

Original Article

The effectiveness of acceptance and commitment therapy on feelings of inferiority, fear of body image, and feeling of self-worth in cosmetic surgery applicants

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Abstract

The general aim of the present study was to determine the effectiveness of acceptance and commitment therapy on feelings of inferiority, fear of body image, and feeling of self-worth in cosmetic surgery applicants. The current research is fundamentally applied in terms of its purpose, and semi-experimental in terms of design. It was a pre-test-post-test design with a control group. To collect data from the demographic checklist, the Multidimensional Self-Body Relationships Questionnaire (MBSRQ), the Inferiority Scale, and the Contingencies of Self-Worth Scale (CSWS) were used. The population under study included 58 people who visited the cosmetic surgery clinic in Mahabad city in 1401 for cosmetic surgery during a period of one month. The sample size in this research was 12 people in the control group and 12 people in the experimental group. The sampling method was convenience sampling. The experimental group (8 sessions of 45 minutes) underwent acceptance and commitment therapy, and the control group did not receive any treatment. The analysis showed that the components of self-worth, feeling of inferiority, and fear of body image of the experimental groups (the group that was exposed to the treatment method of acceptance and commitment) in the post-test are significantly different from the control group. The eta square indicated that a high amount of the variance of the components of self-worth (24.6%), feeling of inferiority (73.3%), and body image (36.2%) can be explained by the treatment method of acceptance and commitment. The results showed that acceptance and commitment therapy is effective on feeling of inferiority, fear of body image and, feeling of self-worth. Based on these findings, it is recommended to use this method to reduce the fear of body image and feeling of inferiority, as well as increase self-worth in people applying for cosmetic surgery.

Keywords

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Introduction

Beauty and attractiveness are popular traits for all people in all societies (Lazuka et al., 2020). Humankind is always trying to invent ways to beautify and make his body look attractive. These methods are different from each other depending on the time and various conditions. Man has tried to satisfy his natural, social and psychological need for beauty by changing his body and appearance (Pirahari & Bidaran, 2018). The tendency towards beauty and concern about appearance based on the social framework is completely natural and even indicates mental health. But today, due to the overemphasis on physical appearance in fashion magazines and media, attention to the body has increased

dramatically (Salahian, 2019). So, that the people of society are seeking to gain more beauty through cosmetic surgeries by accepting the costs of health services and accepting negative physical effects (Mohammadshahi et al., 2016).

Cosmetic surgeries are those surgeries that are performed without special medical necessity and only for cosmetic purposes (Tavasli & Madiri, 2012). Cosmetic surgery is one of the most common surgeries in the world and its demand is increasing day by day (Ronagh et al., 2018). Lip augmentation, nose reduction, prominent cheekbones, belly reduction, breast augmentation, stretching the skin and smoothing wrinkles, and liposuction of the thighs are some of the things that people do on their bodies to achieve their desired beauty (E'temadifard & Amani, 2013). According to reports from the American Society

of Plastic Surgeons, in 2017, 17.5 million plastic surgeries were performed (Sarwer, 2019). Iran is also one of the countries that has a high rank in performing cosmetic surgeries (Pourmohseni & Shirmohammadi, 2016).

Body image is a mental image of a person's physical appearance and emotions, and it can be defined as a multidimensional structure that describes internal and mental representations of physical appearance and bodily experience, attitudes toward the body, especially toward size, shape, and aesthetics (Savi-Çakar & Savi-Karayol, 2015; Tylka & Wood-Barcalow, 2015). In other words, body image is the way people look and feel about their bodies (Dyer et al., 2013). Body image can have a serious effect on the physical and emotional health of people (Markey, 2010). Physical appearance has an important impact on first impressions, friendships, and other life issues (Cash et al., 2004). This shows that body image may play an important role in psychological well-being (Shang et al., 2021). Our perception of the body can affect our ability to communicate with others and how others respond to us (Ronagh et al., 2018).

In this regard, cosmetic surgery is mostly used by those who are dissatisfied with their appearance and sometimes to increase their self-esteem and self-worth (Salahian, 2019). It should be noted that the meaning of self-worth is a personal judgment about one's worth (Monsef et al., 2016). According to research, the self-worth of people who seek cosmetic surgery depends on their appearance and the approval of others (Valikhani et al., 2021). According to research, cosmetic surgery can also be effective in reducing feelings of inferiority (Zare & Sadeghi, 2021). In people who have feelings of inferiority and low self-worth, a psychological effort begins to develop through which they hide their fear and inadequacy (Zare & Sadeghi, 2021). The task of this psychological effort in a psychologically healthy life is to overcome the felt weakness and inadequacy and finally recreate excellence (Liebelt, 2019). According to the mentioned materials, the necessity of treatment for these cases can be seen. One of the effective treatment methods to eliminate concern about body image (Rahmanian et al., 2018) and feelings of inferiority (Aghili & Ramrodi, 2021) is acceptance and commitment therapy.

Acceptance and commitment therapy is one of the treatments of the third wave of behavioral therapy that Steven Hayes and his colleagues proposed in the early 1980s (Hayes et al., 2005). Hayes defines ACT as A therapeutic approach based on the relational framework theory, which considers psychological problems as the result of psychological inflexibility resulting from experiential avoidance and cognitive fusion (Bach & Moran, 2008). The goal of treatment based on acceptance and commitment is to reduce experiential avoidance and increase psychological flexibility through accepting unavoidable and disturbing unpleasant feelings such as anxiety, cultivating Mindfulness in order to neutralize excessive involvement with cognitions and determining personal values related to behavioral goals. During these

cases, clients are encouraged to connect and accept their experiences fully and without resistance as they move toward their valued goals, without judging their rightness or wrongness. Finally, these things lead to an improvement in the quality of life, especially in the psychological field (Irandoost et al., 2014). Increasing psychological flexibility is through six basic processes, which are: Acceptance, cognitive dissonance, being in the present, self as context, values, and committed action (Harris, 2009). As mentioned, this treatment method has been effective for body image concerns and feelings of inferiority. According to research, the number of people seeking cosmetic surgery has increased (Milothridis et al., 2016).

Several studies in the last few years confirm the effectiveness of acceptance and commitment therapy on mental health issues. Ariapooran, Abbasi and Karimi (2019), in their research, reached the conclusion that acceptance and commitment therapy was effective in improving the unfavorable body image in women with obesity. Fogelkvist et al. (2020) concluded that acceptance and commitment therapy is effective in reducing eating disorder symptoms and body image-related problems in patients with eating disorder symptoms. Also, Aghili and Ramrodi (2021) also concluded that acceptance and commitment therapy can be effective on feelings of inferiority and low self-worth in students with physical and movement disabilities. Eryananda and Oriza (2020) found that acceptance and commitment therapy can be effective on low self-worth in students. According to their research, Khatibi, Khanmohammadi-Otaghsara and Fakhri (2021) confirmed the effectiveness of acceptance and commitment therapy on self-worth in obese women.

According to the mentioned materials, we find out that in the current era, cosmetic surgeries are very widespread and in many cases they are performed completely unnecessarily (Manshadi et al., 2014). Along with modernity, cosmetic surgery was created with the aim of beautification and became a social norm (Enayat & Anbary Roozbahany, 2018). It should also be considered that physical appearance is also an important part of body image, because it is the first source of information that is used in a person's social interactions with others. Therefore, it can have a fundamental role in determining beliefs and opinions about a person's body image. Usually, people go for cosmetic surgery when they are discontented with their imaginary and minor defects. In other words, these types of surgeries are often not performed with the intention of reconstruction to improve physical and social functioning. Therefore, it can be concluded that cosmetic surgeries are usually rooted in psychological problems (ShirMohammadi, Hosseini & Amiri, 2019). Therefore, treatment based on acceptance and commitment through processes such as acceptance, being in the present moment, cognitive diffusion, self as background, values, and committed action can help a person to achieve psychological flexibility. It should be noted that cosmetic surgery is so widespread nowadays that it can be considered an epidemic. However, the

research conducted in the field of investigating this phenomenon from a psychological point of view and applying psychotherapy methods to reduce the cases that result in a person resorting to cosmetic surgeries is few. Therefore, this research was conducted with the aim of the effectiveness of acceptance and commitment therapy on Feelings of Inferiority, fear of body image, and feelings of self-worth in cosmetic surgery applicants.

Method

Participants

In terms of the purpose, the current research was prospective and fundamentally applied, in terms of methodology, it was quasi-experimental and in terms of design, it was a two-group pre-test-post-test design. First, the experimental group received acceptance and commitment therapy during eight one-hour sessions weekly. Then the questionnaires were completed by both experimental and control groups in the pre-test and post-test stages. The population under study includes those who visited cosmetic surgery clinics in Mahabad city in 2022 for cosmetic surgery and their number was equal to 58. The sample size in this research was 12 people in the control group and 12 people in the experimental group. The sampling method was availability sampling.

The inclusion criteria were consent to participate in the research, being the applicant for surgery, and the exclusion criteria were not consenting to participate in the research, being absent for more than two sessions, or withdrawing from cosmetic surgery.

Instrument

Multidimensional Self-Body Relationships Questionnaire (MSBRQ):

This test is a self-report scale developed by Cash et al. in 1986, 1987 to assess body image. In this research, the final version prepared by Cash in 1997 was used. The participants in this test must answer 46 items based on a Likert scale (completely disagree = 1 to completely agree = 5). The scores of this questionnaire are in the range of 46-230. This scale has 6 subscales, which are: 1- Appearance Evaluation (AE), 2- Appearance Orientation (AO), 3- Fitness Evaluation (FE), 4- Fitness Orientation (FO), 5- Overweight Preoccupation (OP), and 6- Body Areas Satisfaction (BAS). A higher score in this test indicates more satisfaction with the body. Cronbach's alpha coefficients of the subscales range from 0.77 to 0.88 (Michou & Costarelli, 2011). The content validity of this scale is reported as 0.79 (Abbasi et al., 2022).

Inferiority scale:

This questionnaire was created by Yao et al. (1997) and has 34 items. This scale is a self-reporting tool whose 17 items measure Inferiority related to other people's judgments. Based on a five-point Likert scale (not completely correct = 1 to correct = 5), the lowest possible score will be 34 and the highest score will be 170. Its reliability was obtained by Cronbach's alpha method for the whole sample. In Iran, the validity of the construct and the questionnaire was confirmed by Yousefi et al. and its reliability was obtained by Cronbach's alpha method for a total of 0.89 (Zare & Sadeghi, 2021). The Validity coefficient of the feeling of inferiority questionnaire was obtained through retesting 0.76 and the internal consistency of the scale items was obtained through Cronbach's alpha 0.89 (Yousefi et al., 2008).

Contingencies of Self-Worth Scale (CSWS):

The CSWS was developed by Crocker et al. (2003). This questionnaire has 7 subscales and 35 items, the components of which are: family support, competition, appearance, God's love, academic competence, virtue, and approval from others. Each item in this scale is scored based on a 7-point Likert scale (1=completely agree to 7=completely disagree). Each subscale had high internal consistency with alpha ranging from 0.82 to 0.96 (Valikhani et al., 2021). Crocker et al. in their research, which was conducted on 642 students, confirmed the convergent validity of this scale with a correlation of 0.52 (Mokhles et al., 2021).

Procedure

After selecting people and dividing them into experimental and control groups, treatment was performed on the experimental group. The experimental group (8 sessions of 45 minutes) underwent acceptance and commitment therapy, and the control group did not receive any treatment. The ACT treatment protocol was selected from Pearson et al. (2010) and Harris (2019) and used to reduce Feelings of Inferiority, and concern about body image, and increase self-esteem, which is summarized in Table 1.

In this study, the ethical points of the Declaration of Helsinki were observed in the following order: explaining the objectives to the research sample and obtaining informed written consent from them to participate in the research, the right of participants to choose to enter and leave the research at any time, honesty in the selection of research units and data collection and analysis.

In order to analyze the data, descriptive statistics and inferential statistics were used, and the data obtained after conducting the research were analyzed using descriptive statistics (mean, standard deviation) and inferential statistics of covariance analysis in the SPSS 25.

Table 1. The ACT treatment protocol

Sessions	Targets	Home works
First session	Familiarizing the participants and the therapist with each other - explaining the goals - establishing a therapeutic relationship - introducing the participant to the subject of the research	Implementation of concentration exercise - assessment of control methods and creation of creative hopelessness - answers to questionnaires
Second session	Examining the inner and outer worlds in Acceptance and Commitment Therapy (ACT) - creating a desire to leave a dysfunctional program	Mindfulness training - implementation of relaxation exercises - training on how to change the subject of control - introducing an alternative to control (inclination)
Third session	Identifying and clarifying the values of the client - Specifying goals - Specifying actions and obstacles	Homework review - body scan mindfulness practice - goal setting practice - committed action training
Fourth session	Examining the values of each person - Examining obstacles	Reviewing homework - deepening the previous concepts - completing the form of valuable routes
Fifth session	Understanding diffusion and fusion - preventing negative thoughts in the body image, especially its frequency and intensity	Reviewing homework - performing diffusion exercises - breaking away from language threats - mindfulness training
Sixth session	Understanding the fusion with self-conceptualization and teaching how to diffusion from it.	Reviewing homework - primary and secondary suffering assignment - education of commitment and obstacles to the formation of satisfaction
Seventh session	Emphasis on being in the present. An introduction to values, value as behavior versus value as feelings, the definition of self-worth	Reviewing homework - Mindfulness practice while walking - Breathing practice
Eighth session	Review of treatment - Committed action - Review of events	Reviewing homework - Review of life story - Education of preparation, not prevention, against Feeling of Inferiority

Results

According to the findings of Table 2, it can be seen that the indicators of descriptive statistics of feelings of Inferiority, fear of body image, and feeling of self-worth have been reported in cosmetic surgery applicants. The mean of the pre-test self-worth score in the experimental group is 182.38, while it increased to 215.15 in the post-test stage. But in the control group, there is no

significant difference between the pre-test and post-test overall self-worth scores. Also, the mean of the pre-test body image score in the experimental group is equal to 151, while it increased to 213.69 in the post-test stage. But in the control group, there is a very small difference between the pre-test (138) and post-test (136.75) body image scores.

Table 2. Descriptive statistics indicators of self-worth, fear of body image, and feeling of Inferiority in cosmetic surgery applicants

Components	Tests	groups	min	max	mean	standard deviation	standard error
self-worth	Pre-test	control	134	197	172.42	21.68	6.26
		experiment	147	212	182.38	18.002	4.99
	Post-test	control	133	197	170.83	20.93	6.04
		experiment	195	244	215.15	16.96	4.70
feeling of Inferiority	Pre-test	control	50	135	92.50	20.22	5.84
		experiment	46	148	93.46	33.75	9.36
	Post-test	control	50	137	94.75	19.82	5.72
		experiment	145	189	168.08	13.68	3.79
body image	Pre-test	control	109	172	138	22.42	6.47
		experiment	143	178	151	11.15	3.09
	Post-test	control	109	172	136.75	21.68	6.26
		experiment	178	240	213.69	19.16	5.31

According to the results obtained in Table 3, because the P value obtained for the investigated variables in both pre-test and post-test conditions is greater than the significance level, i.e. $\alpha = 0.05$, the assumption of

normality of the data is accepted and parametric methods can be used to check the hypotheses, where univariate and multivariate covariance analysis tests are used.

Table 3. Examining and comparing the results of the normality test related to pre-test and post-test research variables by group (control and intervention)

group	Variables	Number	Pre-test		Post-test	
			Statistic	sig	Statistic	sig
Control	Self-worth	12	0.894	0.134	0.915	0.249
	feeling of Inferiority	12	0.934	0.430	0.891	0.123
	body image	12	0.907	0.196	0.940	0.493
Experiment	Self-worth	13	0.960	0.747	0.886	0.085
	feeling of Inferiority	13	0.954	0.656	0.959	0.737
	body image	13	0.896	0.119	0.927	0.310

According to the findings of Table 4, a significant difference has been observed between the level of feeling of Inferiority, self-worth, and body image in the

two intervention and control groups after acceptance and commitment therapy in cosmetic surgery applicants ($p = 0.010$).

Table 4. The results of the covariance test of the difference between the two control and intervention groups in the variables

Variables	Source of changes	sum of squares	Df	Mean of square	F	sig	Eta squared
feeling of Inferiority	Pre-test	2747.222	1	2747.222	2.818	0.107	0.114
	group	43959.484	1	43959.484	45.099	0.0001	0.672
	Error rate	21444.137	22	974.733			
Self-worth	Pre-test	6397.336	1	6397.336	93.464	0.0001	0.809
	group	3447.799	1	3447.799	50.372	0.0001	0.696
	Error rate	1505.838	22	68.447			
body image	Pre-test	5310.862	1	5310.862	57.853	0.0001	0.724
	group	8199.783	1	8199.783	89.323	0.0001	0.622
	Error rate	2019.574	22	91.799			

Discussion

The present study was conducted with the aim of investigating the effectiveness of acceptance and commitment therapy on feelings of inferiority, fear of body image, and feeling of self-worth in cosmetic surgery applicants. According to the results, in the post-test stage, a significant difference was observed between the level of feeling inferiority, self-worth, and body image in the two experimental (the group that was exposed to acceptance and commitment therapy) and control groups in cosmetic surgery applicants. The post-test scores of feelings of inferiority, self-worth, and body image confirm the effect of acceptance and commitment therapy on these variables. The results of this research are in line with the research of Ghafari-Jam, Mahmoodfakheh and Mostafae (2021), Khatibi, Khanmohammadi-Otaghsara and Fakhri (2021), Aghili & Ramrodi (2021), Pardede Keliat and Wardani (2020), Moradi, Ghadiri-Anari, Deghani, Vaziri and Enjzab (2020), Fogelkvist, Gustafsson, Kjellin and Parling (2020), Usefi, Ostadian Khani and Fadaie Moghadam (2016) and Habibollahi and Soltanizadeh (2015).

In acceptance and commitment therapy to achieve mental health, instead of eliminating the pathogenic factors, one should help the person to accept his emotions and perceptions, avoid fighting with them, and free himself from the control of verbal rules that cause problems (Gueserse et al., 2022).

According to the findings of this research, in order to explain the effectiveness of acceptance and commitment therapy on feelings of inferiority, fear of body image, and feelings of self-worth, various aspects can be pointed out. In this treatment, through components such as acceptance, diffusion, being in the present, self as context, values and committed action, achieving an increase in psychological flexibility, improving negative and inflexible behaviors and beliefs, restoring self-worth, reducing feelings of inferiority, improving body image and increasing quality of life in people applying for cosmetic surgery, it was considered. In the following, each of the components of this treatment and their effect on the mentioned cases will be discussed. In some people who apply for cosmetic surgery, they have a negative physical image of themselves, and as a result of this, their feeling of inferiority increases and they have a low sense of self-worth, leading to them sticking to these negative conceptualizations of themselves (self-conceptualized), which is very harmful. In this research, an alternative has been introduced for this negative self-conceptualization. Therefore, it has been emphasized to change the perspective from the negative self-conceptualized (for example, the incomplete or defective self) to the neutral self-observer, so that this method causes the person to diffusion away from these ideas and thoughts. For this purpose, people were taught to simply observe them instead of fighting them and trying to eliminate them. By substituting "self as context," people learned to detach themselves from negative and unpleasant thoughts and beliefs and simply

experience them in the present moment. According to the chess board metaphor, people were asked to consider themselves as a chess board and their negative and positive thoughts and beliefs as white and black pieces that are always moving, and in this way the patients learned that feelings such as deformity Body and feeling of Inferiority is mostly a product of their mind, and responding to these beliefs and thoughts should be based on usefulness and practicality. In order for clients not to experience feelings and thoughts such as body deformity, the feeling of Inferiority, and low self-worth and their negative consequences, they avoid them, and this can lead to the aggravation of these cases. Therefore, according to the acceptance and commitment therapy and the component of acceptance, people were taught to stop avoiding and ineffectively fighting against them in order to avoid these cases and by introducing human suffering, people were taught to experience negative thoughts and beliefs only as thoughts and beliefs and to act in line with their values instead of responding ineffectively to them. Also, people learned to change the relationship between unpleasant thoughts and feelings and not to consider them as negative and unpleasant factors, but to consider them as harmless factors, and people with effective control of the pains and sufferings that life imposes on them, a life build meaningful. In general, in the context of the effectiveness of acceptance and commitment therapy on body image, feeling of Inferiority, and self-worth in people applying for cosmetic surgery, it can be said that this treatment focuses on the processes of acceptance and mindfulness on the one hand and the processes of commitment and behavior change, on the other hand, increases mental health and psychological flexibility, and also improves body image, feeling of Inferiority, and self-worth in people applying for cosmetic surgery.

One of the limitations of the research is the lack of follow-up. Also, due to the fact that the research was conducted under controlled conditions and the subjects only received acceptance and commitment therapy, the generalization of the results is limited. Therefore, it is suggested that in future research, the follow-up steps also be included, and this method should also be compared with other treatment methods and combined treatment.

Conclusion

In general, the results of this research showed that acceptance and commitment therapy is effective in improving body image, feeling of self-worth, and reducing feelings of inferiority in people applying for cosmetic surgery. This result emphasizes the importance of using psychological interventions on these people, and it is better that first, the mental health of people applying for cosmetic surgery is checked and if necessary, this treatment method is performed on them.

Conflict of interest

No potential conflict of interest was reported by the authors.

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