

Body dissatisfaction and social physique anxiety in anorexia : which factor predicts problematic eating behaviour?

Mandy Rossignol*, PhD, Aurelia Rendon de la Cruz, MSc, Alice Bodart, MSc

Cognitive Psychologie & Neuropsychology Department, Université de Mons, Mons, Belgium

* Presenting & corresponding author (mandy.rossignol@umons.ac.be)

1. Introduction

- Body dissatisfaction (BD):** negative perception of one's own body, often marked by an overestimation of body size and excessive concerns about weight and shape (Cash & Smolak, 2011).
- Risk factor for anorexia nervosa (AN):** low appearance-related self-esteem → restrictive behaviors to reach ideal body.
- Link with body dysmorphic disorder (BDD):** AN may be associated with a distorted body perception similar to that observed in BDD (Phillippou et al, 2019).
- AN is often linked to the fear of being judged negatively based on physical appearance → **Social physique anxiety (SPA)**, Hart et al, 1989).
- These factors (BD, BDD, SPA) play a central role in the emergence and persistence of AN.
- Study aim:** examine relationships between these constructs in women with and without AN.

2. Methods

Participants:

- 45 women diagnosed with AN (aged 18–30) ;
- 61 control women matched for age and socio-cultural level.

Measures:

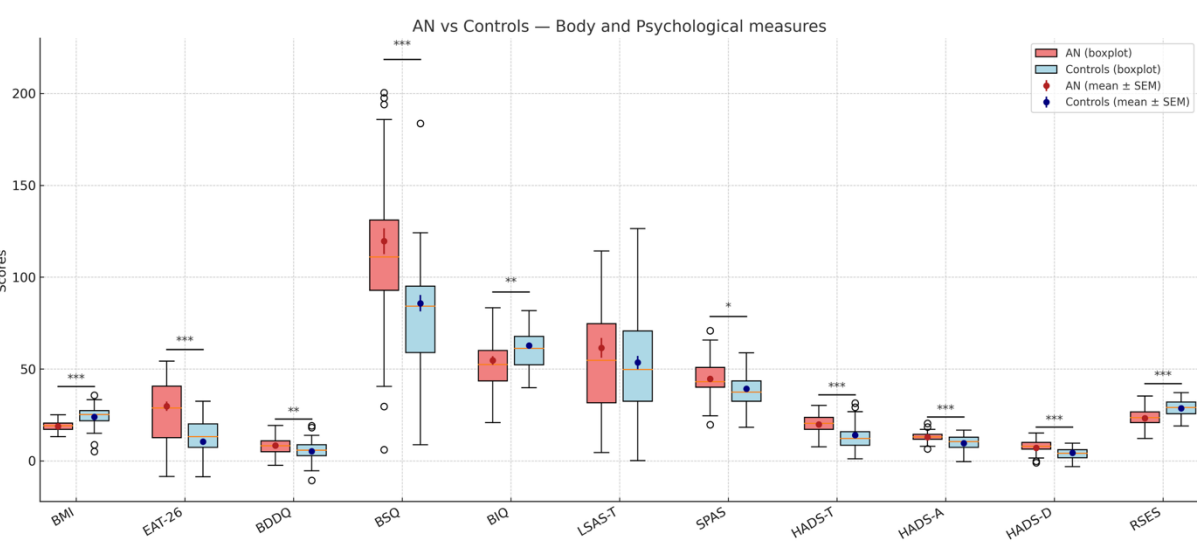
- Body Mass Index (BMI)** : weight (kg)/ height² (m²)
- Eating behavior** : Eating Attitudes Test (EAT-26, Garner et al, 1982)
- Body concerns** : Body Dysmorphic Disorder Questionnaire (BDDQ; Phillips, 1995)
- Body dissatisfaction** : Body Shape Questionnaire (BSQ; Cooper et al., 1987)
- Body satisfaction** : Body Image Questionnaire (BIQ; Bruchon-Schweitzer, 1987)
- Social physique anxiety** : Social Physique Anxiety Scale (SPAS; Hart et al., 1989)
- Social anxiety**: Liebowitz Social Anxiety Scale (LSAS; Liebowitz, 1987)
- Anxiety and depression**: Hospital Anxiety and Depression Scale (HADS; Snaith & Zigmond, 1983)
- Self-esteem**: Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965)

3. Results

A. Mean comparisons

As compared to healthy control women,

- AN women had significantly lower BMI and reported significantly more eating problems.

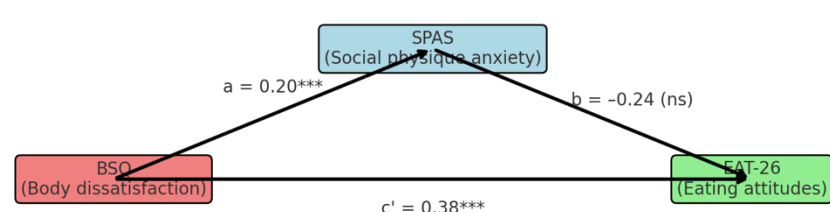


- They reported **higher body dissatisfaction, body concerns, depression and anxiety** as well as **social physique anxiety**.
- They had **lower body satisfaction** and **self-esteem**.
- The two groups did not differ in terms of social anxiety, except for items related to eating or drinking in public.

C. Mediation analysis (PROCESS, Model 4; Hayes, 2022)

- X (Predictor):** BSQ ; **M (Mediator):** SPAS ; **Y (Outcome):** EAT-26
- Method:** Bootstrapping (5000 samples, 95% CI) to test indirect effects

Mediation model: BSQ → SPAS → EAT-26



→ EAT-26 is directly predicted by BSQ, not mediated by SPAS.

B. Correlations and regression analyses

- BMI:** ↑ self-esteem & body satisfaction; ↓ HADS anxiety & EAT-26.
- Body concerns (BDDQ), SPA & BSQ:** strongly interrelated; linked to EAT-26 and anxiety/depression.
- Social anxiety (LSAS):** associated with ↑ body concerns, SPA, eating problems, and HADS symptoms.
- Self-esteem (RSES):** low with ↑ anxiety, body concerns, and EAT-26.
- SPAS** : moderately correlated with anxiety and depression **but unrelated to BMI** → reflects subjective perception, not actual weight.
- Stepwise multiple regression analysis on EAT-26** :
 - Step 1 – Body dissatisfaction (BSQ) explained 64% of variance ($R^2 = .64$, $F(1,83) = 147.8$, $p < .001$).
 - Depression ($\Delta R^2 = .09$) and BMI ($\Delta R^2 = .04$) were added in Step 2 and 3. → Body dissatisfaction is the central predictor of disordered eating, while depression and low BMI act as aggravating factors.
- BSQ was also the only predictor of BDDQ scores ($F(1,83) = 235.8$, $p < .001$) while SPAS were predicted by BSQ and LSAS ($R^2 = .74$, $F(1,83) = 116.6$, $p < .001$).

Correlation Matrix with Significance (Abbreviated Scales)

	BMI	EAT-26	LSAS	HADS_Total	HADS_Anxiety	HADS_Depression	SPAS	BIQ	BDDQ	BSQ	RSES
BMI	1.0	-0.33**	-0.18	-0.31**	-0.36**	-0.16	-0.05	0.16	-0.14	-0.09	0.31**
EAT-26	-0.33**	1.0	0.31**	0.64**	0.54**	0.57**	0.63**	0.63**	0.62**	0.81**	-0.53**
LSAS	-0.18	0.31**	1.0	0.41**	0.44**	0.25*	0.53**	-0.46**	0.46**	0.45**	-0.51**
HADS_Total	-0.31**	0.64**	0.41**	1.0	0.88**	0.85**	0.39**	-0.51**	0.47**	0.40**	-0.55**
HADS_Anxiety	-0.36**	0.54**	0.44**	0.88**	1.0	0.51**	0.39**	-0.46**	0.44**	0.45**	-0.56**
HADS_Depression	-0.16	0.57**	0.25*	0.85**	0.51**	1.0	0.26*	-0.52**	0.38**	0.37**	-0.38**
SPAS	-0.05	0.63**	0.53**	0.39**	0.39**	0.26*	1.0	-0.51**	0.72**	0.84**	-0.52**
BIQ	0.16	-0.63**	-0.46**	-0.51**	-0.46**	-0.52**	-0.51**	1.0	-0.59**	-0.59**	0.51**
BDDQ	-0.14	0.62**	0.46**	0.47**	0.44**	0.38**	0.72**	-0.59**	1.0	0.86**	-0.56**
BSQ	-0.09	0.81**	0.45**	0.40**	0.46**	0.37**	0.84**	-0.59**	0.86**	1.0	-0.58**
RSES	0.31**	-0.53**	-0.51**	-0.55**	-0.56**	-0.38**	-0.52**	0.51**	-0.56**	-0.58**	1.0

4. Discussion

- Body dissatisfaction is a central process in AN, underpinning both body concerns and problematic eating behaviours :
→ Body dissatisfaction → desire to change one's appearance that can motivate restrictive or compensatory behaviours
- Social physique anxiety does not mediate this relation but may result from the onset of body dissatisfaction and concerns and amplify the distress.
- Need to assess the effectiveness of therapeutic interventions on these processes.