



The Effectiveness of Group Therapy based on Acceptance and Commitment on Emotional Eating, Body Image and Rumination of Overweight Female Students

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Abstract

The aim of this study was to determine the effectiveness of acceptance and commitment group therapy on emotional eating, body image and rumination of overweight female students. The current research was semi-experimental and in the form of a two-group pre-test-post-test design with a 2-month follow-up. The population is all overweight teenage students who were introduced to obesity treatment centers in Borujerd city by school health educators; A sample of 30 people was selected voluntary sampling and randomly divided into two groups of 15 people. The instruments were the rumination scale by Nolen-Hoeksma, the multidimensional body-self relationship questionnaire by Bern et al., and Stein's eating behavior questionnaire. Analysis of variance with repeated measures was used to analyze the data. The results of the research showed that group therapy based on acceptance and commitment has a significant effect on emotional eating, self-image and rumination of overweight female students.

Keywords: Emotional eating, rumination, self-body image

Introduction

Due to the development of today's modern life, the level of human well-being has improved and his way of life, including the type of food, the physiological clock of the body, physical activities and even the way of thinking of man has faced major change (Sob et al., 2021). People's mental image of their body is one of the factors influencing weight gain during adolescence (koohestani sini et al., 2022). Body image can be defined as "a person's perceptions, thoughts, and feelings about their body" (Fioravanti et al., 2022). There is also strong evidence that emotional eating mediates obesity and depression (Arexis, 2023). Rumination is a type of obsession that is formed based on a lack of serotonin, and in the form of resistant and repetitive thoughts, it directs the person's focus to a fruitless issue (Stade & Ruscio, 2023). In this sense, the researcher has chosen this approach as the basis of his treatment plan. This intervention targeted a transdiagnostic sample, where body image problems were a common factor hypothesized to prevent further changes in eating disorder symptoms, such as eating patterns. Therefore, the present research tests the following hypotheses:

- Group therapy based on acceptance and commitment is effective on emotional eating of overweight female students.
- Group therapy based on acceptance and commitment is effective on body image in overweight female students.
- Group therapy based on acceptance and commitment is effective on the rumination of overweight female students.

Method

The research design was a semi-experimental pre-test and post-test type with a control group and a three-month follow-up period. The statistical population is all overweight teenage students who were introduced to obesity treatment centers in Borujerd city by school health educators, and their number was 136. through a call from among the people who met the criteria of overweight; We selected a sample of 30 people through voluntary sampling and randomly divided them into two groups of 15 people, intervention and control, and the treatment process was carried out in two months. The data obtained from this project were analyzed using SPSS₂₂ statistical software. Data were analyzed using ANOVA with repeated measures and Bonferroni's post hoc test. In addition, obtaining informed and voluntary consent to participate in the research, ensuring the non-disclosure of information, maintaining privacy and confidentiality were the ethical issues observed in the research.

Tools

Nolen-Hoeksma rumination scale (RRS): The scale of ruminative responses is one of the subscales of the Nolen-Hoeksma Response Styles Questionnaire (RSQ), which has 22 items with 4 options and is graded on a Likert scale from never (1) to always (4). Also, this scale has 3 subscales of distraction, contemplation and thinking with Cronbach's alpha were 0.88-0.92 respectively, Papageorgiou, and Wells (2004). In the present study, Cronbach's alpha was 0.87.

Body Image Concern Questionnaire (BICI): This questionnaire was created by Littleton et al. (2005), consists of 19 items, on a 5-point Likert scale, with internal consistency of 0.93 by Cronbach's Apha method. In the present study, Cronbach's alpha was 0.86.

Dutch Eating Behavior Questionnaire (DEBQ): A valid Korean version of the Dutch Eating Behavior Questionnaire was used to evaluate eating behavior. The 33 items are scored on a 5-point Likert scale, with internal consistencies (Cronbach's alpha coefficient) between 0.86 and 0.95. In the present study, Cronbach's alpha coefficient for three subscales of eating behavior was obtained: 0.91 for restrained eating, 0.95 for emotional eating, and 0.85 for external eating.

Intervention program. In this research, acceptance and commitment-based therapy was used in a group setting using the group guidelines provided by Turrell et al. (2016) in the book ACT for Adolescents.

Results

Before performing the repeated variance analysis, the results of the M-box test for eating behavior ($F=0.52$; $p=0.79$), body image ($F=0.52$; $p=0.79$) and rumination ($F=0.62$; $p=0.71$) indicated compliance with the homogeneity condition of variance-covariance matrices. Levin's test results in the pre-test ($F=1.61$; $p=0.21$), post-test ($F=2.17$; $p=0.15$), and follow-up ($F=2.19$; $p=0.15$) eating behavior and pre-test ($p=0.43$, $F=0.62$), post-test ($p=0.86$, $F=0.03$) and follow-up ($p=0.58$, $F=0.31$) body image and pre-test ($p=0.69$, $F=0.15$), post-test ($p=0.38$, $F=0.79$) and follow-up ($p=0.18$, $F=1.86$) rumination confirmed the equality of variances between groups. The results of Mochli's sphericity test for irritability ($p=0.15$; $W=0.87$) and learning behavior ($p=0.82$; $W=0.98$) confirmed the equality of intra-group variances. Based on the results of variance analysis with repeated measurements (Table 1), experimental and control groups are significantly different from each other in terms of eating behavior, body image and rumination in the three stages of pre-test, post-test and follow-up.

Table 1. Tests of Between-Subjects Effects

Dependent Variable	Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Eating behavior	Time	60.80	1.39	57.99	36.37	.001	.56
	Time × group	14.02	1.39	103.62	64.99	.001	.69
	error	62.04	38.91	1.59			
Body Image	Time	136.02	1.67	81.33	54.58	.001	.66
	Time × group	136.86	1.67	81.84	54.92	.001	.66
	error	69.77	46.82	1.49			
Rumination	Time	242.68	1.44	168.15	107.36	.001	.79
	Time × group	202.68	1.44	140.43	89.67	.001	.76
	error	63.28	40.41	1.56			

Discussion and Conclusion

In explaining these results, it can be said that the component of acceptance without judgment is very important in emotional eating. At high levels of acceptance, female students notice psychological arousals, including their feelings and thoughts, without trying to control or avoid them. It can be said that this treatment method helped the subjects in creating and increasing psychological flexibility, which means helping them to choose the best, most appropriate and practical solution among the available actions and solutions, not an action to avoid thoughts and feelings. and do disturbing tendencies. In explaining this hypothesis, it can be said that rumination is thoughts that are constantly repeated consciously about a subject. These thoughts are active even in the absence of the generating stimulus. The most important limitations of this study included the use of voluntary sampling method and the limitation of the research population to adolescent students (13 to 17 years old) of obesity treatment centers. Therefore, in using the possibility of generalizing the results of this research to other groups of society

with different age groups, caution should be observed. It is suggested that sampling methods with less error, such as random sampling, be used in future researches.

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Conflict of Interests

The author declared no conflict of interest.



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