

Research paper

The Effectiveness of Family-Based Therapy on Body Image and Identity Styles of Female Adolescent with Anorexia Nervosa

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Abstract

The aim of this study was to evaluate the effectiveness and continuity of the effect of family-based therapy (FBT) on body image and identity styles of female adolescents with anorexia nervosa. The research design was quasi-experimental, pre-test and post-test and quarterly follow-up with the control group. At least 30 students with their family were randomly assigned to experimental and control groups. In 10 treatment sessions. These instruments were used: Eating Attitudes test, Identity Style Inventory and Multidimensional Body-Self Relations Questionnaire. Data were analyzed by using multivariate analysis of covariance and mixed analysis of variance. The results showed that FBT leads to the emergence of a positive body image and the acquisition of a committed identity in students. Also, the follow-up results showed that the effectiveness of the intervention is lasting.

Keywords: Anorexia nervosa, body image, family-based therapy, identity styles

Introduction

One of the diagnostic criteria for anorexia nervosa is a disturbance in body image with the individual's self-assessment or denial of the deterioration of current low weight. Body image has an effect on social interactions. Research has shown the effectiveness of methods such as schema therapy (Ansari, et al., 2020), acceptance and commitment therapy (Ostadian, et al., 2020). Berzonsky (1989) presented a model of the process of identity formation and identified three types of identity styles: information, normative style and confused style. Research has shown that individuals with a lesser eating disorder are successful and committed to identity transformation processes and employ coping mechanisms in avoidant identities. In addition, the effectiveness of treatment has been confirmed in self-efficacy and identity styles (Norouzpour, et al., 2020). Family-based therapy accommodates the adolescent family in the family and considers family involvement necessary. This treatment consists of three steps and has been introduced as the best treatment for anorexia nervosa. In phase one, the therapist focuses only on eating and gaining weight. Eating is the responsibility of the parents. When the person reaches 90% of the desired weight, the treatment enters the second phase. Eating control is gradually transferred to the adolescent. In the third phase, family boundaries are redrawn as adolescent independence increases (Rienecke, 2017). The research hypothesis is as follows: Family-based therapy in body image and identity styles of female adolescents with anorexia nervosa is effective and lasting.

Method

The study was quasi-experimental with pretest-posttest and quarterly follow-up with a control group. The statistical population was female students by administering the eating attitudes questionnaire and evaluation, 30 were purposefully selected as a sample and randomly assigned to experimental and control groups. The treatment was according to the protocol (Rienecke, 2017) for 10 sessions, then the post-test and after 3 months, follow-up were performed. Data were analyzed with multivariate analysis of covariance and mixed analysis of variance.

Eating Attitudes Test(EAT-26): It is for screening eating disorders. Garner and Griffin (1982) reported Cronbach's alpha of 0.94, validity with the eating questionnaire at 0.50. The present study showed the internal consistency by Cronbach's alpha method for its subscales, 0.77- 0.83.

Berzonsky Identity Styles Inventory(ISI): It measures 3 styles of identity namely information, normative, and confusing / avoidance styles. Berzonsky (1989) reported the alpha coefficient 0.62, 0.66, and 0.73, respectively. In the present study, these were in order of 0.86, 0.79, 0.75, 0.71, respectively.

Multidimensional Body-Self Relations Questionnaire (MBSRQ): The 69 items questionnaire developed by Cash& Pruzinsky (1990). They reported the validity and reliability of the components from 0.77 to 0.91 for men and from 0.73 to 0.89 for women. In the present study, the alpha was 0.79.

Results

By performing Shapiro test (body image, information styles, normative, confused, commitment, respectively 0.70, 0.64, 0.63, 0.66, 0.62 and $p>0.05$), normality of data and with Levin test (body image, Informational, normative, confused, commitment styles 0.41, 0.33, 0.19, 0.99, 0.64 and $p>0.05$), homogeneity of variance was confirmed in the experimental and control groups ($p >0.05$). The hypothesis of equality of covariance matrices was confirmed by evaluating the equality of covariance matrices of M-box test (Box's M = 75.33, F = 1.42, $p >0.05$). The results of mixed analysis of variance and intergroup differences in dependent variables were examined. By removing the effect of the pretest variable, the hypothesis that there was a significant difference in the research variables under the family-based treatment method compared to the control group was confirmed.

Table1: Intergroup effects test

source	Variable	Sum of square type 3	D.F.	squared mean	F	Sig. level	ETA coefficient
Corrected model	body image	2.70	1	2.70	5.50	0.025	0.08
	Information	7.50	1	7.50	5.92	0.022	0.18
	Normative	45.63	1	45.63	36.86	0.000	0.57
	Confused or avoidant	9.63	1	9.63	8.61	0.007	0.24
	Commitment	4.80	1	4.80	8.06	0.008	0.22
Width from the origin	body image	208.03	1	208.03	192.45	0.000	0.87
	Information	208.03	1	208.03	164.24	0.000	0.85
	Normative	326.70	1	326.70	263.87	0.000	0.90
	Confused or avoidant	340.03	1	340.03	303.86	0.000	0.92
	Commitment	374.53	1	374.53	629.22	0.000	0.96
	body image	2.70	1	2.70	5.50	0.025	0.08

Group	Information	7.50	1	7.50	5.92	0.022	0.18
	Normative	45.63	1	45.63	36.86	0.000	0.57
	Confused or avoidant	9.63	1	9.63	8.61	0.007	0.24
	Commitment	4.80	1	4.80	8.06	0.008	0.22
Error	body image	30.27	28	1.08			
	Information	35.47	28	1.27			
	Normative	34.67	28	1.24			
	Confused or avoidant	33.31	28	1.12			
	Commitment	16.67	28	0.06			
Total	body image	241.00	30				
	Information	251.00	30				
	Normative	407.00	30				
	Confused or avoidant	381.00	30				
	Commitment	396.00	30				
Corrected total	body image	32.97	29				
	Information	42.97	29				
	Normative	80.30	29				
	Confused or avoidant	40.97	29				
	Commitment	21.47	29				

The results of Bonferroni test show that in all of them, there is a significant difference between pre-test and post-test stages and between pre-test and follow-up. But there is no significant difference between post-test and follow-up stages ($p < 0.01$).

Table2: Double comparison table with Bonferoni modification

Variable	Group (I)	Group (J)	Mean differences	Standard deviation	Sig.
Image	Pretest	Post-test	0.58 *-	0.21	0.019
		Follow-up	0.82 *-	0.21	0.000
	Post-test	Pretest	0.58 *	0.21	0.019
		Follow-up	0.24-	0.21	0.757
	Follow-up	Pretest	0.82 *	0.21	0.000
		Post-test	0.24	0.21	0.757
Informative style	Pretest	Post-test	0.71 *-	0.25	0.013
		Follow-up	0.95 *-	0.25	0.001
	Post-test	Pretest	0.71 *	0.25	0.013
		Follow-up	0.24-	0.25	0.988
	Follow-up	Pretest	0.95 *	0.25	0.001
		Post-test	0.24	0.25	0.988
Normative style	Pretest	Post-test	0.84 *-	0.29	0.012
		Follow-up	10.08 *-	0.29	0.001
	Post-test	Pretest	0.84 *	0.29	0.012
		Follow-up	0.24-	0.29	1.000
	Follow-up	Pretest	10.08 *	0.29	0.001
		Post-test	0.24	0.29	1.000
Confused style	Pretest	Post-test	0.44 *-	0.29	0.005
		Follow-up	0.68 *-	0.29	0.007
	Post-test	Pretest	0.44 *	0.29	0.004
		Follow-up	0.24-	0.29	1.000
	Follow-up	Pretest	0.68 *	0.29	0.007
		Post-test	0.24	0.29	1.000
	Pretest	Post-test	0.98 *-	0.22	0.000

commitment style	Post-test	Follow-up	10.22 *-	0.22	0.000
		Pretest	0.98 *	0.22	0.000
		Follow-up	0.24-	0.22	0.814
	Follow-up	Pretest	10.22 *	0.22	0.000
		Post-test	0.24	0.22	0.814

Discussion

The results showed that the family-based treatment method improved the body image and identity styles of female adolescents with anorexia nervosa and the results were maintained in the follow-up phase. By maintaining respect and attention to opinions and experiences and not blaming, a desirable body image can be created. guide adolescent to a committed identity by reconstruct family boundaries. It also instructs parents to help adolescents with transformational tasks.

The limitations of the research were the economic consideration, cultural, family status, the parents level of education and population (girls only). The theoretical result of the study shows the importance of the formation of imagery and student identity styles and the need for families to pay attention to parenting.

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Conflicts of interest

There is no conflict of interests for researchers.



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