Unravelling body image in anorexia nervosa using virtual selves

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The primary objective of the current study is to investigate whether self-disgust is heightened in patients with AN. If this indeed is the case, this would provide important leads to improve existing treatment options for AN.

Ethical review	Approved WMO
Status	Recruiting
Health condition type	Eating disorders and disturbances
Study type	Observational non invasive

Summary

ID

NL-OMON53206

Source
ToetsingOnline

Brief title
VR body image assessment in anorexia

Condition

- Eating disorders and disturbances

Synonym
eating disorder; anorexia nervosa

Research involving
Human

Sponsors and support

Primary sponsor: Accare, kinder- en jeugspsychiatire
Source(s) of monetary or material Support: NWO

Intervention

Keyword: anorexia nervosa, body image, virtual reality

Outcome measures

Primary outcome

By briefly (i.e., 4 x 10 seconds) exposing individuals with and without AN toward a personalized avatar in Virtual Reality (VR) with overweight, we will determine in real-time whether indeed self-disgust is characteristic of AN. Facial electromyography (fEMG) will be used to assess psychophysiological disgust responses with the levator labii as the classic index of disgust. Self-reported state levels of disgust will be assessed with visual analogue scales.

Secondary outcome

• Fear of food intake indexed with the Anxiety about eating subscale of the Fear of Food Measure

• Food intake expectancy indexed with the Weight gain estimation task

Study description

Background summary

Investigating specific factors contributing to the development and maintenance of anorexia nervosa (AN) is important to inform treatment options, especially because relapse rates are high in this population. So far, prior interventions targeting food restriction in AN have focused on the reduction of fear of food intake. We recently developed a theoretical model incorporating key mechanisms of existing theories and described how body-related self-disgust can play a central role in the onset and maintenance of AN. Because treatments currently do not specifically address self-disgust, this could explain why their effectiveness is often limited on the long term: residual levels of self-disgust after treatment could make individuals vulnerable to relapse. To

effectively reduce disgust, habituation via prolonged exposure is considered critical to weaken the intrinsically revolting nature of disgust-eliciting objects. However, it is only justifiable to start testing such a new interventional approach, after the validity of the underlying theoretical model has been thoroughly investigated.

Study objective

The primary objective of the current study is to investigate whether self-disgust is heightened in patients with AN. If this indeed is the case, this would provide important leads to improve existing treatment options for AN.

Study design

This study will use an observational design (case-control study).

Study burden and risks

In this observational study participants will be asked to fill out seven questionnaires, engage in a VR free-viewing task during which fEMG responses are being recorded, and perform two computer tasks. In total, the time investment will be approximately 105 minutes. The study might elicit negative affect in the short term in the patient group, due to the brief presentation of eating disorder relevant stimuli. Because all patients will be in treatment at the time of the study, any negative effects of the study can be discussed with their therapists. Since individuals with heightened levels of eating disorder symptoms are excluded from participation in the comparison group and on basis of positive experiences with prior studies in which we included adolescent girls in a comparison group for a study regarding disgust and eating disorder symptoms, we do not expect that the current study will have any negative effect on participants in the comparison group, and if so, we expect this to be only temporary. The study is expected to advance our understanding of the persistence of food restriction in individuals with AN. Although several studies so far have linked disgust to AN, it remains entirely unclear what exactly elicits disgust in individuals with AN. By studying disgust responses in real-time, the current study will help to get insight into the exact nature of disgust in AN which will help to determine what might be important targets for treatment.

Contacts

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Trial sites

Listed location countries

Netherlands

Eligibility criteria

Age
Adolescents (12-15 years)
Adolescents (16-17 years)
Adults (18-64 years)

Inclusion criteria

Inclusion criteria for the patient group:
• In treatment at the Department of Eating Disorders of Accare
• Having a current formal diagnosis of anorexia nervosa according to DSM-5 criteria
• Aged 12 to 19 years old
• Female gender
• Being cognitively able to take part in the study, as judged by their therapist

Inclusion criteria for the comparison group:
• Aged 12 to 19 years old
• Female gender
• Having a healthy weight. The TNO (2010) BMI for age growth curve will be used to determine an age adjusted BMI range which corresponds with adult BMI classifications for a healthy weight (i.e., BMI between 18,5 and 24,9).

Exclusion criteria

A potential participant who meets any of the following criteria will be excluded from participation in this study:
• Aged > 19 years
• Aged < 12 years
• Not being able to speak and read Dutch
• Not being able to do the experiment without glasses

Additional exclusion criteria for the patient group:
• Being medically unstable and/or admitted to the hospital
• Being in an acute crisis (e.g., due to suicidality or substance abuse)

Additional exclusion criteria for the comparison group:
• Having heightened levels of eating disorder symptoms (EDE-Q >= 4; Mond, Hay, Rogers & Owen, 2006).
• Being underweight (age adjusted BMI below norms for a healthy weight) or overweight (age adjusted BMI above norms for a healthy weight).

Study design

Design

Study type:	Observational non invasive
Intervention model:	Other
Allocation:	Non-randomized controlled trial
Masking:	Open (masking not used)
Control:	Active
Primary purpose:	Basic science

Recruitment

NL

Recruitment status:	Recruiting
Start date (anticipated):	08-10-2024
Enrollment:	144
Type:	Actual

Ethics review

Approved WMO Date:	06-10-2023
Application type:	First submission
Review commission:	METC Universitair Medisch Centrum Groningen (Groningen)
Approved WMO Date:	13-06-2024
Application type:	Amendment
Review commission:	METC Universitair Medisch Centrum Groningen (Groningen)

Study registrations

Followed up by the following (possibly more current) registration

No registrations found.

Other (possibly less up-to-date) registrations in this register

No registrations found.

In other registers

Register	ID
CCMO	NL84582.042.23