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Association between attitudes towards body image, negative emotions about one's own body and self--state representations in a clinical sample of eating disordered women

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Summary

Aim. The purpose of the study was to assess the body image disturbance in patients with eating disorders.

Methods. The clinical samples include 25 women with anorexia nervosa, 25 with bulimia nervosa and 30 normal weight women. All participants were assessed with the Body Attitude Test, the Body Dissatisfaction Scale and the Contour Drawing Rating Scale and their clinical and sociodemographic features were recorded.

Results. In patients with anorexia ideal self, that is one's representation of the attributes that someone would like the person to possess (the patient's perspective), is less pathological compared to the patients with bulimia. However, the ought self, that is, one's representation of the attributes that someone believes the person should possess (the perceived perspective of family and friends), is more pathological in group with anorexia nervosa.

Conclusions. The correlations between the examined variables of body image, as well as the results of a structural analysis using PRINCALS, were interpreted at the light of the state-of-the-art in body image disturbance. Results are discussed on the background of social comparison literature.

body image disturbance / self-discrepancy / anorexia nervosa / bulimia nervosa

INTRODUCTION

From the historic perspective, research literature on body image is rooted in Schilder's neuropsychological investigation of the "body schema" [1] and in Fisher's psychodynamic conception of "body image boundaries" [2]. The last decade of the twentieth century focussed on body image disturbance [3], whereas more recent approaches stress the multidimensional complexity of body image, as well as the lack of theoretical and empirical integration [4]. Currently, new conceptual constructs are appearing in literature. Body image includes perceptual (e.g. body size estimation), cognitive (thoughts and beliefs about the body), affective (feelings about one's own body; e.g. body dissatisfaction), and behavioural components (e.g. body checking) [5].

The construct named 'body attitudes' has three facets: evaluation effect (evaluative thoughts and beliefs about one's appearance), discrete emotional body experiences and investment, which

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means the importance of appearance and the behaviours intended to keep or improve it [6]. A lot of contemporary theories regard body dissatisfaction to be the most direct or proximal antecedent to the development of eating disorders. In our study we have used Garner's et al. [7] definition, according to these authors body dissatisfaction indicate the belief that specific parts of the body associated with shape change or increased "fatness" at puberty are too large (e.g. thighs, hips, buttocks).

As part of this research, we paid attention to a particular dimension of the self-discrepancy theory [8] which provides a structure for understanding representations of the self and the consequences of inconsistent self-beliefs. The theory identifies three domains of self-state representations: the actual self - which include the attributes that people believes they actually possesses, the ideal self - which contains the attributes that people would like to possess; the ought self - which includes the attributes that people believe they should possess. Discrepancy between the actual self and the ideal self (the actual-ideal discrepancy) produces dejection-related emotions (e.g. sadness, disappointment, dissatisfaction, hopelessness), whereas the actual-ought self discrepancy produces agitation-related emotions (e.g. apprehension, threat, uneasiness, tension, nervousness) [9]. Research on self-discrepancy and disordered eating patterns suggests that the actual-ought self-discrepancy is especially important in the prediction of dieting and anorexic symptoms, while the actual-ideal self-discrepancy is especially important in the prediction of bulimic symptoms [10]. In a psychodynamic perspective, one could say that patients with anorexia are rather dominated by their Superego, whereas patients with bulimia are more dominated by their Ego Ideal as defined classically by Psychoanalysis and Ego Psychology.

The objective of the present study was to analyse the relationship between body attitude, self-state representations and body dissatisfaction in a sample of women with eating disorders and normal weight control comparison group. An interaction effect is postulated between body dissatisfaction and experience and attitude toward one's body on the one hand, and self-state representations on the other. More specifically, the following hypotheses are put forward:

H1: A positive link will be found between dissatisfaction with one's own body and body attitudes in women with anorexia and bulimia nervosa.

H2: A positive link will be associated between body dissatisfaction and self-state representations in women with eating disorders.

H3: Both clinical subgroups will differ on the level of structural personality organisation. Multidimensional analysis will show typical patterns of functioning in relationship with defence mechanisms.

PARTICIPANTS

Participants were composed of three groups of females (see Tab. 1 – *next page*). The first was a clinical group of 25 patients with anorexia nervosa (8 patients with anorexia restricting type and 17 patients with anorexia binge eating/purging type). The second was a clinical group of 25 female with bulimia nervosa (5 patients with bulimia non purging type and 20 patients with bulimia purging type). Diagnoses were based on DSM-IV-TR [11] via interview. The third was a no clinical group of undergraduate women without a current eating disorder. All participants were agreed to participate in present study (participation in our study was completely voluntary).

MEASURES

Contour Drawing Rating Scale - the CDRS [12] consists of nine female (for female participants) and nine male (for male participants) contour drawings of graduated sizes (figure 1 = the thinness; figure 9 = the largest). In this study, instruction for choice of body size were: "to circle the body type that presents your current figure" (actual self), "to circle the body type that presents your ideal figure" (ideal self) and "to circle the body type that presents the figure woman should have" (ought self).

Body Attitude Test – the BAT [13] is a self-report questionnaire to assess the distorted body experience of female patients with eating disordered. This method measures concern about the

Table 1. Characteristics of the patients with eating disorders and normal weight women

Variable	Anorexia nervosa patients	Bulimia nervosa patients	Normal weight women	Anorexia patients compared with bulimia patients		Anorexia patients compared with normal weight women		Bulimia patients compared with normal weight women	
	M ± SD	M ± SD	M ± SD	Mann-Whitney U		Mann-Whitney U		Mann-Whitney U	
				z	p	z	p	z	p
Age	200.08 ± 20.99	210.16 ± 20.86	190.43 ± 10.03	-10.32	0.184	-10.41	0.157	-20.80	0.005
Body Mass Index	170.55 ± 10.71	200.83 ± 20.81	200.52 ± 20.19	-40.26	0.001	-40.57	0.001	-0.16	0.872
Duration of eating disorder (in years)	40.00 ± 40.12	20.55 ± 20.31	–	-0.435	0.664	–	–	–	–

negative appreciation of body size (e.g., "I think I'm too thick"), lack of familiarity with one's own body (e.g. "My body appears as if it is not mine") and general body dissatisfaction (e.g., "I envy others for their physical appearance"). The Body Attitude Test consists of 20 items to be scored on a 6-point scale (always–usually–often–sometimes–rarely–never) from 5 to 0 (with the exception of two negatively keyed items). The maximum total score is 100. The higher the score is, the more deviating is the body experience.

Body Dissatisfaction Scale – the EDI-Body Dissatisfaction subscale [7] measures feelings about one's body. It consists of 9 items related to satisfaction with size and shape of specific parts of the body (e.g., "I think that my thighs are too large") to which participants respond using a 6-point scale (from always to never). Higher scores indicate more elevated body dissatisfaction.

METHODS USED IN STATISTIC ANALYSIS

As we worked with small samples and with data belonging to mixed levels of measurement, we used non parametric statistical procedures. With these procedures, there are no restrictive conditions linked to the shape of distribution . We present the results of a comparative study of the clinical subgroups, based on Mann Whitney's U-Test, followed by a multidimensional study using Optimal Scaling, as the mathematical conditions for the use of Factor Analysis are not met.

In order to extract latent dimensions, we applied the Non Linear Principal Components Analysis (PRINCALS) to our clinical groups. If the combination of research tools we choose for this study was pertinent, this procedure should give us psychologically plausible results at the light of the state-of-the-art on body image disturbance. We show the three dimensional solution that meets the eigenvalue criterion>1/ N [14].

RESULTS

Comparative study

The means and standard deviations for the self-representations, subjective body experience, attitude towards one's body, dissatisfaction with one's body, as well as the results of Mann–Whitney's U-Tests, in eating disorder patients and normal weight women appear in Tab. 2 (*see next page)*.

The correlations (Spearman's rank correlation coefficient) between the body attitude and other variables in patients with anorexia and bulimia nervosa are presented in Tab. 3 (*see next page)*.

Multidimensional study: PRINCALS

With patients with anorexia nervosa
Tab. 4 (*see next page*).

Proposed denomination of dimensions:

Dimension 1 (α=0.758): Negative appreciation of actual self/ought self
Dimension 2 (α=0.377): Imaginary representation of body/emotional attitude towards real body
Dimension 3 (α=0.240): Idealistic goal/realistic goal

With patients with bulimia nervosa
Tab. 5 (see *page 41*).

Table 2. Comparison between self-state representations, attitudes towards one's own body and body dissatisfaction in experimental and control groups

Variable	Anorexia nervosa patients	Bulimia nervosa patients	Normal weight women	Anorexia patients compared with bulimia patients		Anorexia patients compared with normal weight women		Bulimia patients compared with normal weight women	
	M ±SD	M ±SD	M ± SD	Mann-Whitney U		Mann-Whitney U		Mann-Whitney U	
				z	p	z	p	z	p
Actual self	50.20 ± 20.00	50.40 ± 10.70	40.46 ± 10.40	-0.434	0.665	-10.50	0.133	-20.21	0.026
Ideal self	10.40 ± 00.57	20.24 ± 10.09	30.68 ± 00.98	-30.04	0.002	-60.22	0.001	-40.41	0.001
Ought self	40.88 ± 10.85	30.60 ± 10.52	40.00 ± 10.18	-20.48	0.013	-10.93	0.053	-0.948	0.343
Negative appreciation of body size	260.13 ± 70.47	260.72 ± 50.24	110.25 ± 80.37	-0.25	0.796	-30.43	0.001	-40.18	0.001
Lack of familiarity with one's own body	210.48 ± 50.83	200.96 ± 50.26	110.75 ± 70.10	-0.29	0.77	-30.97	0.001	-40.04	0.001
General body dissatisfaction	140.17 ± 40.10	140.76 ± 30.81	70.50 ± 60.92	-0.34	0.73	-30.12	0.002	-30.36	0.001
Body dissatisfaction	200.75 ± 50.88	200.16 ± 60.40	50.77 ± 50.45	-0.15	0.88	-50.70	0.001	-50.59	0.001

Table 3. Rank Correlations between the body attitude and other variables in patients with eating disorders

Patients with anorexia nervosa							
	1	2	3	4	5	6	7
10. Negative appreciation of body size		0.46 *	0.44 *	0.48*	0.43	-0.07	0.56 **
20. Lack of familiarity with one's own body			0.58 **	0.05	-0.19	-0.09	0.17
30. General dissatisfaction				0.19	0.05	-0.30	0.30
40. Actual self					0.19	0.23	0.47 *
50. Ideal self						-0.30	-0.21
60. Ought self							-0.01
70. Body dissatisfaction							
Patients with bulimia nervosa							
10. Negative appreciation of body size		0.67**	0.73 **	0.20	-0.29	-0.37	0.72 **
20. Lack of familiarity with one's own body			0.86**	0.17	-0.51 *	-0.44 *	0.67 **
30. General dissatisfaction				0.10	-0.47 *	-0.55 **	0.68 **
40. Actual self					0.20	0.18	0.39 *
50. Ideal self						0.42 *	-0.50 *
60. Ought self							-0.26
70. Body dissatisfaction							

Note: ** p<0.01 ; * p<0.05

Table 4. Component Loadings (Cronbach's total Alpha: 0.958) – patients with anorexia nervosa

Variable	Dimension		
	1	2	3
Actual self	-0.114	706	0.620
Ideal self	-0.463	-0.275	0.790
Ought self	-0.822	0.490	-0.169
Negative appreciation of body size	0.898	-0.113	0.295
Lack of familiarity with one's own body	0.706	0.585	-0.175
General body dissatisfaction	0.821	-0.478	0.129
Body dissatisfaction	0.596	0.732	0.082

Table 5. Components Loadings (Cronbach's total Alpha: 0.983) – patients with bulimia nervosa

Variable	Dimension		
	1	2	3
Actual self	0.400	836	-0.013
Ideal self	0.176	0.411	0.787
Ought self	-0.358	0.369	-0.679
Negative appreciation of body size	0.907	0.022	0.088
Lack of familiarity with one's own body	0.635	-0.611	0.017
General body dissatisfaction	0.819	-0.156	-0.248
Body dissatisfaction	0.799	0.278	-0.332

Proposed denomination of dimensions:

Dimension 1 (α=0.806): Emotional attitude towards real body/imaginary representation of body
Dimension 2 (α=0.563): Realistic goal/idealistic goal
Dimension 3 (α=0.178): Negative appreciation of actual self/ought self

The results of the structural analysis are meaningful at the light of the state-of-the-art in clinical psychology focused on eating disorders and body image disturbance [4, 15]. The general content of the latent dimensions is similar in the two clinical groups, but they appear in another order, contributing with a different weight to the general variance. Let us stress one important difference: with patients with bulimia, in dimension 3, the negative feelings connected with the actual self are under the impact of the ideal self, whereas, with patients with anorexia, in dimension 1, those feelings are rooted in the subjective body experience and in perceptual distortions.

DISCUSSION

The results of the present study show that patients with anorexia nervosa has higher scores for ought self and lower scores for ideal self than those with bulimia nervosa. Indeed, in patients with eating disorders ideal self is more pathological compared to women without eating disorders. In both figures of women suffering from anorexia and bulimia, the idealised body was definitely slimmer than their perceived body image with an affective distortion. It should be emphasised that, in the examined clinical groups, the realistic assessment of perceived body image turned out to be incommensurate with the real appearance. In addition, the examined patients with eating disorders perceive their own silhouette as stouter, even if their body mass index is underweight (in case of anorexic patients) or is in the normal range (in case of bulimia).

The current study shows that patients with anorexia and bulimia nervosa overestimate their body size and shape. The present research affirms the study by Guardia et al. [16] who found that body overestimation in anorexia nervosa could be a barely 'state of mind' – a false belief resulted in psycho-affective factors and limited to the aesthetic-emotional body representation: the body image. Alternatively, it could reflect abnormal neural processing of the embodied self which disturbs the representation of the body in action, i.e. the body schema. The authors [16] point out that the "predicted" body schema provoked by a mentally simulated action is overestimated in anorexia nervosa and that overestimation is accentuated with disease duration. It is one thing to represent oneself as larger and another to change one's actual or anticipate behaviour due to this.

However, Benninghoven et al. [17] conclude that the overestimation in patients with anorexia nervosa may lend them a hand, keeping a subjectively non-pathological image of their body by negating their severe underweight. In women with bulimia, on the other hand, overestimation leads to a subjectively pathological image by negating the normality of the body.

Our study proves that women with eating disorders present negative body experiences. In both anorexia and bulimia nervosa, patients show similar attitude towards their bodies – they

express more concern about body shape and feelings of being overweight (negative appreciation of their bodies size), greater lack of familiarity with their bodies and higher levels of body disparagement (general body dissatisfaction) in comparison with the control group. Other studies showed that women with eating disorders compared to women without eating disorders are more dissatisfied with their bodies [3, 4, 18] and show more negative subjective body experience and attitude towards their bodies [13, 19, 20, 21, 22]. Kashima et al. [22] reported that eating disordered patients, especially bulimic patients, have strong negative feelings toward their own body, indicating that women with bulimia had the most distorted and most negative body image. Scagliusi et al. [23] found that 'disparagement' (an intense loathing of the body) was the most distinguishing feature between eating disordered and non-clinical women. Only among the eating-disordered group the feeling fat score was more associated with disparagement than with body mass index. This suggests that more than actually being fat, feeling fat is associated with self-loathing. This may indicate that there is an interaction between a perceptual distortion (feeling fat when body mass index is normal) and a negative body attitude (body disparagement). Body image disturbance in patients with eating disorders is a problem of processing self-referential information regarding body image, but not a problem of processing body image related information in itself. Rating one's own perceived and desired body image highly activates self-schemata related to body size and shape. In females with eating disorders this leads to typical cognitive distortions, such as body dissatisfaction and body size misperception [17].

Our results have confirmed our hypotheses. In both patients with anorexia and bulimia nervosa increased general body dissatisfaction was related to increased negative appreciation of body size and increased lack of familiarity with one's own body. In patients with anorexia increased body dissatisfaction is related to increased actual-self and negative appreciation of body size. However, in patients with bulimia the higher the ideal self, the less general dissatisfaction and less lack of familiarity with one's own body there are. Indeed, the higher the ought self, the less negative appreciation of body size, less lack of familiarity with one's own body and less general dissatisfaction there are. The results of the multidimensional analysis show typical configurations related to the clinical subgroups and stress the difference between the functions of ideal self and ought self in the psychic economy. With bulimic patients, the impact of the ideal self, which, according to many authors, has a compensatory function, linked to an ancient narcissistic wound, seems to be especially important, resulting in a chronic open dissatisfaction. With anorexic patients, who are rather influenced by their ought self and tend to control their eating behaviour, general dissatisfaction is rather split up or hidden under an increased activity and agitation. The fundamental defence mechanisms and coping strategies are not the same in the two clinical groups as bulimic patients suffer from a chronic emotional instability, whereas anorexic patients maintain their emotional stability by scotomising parts of their psychic functioning [15].

Even if our results cannot be generalised, due to the small size of our samples, our conclusions open tracks for future action research in the realm of therapeutic interventions.

CONCLUSION

The results of the present study indicate that therapeutic work with women suffering from eating disorders, in terms of negative body image, should focus on negative body attitude and on body dissatisfaction. The chronic dissatisfaction with one's body shape can act as a permanent psychic stressor, leading to a state which may be compared to the recently identified Post-traumatic Embitterment Disorder (PTED). This disorder may be present in people who were victims of injustice several times in their life course. For this state, the most efficient psychotherapy consists in helping the patient acquiring wisdom [24]. This new approach touches the realm of values and is based on cognitive and emotional restructuring. Another promising approach in the treatment of eating disorders could be art psychotherapies. Unlike verbal psychotherapy, these methods are rooted in bodily sensations and act on the level of body awareness. Personal evaluation studies showed that, with various clinical subgroups, arts psychotherapies favour

the imaginary and symbolic elaboration of intra psychic tensions and can lead to the gradual integration of the split parts of the Self [25]. Thus, it would be an interesting perspective for treatment and research to combine the arts therapeutic approach with the wisdom approach. This assumption should be tested in future research.

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NR 1 (156) 2011

CONTENT