



**PREVENTING DISORDERED EATING BEHAVIOURS IN
ADOLESCENT GIRLS THROUGH ENHANCING SELF-CONCEPT:
A PILOT INTERVENTION STUDY**

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Abstract

Disordered eating attitudes and behaviours often emerge during adolescence and negatively impact health and well-being. Enhancing self-concept may help prevent the development of problematic eating patterns. This pilot study evaluated the effectiveness of a self-concept intervention program in reducing disordered eating risk in adolescent girls.

Twenty-four girls aged 14-16 years reporting body dissatisfaction were randomly assigned to either a 8-session self-concept intervention or waitlist control group. The intervention focused on developing self-esteem, self-efficacy and body appreciation.

Post-intervention, intervention participants reported significantly lower levels of disordered/emotional eating behaviour and an increase in overall self-concept for some of its components ($p < 0.05$).

Findings provide preliminary evidence that enhancing self-concept may help reduce risk factors for disordered eating in at-risk adolescent girls.

This pilot study contributes to developing preventive interventions targeting modifiable psychological factors influencing the emergence of problematic eating behaviours during adolescence.

Keywords: *eating disorder prevention, self-concept interventions, self-perception, eating behaviour, adolescent mental health*

1. INTRODUCTION

Disordered eating attitudes and behaviours often emerge during adolescence and have a negative impact on health and well-being (Smolak & Levine, 2015). Recent research shows that up to 57% of adolescent girls exhibit disordered eating behaviors, which are associated with significant negative consequences for physical and psychological development (Neumark-Sztainer et al., 2018).

Improving self-concept can help prevent the development of problematic eating patterns, as demonstrated in multiple longitudinal studies (O'Dea & Abraham, 2020). More specifically, research indicates that a positive self-concept acts as a protective factor against the internalization of unhealthy body ideals and restrictive eating behaviours (Voelker et al., 2015).

This pilot study evaluated the efficacy of a self-concept-based intervention program in reducing the risk of disordered eating in adolescent girls, thus responding to the need identified in the literature for empirically validated preventive interventions (Hart et al., 2019).

2. OBJECTIVE AND HYPOTHESES

2.1. OBJECTIVE

The main objective of this study is to evaluate the effectiveness of a self-concept-based intervention program in reducing the risk of disordered/emotional eating and improving self-concept among adolescent girls aged 14-18 years.

2.2. HYPOTHESES

H1: Participation in the self-concept-based intervention program will lead to a significant reduction in scores on measures of disordered/emotional eating behaviours, compared to the control group.

H2: Adolescent girls who participate in the program will demonstrate a significant improvement in self-concept.

3. METHOD

Participants. The study participants were 24 adolescent girls aged 14-18 years. The participants were divided into two homogeneous groups: Experimental Group (EG - 12 participants) and Control Group (CG - 12 participants). To select the group participants, the criteria for belonging to the category of young people with problematic eating behaviour were used, but not exceeding the threshold score for eating disorders according to EAT-26, i.e., a score range between 16 and 20 points.

Design. The study used a longitudinal experimental design, test/retest with a control group. This approach allows for the immediate effectiveness of the intervention.

Intervention. The intervention program was initially designed in 12 separate modules, with the aim of comprehensively addressing aspects related to the improvement of problematic eating behaviours and their correlates. The duration of the program was 7 months, from February to October 2021, with a planned break in July and August. Two modules per month were scheduled. Each module had an average of 2-3 hours/day following the homeroom classes.

The program content included:

- Development of self-concept and self-knowledge
- Techniques for improving body image
- Strategies for managing social and media pressure
- Developing healthy eating habits
- Stress and emotion management techniques

Measures. The following instruments were used:

1. Eating Disorder Examination Questionnaire (EAT-26; Maloney et al., 2016) for assessing disordered eating behaviours;
2. Emotional Eater Questionnaire (EEQ; Garaulet et al., 2012);
3. The Self-Perception Profile for Adolescents (SPPA; Harter, 2012) for evaluating the self-concept of adolescent girls.

Procedure. After obtaining ethical approval and informed consent, participants completed the test batteries at two time points: pre-intervention and post-intervention. The control group received standard educational materials about nutrition and adolescent development.

Data Analysis. Data analysis included descriptive analyses for demographic characteristics and Mann-Whitney U tests for evaluating differences between groups at post-test.

4. RESULTS

4.1. TABLES AND FIGURES

Table 1 presents a comparison between the post-test results of the experimental group (EG) and the control group (CG) for the dimensions of dysfunctional eating behaviour measured by EAT-26 and EEQ. The data show statistically significant differences (all p-values < 0.001) between the two groups for all measured variables. The experimental group has significantly lower scores than the control group in all dimensions. Total eating attitudes (EAT-26) are lower in EG (12.75) compared to CG (18.92). The EAT-26 subscales (Diet, Preoccupation with food, Oral control) follow the same trend, with significantly lower scores in EG. We also recorded a significant decrease in emotional eating (EEQ) in EG (15.42) compared to CG (19.58).

These results suggest that the intervention applied to the experimental group had a significant and positive impact on eating behaviour, reducing problematic eating behaviours. The consistent differences between EG and CG indicate the effectiveness of the intervention in improving the eating behaviour of the participants in the experimental group.

Table 1. Comparison of post-test means and Mann-Whitney U test for Eating Behaviour Dimensions, EG and CG

Variable	Mean (DS)		Mann-Whitney U	
	GE	GC	U	p
EAT-26 (total)	12,75 (1,76)	18,92 (1,37)	0,5	0,000
EAT-26 - Diet	4,17 (0,83)	5,83 (0,38)	9	0,000
EAT-26 – Preoccupation	4,75 (1,21)	8,58 (0,66)	0,5	0,000
EAT-26 – Oral control	3,75 (0,45)	4,5 (0,52)	27	0,000
EEQ – Emotional eating	15,42 (1,44)	19,58 (0,79)	1	0,000

Table 2 presents a comparison between the post-test results of the experimental group (EG) and the control group (CG) for various dimensions of self-concept, as measured by the SPPA instrument. The data show statistically

significant differences between the two groups for several dimensions. Social competence ($p = 0.004$), athletic competence ($p = 0.004$), physical appearance ($p = 0.009$), and global self-concept ($p < 0.001$) are significantly higher in EG compared to CG. The largest difference is observed in global self-concept, where EG has a mean of 14.92 compared to 9.58 in CG. Academic competence, romantic appeal, and close friendships are also higher in EG, although the differences do not reach the threshold of statistical significance. Competence in professional activities is slightly lower in EG, but the difference is not significant. Behavioural conduct is similar between the two groups.

The results suggest that the intervention applied to the experimental group had a significant positive impact on several aspects of self-concept, especially on social competence, athletic competence, physical appearance, and, most notably, on global self-concept. The effect is stronger in domains related to physical and social self-image, which is in line with the likely objectives of the intervention.

Table 2 – Comparison of post-test means and Mann-Whitney U for Self-Concept Dimensions (SPPA, The Self-Perception Profile for Adolescents), EG and CG

Dimension	Mean (DS)		Mann-Whitney U	
	GE	GC	U	P
1. Academic competence	10,17 (2,48)	9 (2,76)	54	0,319
2. Social competence	11,25 (0,62)	8,42 (2,53)	23,5	0,004
3. Athletic competence	12,08 (2,87)	8,67 (1,92)	23,5	0,004
4. Physical appearance	9,75 (2,37)	7,92 (2,19)	42	0,009
5. Professional competence	11,25 (2,13)	12,75 (3,86)	59	0,478
6. Romantic appeal	10,75 (3,01)	8,58 (2,84)	41	0,078
7. Behavioural conduct	12,17 (2,79)	11,92 (2,39)	67,5	0,799
8. Close friendships	13 (3,56)	10,83 (3,76)	45	0,128
9. Global self-concept	14,92 (1,31)	9,58 (0,66)	0,15	0,000

5. CONCLUSIONS

The study results demonstrate the significant effectiveness of the intervention program in improving both eating behaviours and self-concept in adolescent girls. The data support the initial research hypotheses and align with previous studies highlighting the link between self-concept and eating behaviours (Voelker et al., 2015).

Regarding eating behaviour, the post-intervention comparative analysis reveals significant differences ($p < .001$) between the experimental and control groups for all evaluated dimensions. The significant reduction in EAT-26 scores in the experimental group ($M = 12.75$) compared to the control group ($M = 18.92$) indicates a substantial decrease in problematic eating behaviours, confirming the intervention's effectiveness.

Concerning self-concept, the program generated significant improvements in multiple dimensions assessed by SPPA, with effects on:

- Global self-concept ($p < .001$)
- Social competence ($p = .004$)
- Athletic competence ($p = .004$)
- Physical appearance ($p = .009$)

These results are consistent with previous research suggesting that interventions focused on improving self-concept can positively impact eating behaviours in adolescents (O'Dea & Abraham, 2000).

The magnitude of the observed effects, especially in the domain of global self-concept (EG: $M = 14.92$ vs. CG: $M = 9.58$), suggests that the intervention's benefits extend beyond behavioural changes, positively affecting fundamental psychological constructs (McCabe et al., 2017).

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