



Reframing Self-Perception: Efficacy of Intensive Short-Term Dynamic Psychotherapy on Self-Disgust, Physical Appearance Perfectionism, and Self-Esteem in Girls with Anorexia Nervosa

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Qualitative Study

Abstract

Background: Anorexia nervosa (AN) presents unique psychological challenges, including deep-seated feelings of self-disgust, rigid physical appearance perfectionism, and diminished self-esteem. The aim of this study was to investigate the effectiveness of intensive short-term dynamic psychotherapy (ISTDP) on self-disgust, physical appearance perfectionism, and self-esteem in girls with AN.

Methods: This semi-experimental study used a pre-test, post-test, and follow-up design with a control group. The statistical population of the research included all girls with AN in Tehran, Iran, who had been referred to counselling centers and nutritionists in 2023. Forty of them aged 14 to 19 were selected using the convenience sampling method. Initially, 20 participants were selected for each group, but 3 participants from the control group were excluded due to absence of more than three sessions. The experimental group received 15 sessions of ISTDP, while the control group received no intervention. Data were collected through the use of the Overton et al. Self-Disgust Scale (SDS), Yang and Stoeber Physical Appearance Perfectionism Scale (PAPS), and Rosenberg Self-Esteem Scale (RSES). Data were analyzed using univariate, multivariate, and repeated measures of covariance in SPSS software.

Results: ISTDP effectively reduced self-disgust ($P = 0.001$, $F = 0.151$) and physical appearance perfectionism ($P = 0.001$, $F = 8.830$), and enhanced self-esteem ($P = 0.001$, $F = 52.388$) in girls with AN.

Conclusion: ISTDP was able to reduce self-disgust and physical appearance perfectionism and increase self-esteem, and this change continued in the follow-up.

Keywords: Anorexia nervosa; Intensive short-term dynamic psychotherapy; Physical appearance perfectionism; Self-disgust; Self-esteem

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Citation: Mirzai F, Nikbakht N, Norouziani Z, Abdollahi-Chirani E, Fathy-Karkaragh F, Mazroei P. **Reframing Self-Perception: Efficacy of Intensive Short-Term Dynamic Psychotherapy on Self-Disgust, Physical Appearance Perfectionism, and Self-Esteem in Girls with Anorexia Nervosa.** *Int J Body Mind Culture* 2024; 11(5): 514-24.

Received: 26 Dec 2023

Accepted: 01 Sep. 2024

Proof Version

Introduction

Anorexia nervosa (AN) is the third most common chronic disease among adolescent girls (Frank, 2020). AN is a life-threatening eating disorder (ED) characterized by a low body mass index (BMI) and an intense fear of gaining weight, resulting in a malformed and distorted body image (Halls et al., 2022; Sfärlea, Radix, Schulte-Körne, Legenbauer, & Platt, 2023), and it causes dietary restriction and other weight loss behaviors, such as excessive physical activity (Trinh et al., 2023). Researchers are particularly interested in this disease. On the one hand, AN is a severe mental disorder that has the highest mortality rate among psychiatric disorders (Couturier et al., 2020). On the other hand, the recovery rate of AN is low; no drug has been approved for its treatment, and it is resistant to the best available treatments. Even when a healthy weight is restored, psychological symptoms often persist (Haynos, Lavender, Nelson, Crow, & Peterson, 2020; Gutiérrez & Carrera, 2021; Frank, 2020).

Disgust and self-disgust are negative emotions that are often seen in people with ED. People may experience intense aversion to tasty or high-calorie foods due to overestimating the likelihood of experiencing weight stigma in the future (Bektas, Keeler, Anderson, Mutwalli, Himmerich, & Treasure, 2022). Self-disgust is a negative, self-conscious emotional schema that arises from fundamental disgust and is directed toward a physical or behavioral aspect (Ypsilanti, Gettings, Lazuras, Robson, Powell, & Overton, 2020), and increasing evidence suggests that self-disgust is a more critical factor in mental illness than shame and fault (Tsatali, Overton, & Vivas, 2019).

Evidence suggests that perfectionism is an essential factor in the development and maintenance of ED symptoms and that perfectionism about physical appearance is likely to be prominent (Bergunde & Dritschel, 2020). Previous studies have shown that people with high appearance perfectionism believe their appearance is imperfect and compare it to others (Abdollahi et al., 2023). Physical appearance perfectionism consists of two components (Rica, Solar, Moreno-Encinas, Foguet, Compte, & Sepúlveda, 2022). The first is called "worry about imperfection", and it refers to being unhappy with one's appearance and worrying that one's appearance is never good enough. The second part is "hope for perfection" and shows the hope that others will like one's appearance and look good. Worrying about imperfection is more maladaptive than striving for perfection (McComb & Mills, 2021).

Low self-esteem has been found to be a strong predictor of ED onset, persistence, and relapse, and patients with low self-esteem often struggle to regain self-esteem by controlling their eating, weight, and body shape (Biney, Giles, Hutt, Matthews, & Lacey, 2022). Self-esteem refers to a person's subjective assessment of their worth as a person (Orth & Robins, 2022). Longitudinal research shows that high self-esteem predicts physical health and reduces the risk of depression (Krauss, Orth, & Robins, 2020). Some theorists emphasize that a person's self-esteem can be a variable outcome that may depend on several factors: the process of socialization, social, cognitive, and biological changes, quality of personal relationships, approval/inclusion or rejection/exclusion others, personal beliefs and values, and the pursuit of goals for success or failure (Szcześniak, Mazur, Rodzeń, & Szpunar, 2021).

Treatment for ED has shown limited efficacy. Intensive short-term dynamic psychotherapy (ISTDP) may reduce the cost of healthcare services associated with treating this population, as well as the psychological distress of those with ED (Nowoweiski, Abbass, Town, Keshen, & Kisely, 2020). The importance of facilitating deep emotional experience in session in psychodynamic psychotherapy has been

confirmed by clinical studies in recent years, and ISTDP pilot studies show a positive relationship between treatment results and the achievement of new levels of behavioral emotional expression in session (Ahlquist & Yarns, 2022). ISTDP aims to target affect and attachment-based problems by engaging patients in an emotionally engaged, focused therapeutic relationship. Through focusing on unconscious emotions and addressing emergent defense mechanisms, this facilitates an unlocking of the unconscious and, in doing so, assists the patient in beginning to recognize and resolve emotional content from previous attachment disruptions/traumas (Nowoweiski et al., 2020).

Given the limited knowledge about the effect of ISTDP on AN, the present research aimed to discuss the potential of ISTDP to facilitate rapid psychological changes and its role in the long-term recovery process, explore the temporal dynamics of ISTDP in yielding beneficial outcomes, considering that it is a short-term therapy, and fill existing research gaps by providing empirical data on ISTDP's efficacy in a sample of individuals with AN. The study aimed to assess the impact of ISTDP on improving dimensions of self-perception among girls diagnosed with AN.

Methods

Study design and participants: The current study was semi-experimental research with a pretest, posttest, and follow-up design, with a control group. The statistical population of the research included all girls with AN in Tehran, Iran, who had been referred to counseling centers and nutritionists in 2023. Forty of them aged 14 to 19 were selected using the convenience sampling method. Initially, 20 participants were selected for each group, but 3 participants from the control group were excluded due to absence of more than three sessions. The experimental group received 15 sessions of ISTDP, which focused on identifying and challenging negative beliefs about themselves and their bodies, while the control group received no intervention. After the meeting, both groups completed the questionnaires again. Moreover, after 3 months for the follow-up phase, the experimental and control groups completed the questionnaires. Initially, girls who were diagnosed with AN by their nutritionist and consultant were selected according to the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) criteria and according to their (mild) BMI. Exclusion criteria included having other mental disorders, not attending the intervention period, and missing more than 2 sessions.

Sample size: The appropriate sample size for experimental and control groups in research can vary depending on the research design, the specific objectives of the study, the statistical power required, and ethical considerations. Chau et al. (2017) recommend that at least 15 participants be considered for each group. In this study, it was originally planned to have 15 participants in each of the experimental and control groups. The decision to adjust the sample size was made to account for the possibility of participant attrition and to ensure that the study would have sufficient statistical power to detect meaningful effects and 20 participants were selected for each group. But three participants were excluded from the study due to exclusion criteria.

Instruments and variable

Self-Disgust Scale (SDS): It is an 18-item self-report questionnaire designed by Overton et al. (2008) that measures disgust and repulsion directed to the self. Items were assessed via a 7-point Likert scale (1 = strongly agree, 7 = strongly disagree). Higher scores indicate higher levels of self-disgust. The SDS showed a high internal consistency reliability coefficient. Overton et al. (2008) reported an internal

consistency or reliability of 0.91 for this scale. Additionally, this scale had external (concurrent) validity. In the present study, the internal reliability was also appropriate (Cronbach's $\alpha = 0.87$).

Physical Appearance Perfectionism Scale (PAPS): It was developed by Yang and Stoeber, (2012) as a 12-item self-report questionnaire capturing worries-about-appearance-imperfections (7 items) and hope-for-appearance-perfection (5 items). As exploratory factor analysis (EFA) assumptions were met, an EFA using principal axis factoring with direct oblimin rotation was conducted on the 12 PAPS items. Factor 1 represented worries about appearance improvement, and factor 2 meant striving for appearance perfection. Items were assessed via a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree). In Yang and Stoeber's research (2012), PAPS has demonstrated good 4-week test-retest reliability and good preliminary construct validity; reliability was measured with Cronbach's alpha and the results were favorable (0.83). The results of EFA and confirmatory factor analysis (CFA) confirmed the two-dimensional structure of the measurement. In the present study, the internal reliability was also appropriate (Cronbach's $\alpha = 0.79$).

Rosenberg Self-Esteem Scale (RSES): It is a 10-item self-report questionnaire developed by Rosenberg (1965) with five positively and five negatively worded statements. Items were assessed via a 4-point Likert scale (1 = strongly disagree, 2 = disagree, 3 = agree, and 4 = strongly agree). Rosenberg found that the RSES had a high score of 0.92 on the Guttman scale, which means it is very reliable. Besides, RSES is strongly linked to other ways of measuring self-esteem, such as the Coopersmith Self-Esteem Inventory (CSEI). In the present study, the internal reliability was also appropriate (Cronbach's $\alpha = 0.84$).

ISTDP: The treatment approach in this ISTDP research was based on the protocol of Alan Abbas (2019; quoted by Khatami & Sedaghati Fard, 2023). The treatment consisted of 15 sessions, each session lasting 90 minutes and including the following sessions (Table 1).

Analysis: Data were analyzed using univariate, multivariate, and repeated measures of covariance in SPSS software (version 25, IBM Corporation, Armonk, NY, USA).

Table 1. Intensive short-term dynamic psychotherapy (ISTDP) sessions

Session	Description
First	Statement of rules, initial interview, initial assessment
Second	From the second session onwards, effective and related interventions were used according to the type of defense of the patients.
Third	Working with tactical defenses (used to keep the therapist at bay), vagueness, and generalizations, cover words
Fourth	Examining tactical defenses used by the patient such as diversification
Fifth	Working with withdrawal defenses (used to keep emotions at bay), exploring avoidance and denial
Sixth	Examining the backward defenses of rationalization and rationalization
Seventh	Relocation defense check
Eighth	Investigating defenses that repel replication with an attacker
Ninth	Investigating the defense of separation of emotions
Tenth	Investigation of the defense of small numbers
Eleventh	Investigating repulsive defenses
Twelfth	Investigation of the defense of the repulsed inhibition
Thirteenth	Informing the patient about the side effects of the defenses used by the patient and helping her to stop them, regulating the patient's anxiety, and encouraging her to deeply experience her feelings in the session
Fourteenth and fifteenth	Helping the patient to be aware of the conflict triangle that is the source of the problems raised by the patient

Ethics: Ethical considerations in the present study included obtaining the consent of the subjects, reassurance regarding the confidentiality of information with the therapist, and the possibility of withdrawing from the study in case of unwillingness to cooperate. Moreover, due to ethical considerations, the control group received therapeutic intervention after conducting the research.

Results

The demographic data of the research participants indicate that the average age and standard deviation (SD) in the experimental group were 16.28 and 1.24, respectively. In the control group, the corresponding values were 16.83 for the average age and 1.72 for the SD.

According to table 2, the average scores of individuals in the experimental group in the variable of self-disgust in the post-test have shown a greater decrease compared to the control group. This change mostly continued in the follow-up phase. But in the group that was not being tested, there was not really a big difference. Additionally, the physical appearance perfectionism score in the experimental group decreased in the post-test, and this change mostly continued in the follow-up phase, while there was not much difference in the control group. Moreover, the scores of self-esteem increased in the post-test in the experimental group, and this change mostly continued in the follow-up phase, but there was not much difference in the control group.

To determine effectiveness, first, the underlying assumptions of the covariance test were examined. The Shapiro-Wilk test was used to check the normality of score distribution. The results showed that the scores were distributed normally as assumed ($P > 0.05$). The results of the four-variable multivariate analysis of covariance (ANCOVA) showed that, with controlling for the effects of pre-test scores, there was at least a significant difference between the experimental and control groups in one of the variables ($P < 0.05$). The outcome of Levene's test suggested that the variance error within the variables was not statistically significant at the 0.05 level, which allowed for valid comparison between the groups. The non-significant results of the Box's M test indicated that the assumption of homogeneity of the covariance matrix was met ($P = 0.054$, $F = 3.181$, Box's $M = 21.080$). Furthermore, the level of significant interaction between group and pre-test self-disgust, physical appearance perfectionism, and self-esteem was not significant ($P > 0.05$), indicating that the assumption of homogeneity of regression slopes was met, and the necessary conditions for analyzing the covariance test were satisfied.

According to table 3, the significant levels of all four multivariate statistics, including Pillai's trace, Wilks' lambda, Hotelling's trace, and Roy's largest root were significant at the level of 0.001 ($P < 0.01$), that is, the intervention was generally effective on dependent variables. In the following, the results of ANCOVA are presented to check the dependent variables (Table 4).

Table 2. Mean and standard deviation (SD) of research variables

Source of variance	Group	Mean \pm SD		
		Pre-test	Post-test	Follow-up
Self-disgust	Experimental	103.58 \pm 6.91	69.64 \pm 16.76	76.05 \pm 14.09
	Control	103.15 \pm 6.20	103.10 \pm 5.64	103.20 \pm 6.29
Physical appearance perfectionism	Experimental	82.52 \pm 8.17	44.00 \pm 10.16	49.35 \pm 10.55
	Control	76.65 \pm 10.62	77.10 \pm 10.66	76.65 \pm 10.62
Self-esteem	Experimental	17.00 \pm 4.09	31.52 \pm 3.10	28.82 \pm 3.30
	Control	16.41 \pm 4.03	16.38 \pm 3.81	16.15 \pm 3.93

SD: Standard deviation

Table 3. Multivariate tests

Test	Effect	df	Hypothesis df	F	Value	P-value
Pillai's trace	0.396	35	2	11.493	0.396	0.001
Wilks' lambda	0.396	35	2	11.493	0.604	0.001
Hotelling's trace	0.396	35	2	11.493	0.657	0.001
Roy's largest root	0.396	35	2	11.493	0.657	0.001

df: Degree of freedom

To analyze the data, a univariate ANCOVA was employed. The results revealed that, with controlling for the pre-test scores, there was a significant difference between the control and experimental groups in terms of self-disgust ($P = 0.001$, $F = 0.151$), physical appearance perfectionism ($P = 0.004$, $F = 8.830$), and self-esteem ($P = 0.001$, $F = 52.388$). In other words, the ISTDP has been helpful in reducing self-disgust and physical appearance perfectionism and increasing self-esteem in girls with AN. Considering the eta-squared index in both control and experimental groups, it can be inferred that 85% of the variance in the difference between the control and experimental groups in the SDS, 21% of the variance in the difference between the control and experimental groups in the PAPS, and 61% of the variance in the difference between the control and experimental groups in the RSES is attributed to the mutual effect of the independent variable, namely the ISTDP.

As shown in table 5, there was a significant difference between the average scores of the pre-test, post-test, and follow-up variables of self-disgust, physical appearance perfectionism, and self-esteem. This means that ISTDP significantly increased the post-test and follow-up scores compared to the pre-test stage as the descriptive findings also showed the change. Additionally, this change continued during the follow-up period.

Discussion

The present study aimed to investigate the effectiveness of ISTDP in reducing self-disgust and physical appearance perfectionism, and enhancing self-esteem in girls with AN. Our research shows that ISTDP is effective in treating these problems and gives us valuable information about how it can help people with AN. As Rocco et al. (2021) said, and the results showed, changes resulting from ISTDP were profound and seemed to resolve conflicts in the mind and structure of the person that could cause disorders. Finally, these results were maintained at follow-up, suggesting stability over time. Study of Nowoweiski et al. (2020) confirms that ISTDP could be a good option for treating these problems and might help to lessen the emotional distress that comes with ED in patients. ISTDP has ways to help people feel more motivated, handle anxiety better, and manage personality issues.

Table 4. The result of analysis of covariance (ANCOVA) for research variables

Variable	Source of variations	SS	df	MS	F	P-value	Eta
Self-disgust	Pretest	54.017	1	54.017	3.539	0.069	0.097
	Group	2.301	1	2.301	0.151	0.001	0.850
	Error	503.635	33	15.262			
Physical appearance perfectionism	Pretest	1.406	1	1.406	0.154	0.698	0.005
	Group	80.754	1	80.754	8.830	0.004	0.211
	Error	301.792	33	9.145			
Self-esteem	Pretest	14.303	1	14.303	5.237	0.029	0.137
	Group	143.978	1	143.978	52.388	0.001	0.614
	Error	90.127	33	2.731			

SS: Sum of squares; df: Degree of freedom; MS: Mean square

Table 5. Differences in two-by-two comparison of pre-test, post-test, and follow-up stages

Variable	Stage (I)	Stage (J)	Mean difference (I-J)	SE	P-value
Self-disgust	Pretest	Posttest	16.996	1.618	< 0.05
	Pretest	Follow-up	13.740	1.261	< 0.05
Physical appearance perfectionism	Pretest	Posttest	19.040	1.136	< 0.05
	Pretest	Follow-up	16.588	1.098	< 0.05
Self-esteem	Pretest	Posttest	-7.265	0.508	< 0.05
	Pretest	Follow-up	-5.757	0.563	< 0.05

SE: Standard error

The results of this study show that ISTDP may help girls with AN deal with their complicated emotions and thought processes. Our study showed that ISTDP could help people with AN feel less disgusted with themselves. Feeling really bad about yourself is connected to bad things like feeling sad, worried, and having trouble with eating (Orth & Robins, 2022). By focusing on feeling bad about oneself in therapy, we saw people's physical appearance and confidence got better. This shows that ISTDP may be very helpful in dealing with the main feelings and thoughts in AN. The big decrease in feeling disgusted with oneself goes along with the idea of ISTDP to help people feel their emotions and deal with hidden inner conflicts. It means that if people with AN work hard to deal with their negative feelings about themselves, they might feel better inside. Lilliengren et al. (2020) emphasized the growing evidence base for the effectiveness of ISTDP in addressing complex psychiatric conditions, including self-disgust.

The fact that people care less about looking perfect shows that ISTDP is good at changing beliefs that make you feel bad about yourself and your body. People with AN often feel like they have to look a certain way and be a certain weight because of society's beauty standards (van Eeden, van Hoeken, & Hoek, 2021). Our research shows that ISTDP can help people see themselves more realistically and accept themselves better, which could help improve their mental health. This might help individuals with a history of AN trying so hard to reach a perfect body that is impossible to achieve. This finding is in line with research of Hewitt et al. (2015), which dealt with the effect of ISTDP on perfectionism.

In addition, the study showed that ISTDP helped to improve the participants' self-esteem. Having low confidence is a common part of AN (Gaudiani, Bogetz & Yager, 2022), and it can cause problems like feeling nervous in social situations and not getting along well with others. Getting better in this area shows that the patient is starting to see themselves in a new way. By boosting self-esteem, ISTDP may enhance overall well-being and quality of life for individuals with AN. This means that ISTDP helps people feel better about themselves and be kinder to themselves. It can be especially helpful for people who have had AN and are very hard on themselves. This result is in line with the research conducted by Mehboodi et al. (2022), that looked at how ISTDP affected self-esteem.

More research with a specific type of study and checking in on people for a long time afterwards could prove that ISTDP therapy is more effective for AN. Furthermore, studying how the therapy affects different types of people and men with the disorder could help us understand better how it can be helpful.

Conclusion

Our study gives promising proof for the utilization of ISTDP in treating AN. We

found that ISTDP successfully diminished self-disgust and physical appearance perfectionism, and improved self-esteem in young ladies with AN. These findings have implications for the development of novel interventions tailored to the unique needs of individuals with AN. The present study, like other studies, has limitations. The study had a relatively small sample size, with only 20 participants in the ISTDP group and 20 participants in the control group and relied on self-report measures to assess changes in self-disgust, physical appearance perfectionism, and self-esteem. This limits the generalizability of the findings to a larger population. Present study only had a 3-month follow-up period, which may not be sufficient to assess the long-term effects of ISTDP on the participants. This study only included girls with AN, which limits the applicability of the findings to other populations, such as boys and individuals with other EDs. Future studies could explore the efficacy of ISTDP in a more diverse population, and should continue exploring the potential benefits and limitations of ISTDP, as well as identifying predictors of response to this therapeutic approach. Ultimately, our work highlights the importance of addressing the complex emotional and cognitive aspects of AN to improve treatment outcomes.

Conflict of Interests

Authors have no conflict of interests.

Acknowledgements

All the participants in this research are thanked and appreciated.

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