The *Outfit Choice Task* as a novel method for measuring body dissatisfaction in women with eating disorders and healthy controls

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Abstract

Background: Body dissatisfaction is a key feature of eating disorders. It is measured using questionnaires asking about satisfaction with body parts, or how feelings about weight and shape influence behaviour. Qualitative research finds that women most frequently use clothing to manage their appearance.

Methods: We designed an *Outfit Choice Task* to assess clothing choice. We compared it with existing measures of body dissatisfaction in: Study 1, (online study of 244 women); Study 2 (face-to-face study of 93 women); and Study 3 (case-control study of 30 women with, and 30 without, a diagnosed eating disorder).

Results: The *Outfit Choice Task* factor analysed into five factors comprising different types of outfit. Scores were strongly associated with existing measures of body dissatisfaction, after adjusting for Body Mass Index and age. Mean scores were lower (greater dissatisfaction) in those with an eating disorder (4.22 (95% 3.91, 4.52)) than controls (5.35 (95% CI 5.05, 5.64)).

Discussion: The *Outfit Choice Task* provides a novel way of measuring body dissatisfaction. Since women are most likely to use clothing to manage concerns with their appearance, this scale is likely to be very relevant to women, and has potential use for measuring change in body dissatisfaction.

Introduction

Body dissatisfaction is a precursor to developing disordered eating behaviours (Micali et al., 2015; Neumark-Sztainer, Paxton, Hannan, Haines, & Story, 2006; Sonnevile et al., 2012) and full eating disorders (Stice, Marti, & Durant, 2011). Such dissatisfaction often remains despite treatment for eating disorders, even when disordered eating behaviours have resolved and weight has returned to the normal range (Engel & Keizer, 2017; Exterkate, Vriesendorp, & de Jong, 2009). Residual body dissatisfaction predicts relapse to eating disorders (Jacobi, Hayward, de Zwaan, Kraemer, & Agras, 2004; Stice et al., 2011). Cognitive-behavioural models of eating disorders conceptualise over-evaluation of (and dissatisfaction with) shape and weight as a core belief underlying disordered behaviours of fasting, over-exercise and purging (C. G. Fairburn & Harrison, 2003). Body dissatisfaction is also associated with subsequent overweight and obesity (Quick, Wall, Larson, Haines, & Neumark-Sztainer, 2013; van den Berg & Neumark-Sztainer, 2007), and with subsequent depression (Paxton, Neumark-Sztainer, Hannan, & Eisenberg, 2006). Body Dissatisfaction has been identified as a key target area for novel interventions (Image, 2012).

Multiple methods for assessing body dissatisfaction have been developed. These generally involve questionnaire measures asking participants how satisfied they feel with various body parts (e.g., Body Shape Satisfaction Scale (Pingitore, Spring, & Garfield, 1997)) or how their feelings about their shape and weight influence their behaviour (e.g., Shape and Weight subscales of EDE-Q (C. G. Fairburn & Beglin, 1994)). These questionnaires have good data demonstrating their validity and reliability (C. G. Fairburn & Beglin, 1994; Neumark-Sztainer et al., 2006; Pingitore et al., 1997), but there are limitations to questionnaire measures. These include the possibility that subjects may intentionally conceal their true views by responding in a way that they see as being socially acceptable or as adhering to social norms, and that people may lack insight into their own beliefs, which can be a problem both generally (Nisbett & Wilson, 1977) and specifically in people with eating disorders (Konstantakopoulos, Tchanturia, Surguladze, & David, 2011).

One relatively unexplored method of studying satisfaction with own body size is to measure behavioural outcomes associated with body dissatisfaction. An important but under-researched part of women's "appearance management" (Tiggemann & Lacey, 2009) is their choices about what clothes to wear. Qualitative studies find that women use clothing to hide or accentuate areas of their bodies (Ridgway, Parsons, & Sohn, 2017). Cross-culturally, amongst both Chinese and American women, "clothing" is the most frequently used strategy to manage appearance, ahead of exercise and diet, and in both groups women report using clothing to "cover body parts they found less satisfactory" (p155) (Wu, 2016). Women are more likely to choose more closer fitting or revealing clothes when they feel more confident with their bodies (Grogan, Gill, Brownbridge, Kilgariff, & Whalley, 2013); and women who view themselves as overweight are more likely to report using clothing as "camouflage" (Tiggemann & Andrew, 2012). A quantitative measure of clothing choice would offer the opportunity to study women's satisfaction with their appearance in a way that is directly relevant to their day-to-day life, making it potentially easier to answer than somewhat theoretical questions asking them to score how satisfied they are with individual body parts. Since there is also some evidence that clothing choice is changed more frequently than exercise or diet (Wu 2016), such a measure may also be more sensitive to early change in body satisfaction.

We therefore designed a novel way to measure body dissatisfaction using a range of outfits, the *Outfit Choice Task*. This paper describes the development of this measure, and its associations with existing measures of body dissatisfaction and eating disorders in three studies: (1) an online study of 244 women, (2) a face-to-face study of 93 women and (3) a case-control study of 30 women with and 30 without a diagnosed eating disorder.

Study 1

Material and Methods

Outfit Choice Task: Scale Creation and Rating

We created a set of 60 images of different outfits, which varied in how close-fitting or revealing they were of different parts of the body, and in how much they would provide “camouflage” for the wearer. Images of items of clothing were found online and used to create a set of images of varying types and styles of outfits that might be worn in a variety of different settings, including swim/beach wear, sportswear, casual clothes, work outfits and “party” outfits. We used a “screen grab” tool to copy images of a range of items of clothing, and these images were pasted together to create a set of 60 different outfits, all modified to be of the same size. In order to enable respondents to focus on the shape of the clothes, rather than being distracted by other features, all outfits chosen were black. The images were informally piloted with a group of female colleagues in the Department of Psychiatry, University of Oxford, and images which were viewed as being odd, or where the style of the outfit was generally disliked, were removed. The images are shown in Figure 1.

At the beginning of the task, participants were given the instruction: “Please look briefly at each of the following outfits and decide how comfortable you would feel wearing each of them in an appropriate public setting. Score from 1 (not at all comfortable) to 7 (very comfortable). You will be shown this range alongside each outfit. Please enter your score using the numbers on your keyboard.” Participants were then shown each of the 60 outfits in a randomised order, and for each outfit were asked: “How comfortable with your body would you feel wearing this outfit in an appropriate public setting?” from 1 (not at all comfortable) to 7 (very comfortable).

Participants

Participants were recruited via email and poster advertisements to University of Oxford students and staff. Everyone who completed the study was offered the opportunity to be entered into a prize draw to win an iPad Air; personal data to enable the winner to be contacted was separated from questionnaire responses, which were anonymised on collection.

No exclusion criteria were set for the study, as it would not have been possible to verify whether people met the criteria. It was therefore anticipated that a proportion of respondents would be male. Respondents who categorised themselves as male were given the following version of the task: “Please look briefly at each of the following outfits and decide how comfortable with her body a woman would have to feel to wear them in an appropriate setting. Score from 1 (She wouldn’t have to be comfortable with her body to wear this) to 7 (She would have to be totally comfortable with her body to wear this). You will be shown this range alongside each outfit. Please enter your score using the numbers on your keyboard.”

Measures

Participants were asked to provide demographic data including height, and current weight. They were also asked “Have you ever been diagnosed with an eating disorder? (Yes/No)”, with the supplementary question: “If yes, it would be helpful if you could give brief details of your diagnosis”.

Two existing measures were used to collect data on participant satisfaction with own body. The Body Shape Satisfaction Scale (BSSS) (Pingitore et al., 1997) has an internal consistency of 0.92, and a two-week test-retest reliability of 0.68 to 0.77 in adolescents and young adults, and has been found to be predictive of poor health behaviours (Neumark-Sztainer et al., 2006).

The Eating Disorder Examination – Questionnaire (EDE-Q) (C. G. Fairburn & Beglin, 1994), is a questionnaire version of the Eating Disorder Examination, the gold standard measure of eating disorder pathology. The EDE-Q has four subscales: Weight Concern, Shape Concern, Eating Concern and Restraint. Since the study concerned participant satisfaction with their bodies, the Weight Concern and Shape Concern subscales of the EDE-Q were used. Test-retest reliabilities of 0.92 for Weight Concern and 0.94 for Shape Concern have been found in a sample of female undergraduates (Luce & Crowther, 1999).

Procedure

Participants followed a link within the email advertisements, or followed the URL given on the poster advertisements, which took them to the online study (implemented using the Xperiment online experimental platform, <http://www.xperiment.mobi>, by AW). Participants completed a consent process whereby they read an Information Sheet about the study, including experimenter contact details in case they wished to clarify any aspect of the study, and then completed an online consent form. They then answered a short series of questions concerning demographics. According to the gender they selected, they then completed either the female or male version of the *Outfit Choice Task*, followed by the BSSS and the two EDE-Q subscales. Finally, they completed the ratings of the weight status for each of the images in the Morphed Photographic Figure Scale (Skinner and Bould 2017). Following this, participants were re-consented to check that they were still happy for their data to be used, and were invited to make a note of their Unique Participant Code, which they were told they would need if they decided over the following two weeks that they wished to withdraw their data from the study. Finally, they were debriefed as to the purpose of the study, and asked to enter a contact email address if they wished to be entered into the prize draw.

Statistical Analysis

Using only the data from female participants, we used exploratory factor analysis to investigate the factor structure of the task. We then conducted regression analyses to compare results from the *Outfit Choice Task* and its factors, with results from existing measures of body dissatisfaction, age, BMI and current or previous eating disorder diagnosis. These analyses were repeated adjusting for age and BMI, which may confound the relationship between our new task and existing questionnaire measures of body satisfaction.

The data that form the basis of the results presented are available on request.

Ethics

Ethics approval for the study was obtained from the Central University Research Ethics Committee at the University of Oxford (MSD-IDREC-C1-2015-020).

Results

Demographics

The study ran from 7th April 2015 – 28th May 2015, during which time 337 participants completed the online task. Data on descriptive variables were complete for 337 people; however, two people had improbably high scores for BMI ($>100 \text{ kg/m}^2$), and one was missing BMI. They were therefore excluded from subsequent analyses. 244 (73.1%) of participants were female, and only data from women were used in the subsequent analyses. Demographic data are presented in Table 1.

Factor Analysis

Factor analysis was conducted, to establish the structure of the *Outfit Choice Task*. On the basis of the scree plot and Eigenvalues of the factors generated in the exploratory analysis, the factor analysis was then forced to 6 factors (as this was the point where the amount of variance explained dropped), and 8 factors (as after this point the variance dropped below 1). Studying the results in terms of the outfits grouped in each factor using these two analyses, the eight-factor analysis did not group the data in a more coherent way than the six-factor analysis. The six-factor analysis only had one outfit in the 6th factor, and we therefore reran the analysis, forcing to five factors. The distribution of outfits from this are shown in Figure 1.

We named the factors generated on the basis of the type of outfit, as follows: Factor 1 “Camouflage”: outfits which cover the majority of the body; Factor 2 “Abdomen bare”: outfits in which the wearer’s abdomen is exposed; Factor 3 “Arms bare”: outfits in which the wearer’s arms are exposed; Factor 4 “Tight leggings”: outfits including tight leggings; and Factor 5: “Legs bare” outfits in which part of the thighs of the wearer are exposed.

Outfit Choice Task

The *Outfit Choice Task* had a mean score of 5.12 (SD 1.11) (range 1 (I would feel very uncomfortable with my body wearing this) to 7 (I would feel very comfortable with my body wearing this)). Results are presented by factor in Table 1.

Relationship to Measures of Body Dissatisfaction, BMI and age

The *Outfit Choice Task* did not correlate with participant age, but there was an association with BMI, with higher BMI being associated with lower scores on all factors of the task, with the exception of the “Camouflage” Factor (Table 2).

The *Outfit Choice Task* were strongly associated with other measures of body satisfaction (EDE-Q Shape Concern, EDE-Q Weight Concern, BSSS), and with previous or current eating disorder, as shown in Table 3.

Adjusting for BMI and age of participant (Table 3) did not substantially alter these results.

Study 2

Material and Methods

Participants

We recruited participants by e-mail advertisement (to undergraduate and graduate students at the University of Oxford via College Junior and Middle/Graduate Common Rooms and University departments), word of mouth, posters in Departments and Colleges, and advertisements on Facebook. Potentially interested participants were asked to complete a brief online screening questionnaire to ensure that they met inclusion criteria.

Inclusion criteria required participants to be female, aged 18 to 30 years old, speak English as a first language (since some of the tasks required this) and have a Body Mass Index (BMI) within the healthy range of 18-25 kg/m². Participants were excluded if they had a current or previous eating disorder, were undergoing treatment for any other mental illness or taking psychoactive medication that may affect cognitive function (e.g. street/illicit drugs, methylphenidate, St John’s Wort), had any current serious neurological illness (e.g. MS, epilepsy), had Coeliac disease, were currently pregnant,

smoked more than 10 cigarettes per day or had dyslexia. Participants were offered £60 to thank them for their time.

The study protocol was pre-registered on the Open Science Framework (<https://osf.io/pwd36/>). The primary aim of the study was to investigate the effect of exposure to images of women of different sizes on perceived own size, and these results have been submitted for publication. The data presented here use the baseline measures described and compare them to our new *Outfit Choice Task*.

Ethics

The study was approved by the Oxford University Central University Research Ethics Committee (MS-IDREC-C1-2015-083).

Measures

As well as demographic data, participants completed questionnaire measures: the Body Shape Satisfaction Scale (BSSS) (Pingitore et al., 1997) and the Eating Disorder Examination – Questionnaire (EDE-Q) (C. G. Fairburn & Beglin, 1994). Participant height and weight were also measured. For the full protocol see <https://osf.io/pwd36/>.

Statistical Analysis

We used regression analyses to compare the results from the different factors of the *Outfit Choice Task* (as generated in Study 1) with age, BMI, EDEQ subscales and the BSSS. We then adjusted the analyses comparing the task factors with the EDEQ subscales and the BSSS for age and BMI.

The data that form the basis of the results presented are available on request.

Results

Results from the novel *Outfit Choice Task* again correlated with BMI, with higher BMI being associated with lower *Outfit Choice Task* scores, except on the Camouflage factor. The association with BMI was strongest for the factor “Abdomen Bare”. The Task factor scores also correlated strongly with the BSSS and the EDE-Q subscales (Table 2) The results were strikingly similar in magnitude to those in Study 1. Again, they were not substantially affected by adjusting for age and BMI (Table 3).

Study 3

Material and Methods

Study 3 allowed us to compare results on our new measure in a case-control study, using one group of participants with a current eating disorder, and one group without a current or previous eating disorder (confirmed using the Eating Disorder Examination) (C. G. W. Fairburn, G.T. , 1993).

Participants

Both Case and Control participants were recruited by email advertisement to undergraduate and graduate students and staff at the University of Oxford via their College Junior and Middle/Graduate Common Rooms and University departments; word-of-mouth; posters in Departments and Colleges; and advertisements on Facebook and Twitter. The study advert was also put up on the websites “Patients Active in Research” and on the Department of Psychiatry, University of Oxford.

In order to increase recruitment of participants with a current eating disorder, email advertisements were sent to a list of research-interested people with eating disorders held by RP.

Inclusion criteria required participants to be female and aged 16 to 45 years old, to speak English as a first language and to have a Body Mass Index (BMI) of less than 30kg/m²; Case participants were required to have a current diagnosis of any eating disorder, including Anorexia Nervosa, Bulimia Nervosa, Other Specified Feeding or Eating Disorder or Binge Eating Disorder (confirmed using the Eating Disorder Examination (EDE) (C. G. W. Fairburn, G.T. , 1993). Participants were excluded if they had a previous but no current eating disorder; had any current serious neurological illness (e.g. MS, epilepsy); had a former brain injury with lasting consequences (e.g. amnesia); were currently pregnant; smoked more than 10 cigarettes per day; had dyslexia; or had taken part the study of women's perceptions of their own and others bodies described in Study 2.

Control participants were also excluded if they were currently taking psychoactive medication that may affect cognitive function (e.g. street/illicit drugs, methylphenidate, St John's Wort), had a current diagnosis of another mental illness requiring treatment, or had a history of a previous eating disorder.

Potentially interested participants were directed to a brief online screening questionnaire which they completed to ensure that they met inclusion criteria. People meeting screening criteria were emailed to invite them to sign up for a time slot to participate.

Ethics

The study was approved by the Oxford University Medical Sciences Inter-Divisional Research Ethics Committee (Reference Number R45241/RE002).

Measures

In addition to the *Outfit Choice Task* and demographic data, participants completed the Eating Disorder Examination (conducted by HB) to confirm presence or absence of an eating disorder, and establish type of eating disorder. Results from the EDE were also used to generate the EDE-Q scores to enable comparison with the previous studies. They also completed the Body Shape Satisfaction Scale (BSSS) (Pingitore et al., 1997). Participant height and weight were also measured.

Other measures of perceived own and ideal size, including implicit measures, were also collected. Results from these aspects fall outside the scope of this paper; the paper describing these results is currently in preparation.

Procedure

Participants attended a single session, lasting between 1.5 and 2 hours at the Department of Psychiatry, University of Oxford. Participants were asked to eat a light meal 2 hours before attending, and to avoid caffeine, alcohol and cigarettes in the 2 hours before the session. At the start of the session, participants gave informed consent for the tasks they would be undertaking; however, they remained blind to the hypotheses and purpose of the study. Before attending, participants aged 16 or 17 were also sent a Patient Information Sheet – Parent/Carer version, and a Parent/Carer Consent form. They were asked to either bring their parent/carer with them to the session, or to bring the signed Parent/Carer Consent form with them, as well as going through the consent process themselves.

Statistical Analysis

We used regression analyses to compare the results from the different factors of the *Outfit Choice Task* (as generated in Study 1) with results from existing measures of body dissatisfaction, presence/absence of eating disorder pathology, age and BMI. These analyses were repeated adjusting for participant BMI and age.

The data that form the basis of the results presented are available on request.

Results

There was a difference between the mean *Outfit Choice Task* score in the Cases (4.22 (95% CI 3.91, 4.52)) compared to that in the Controls (5.35 (95% CI 5.05, 5.64)) (Table 3, supplementary table 1 and Figure 2). Cases had a lower mean score than Controls (Odds Ratio 0.15 (95% CI 0.05, 0.44), $p < 0.001$), indicating that they would feel less comfortable wearing a range of outfits.

Again, there was no evidence of an association between the *Outfit Choice Task* factors and age, and in this study there was no evidence of an association with BMI; this is likely because the clinical cases included people with low BMI and low *Outfit Choice Task* scores (Table 2).

There were again strong correlations between the *Outfit Choice Task* and its factors and both the EDE-Q and the BSSS, although the association between the EDE-Q and BSSS and the Factor “Camouflage” was not evident in this study (Table 2).

Results were largely unchanged following adjustment for measured BMI and age (Table 3).

Discussion

We created a novel scale, the *Outfit Choice Task*, using how comfortable women would feel wearing different outfits as an alternative way of examining body dissatisfaction. Having used the scale online in a large sample of women, factor analysis demonstrated that the scale appears to contain factors related to specific body parts: a factor for outfits which are generally “camouflaging” and in which most women feel fairly comfortable with their bodies; a factor where the abdomen is bare; a factor where arms are bare; a factor where legs are wearing clinging leggings, and a factor where legs are bare.

The *Outfit Choice Task* correlated across three studies with existing measures of body satisfaction and with measures of eating disorder pathology, and magnitudes were similar across studies. Scores on the scale were considerably lower in those with a current or previous eating disorder, as seen in studies 1 and 3. The task did not correlate with age, but there was an association with BMI, with the exception of the “Camouflage” subscale. However, associations between the *Outfit Choice Task* and other measures of body (dis)satisfaction and eating disorders remained following adjusting for BMI and age.

Strengths and limitations

To our knowledge, this is the first attempt to use clothing to assess women’s satisfaction with their bodies in a structured way. This offers an intuitive method of establishing levels of body satisfaction, since women make decisions daily about what clothes they feel comfortable wearing, and qualitative literature suggests it is the most likely thing that they are most likely to change in order to “manage” their appearance. Following design of the new scale, we tested it in comparison with other measures of body dissatisfaction and eating disorders in three separate studies, and results showing high correlation with these alternative measures were replicated across all three studies. We have also shown that women with an eating disorder have higher scores across the subscales of the *Outfit Choice Task*.

However, the test-retest reliability of the task has yet to be established. The task has been tested across a narrow age range, and only within the UK; there is no evidence for its validity outside this population.

Previous literature

Our results fit with the existing qualitative research which suggests that women choose more closer fitting or revealing clothes when they feel more confident with their bodies (Grogan et al., 2013), implying that there is an association between body satisfaction and outfit selection which our studies support. In relation to BMI, qualitative work has shown that women who view themselves as overweight are more likely to report using clothing as “camouflage” (Tiggemann & Andrew, 2012), and this is consistent with our finding that there is no relationship between BMI and the “Camouflage” subscale of the *Outfit Choice Task*.

Clinical relevance

The fact that women are most likely to use clothing to manage their appearance and concerns with their appearance suggests that this scale has potential use for measuring change in appearance perception. The use of a set of examples of individual outfits may help women to more accurately answer questions about their body dissatisfaction, as they make decisions every day about what to wear and how comfortable they will feel in their clothes, whereas they may not spend so much time considering for example how satisfied they are with an individual body part.

Conclusion

We have created and tested a novel measure to assess body dissatisfaction in a series of three studies. It constitutes a novel method for measuring body dissatisfaction that may be more relevant to women than existing scales, and has potential to be a useful measure of change in body dissatisfaction.

Figure 1: Outfits comprising the *Outfit Choice Task*, shown in the factors generated by forcing to five factors

Factor 1: Camouflage

Factor 2: Abdomen bare

Factor 3: Arms bare

Factor 4: Leggings

Factor 5: Legs bare

	Descriptive data		
	Study 1	Study 2	Study 3 (Case-Control)
N female participants	244	93	60
Age (mean, SD)	22.7 (5.62)	22.8 (3.13)	25.5 (7.33)
Body Mass Index (mean, SD)	22.2 (3.52)	21.9 (2.11)	21.2 (3.76)
Current or previous eating disorder (N, %)	28 (11.3)	-	30 (50%)
EDE-Q: Shape concern (mean, SD)	3.07 (1.49)	1.45 (1.24)	2.48 (1.61)
EDE-Q: Weight concern (mean, SD)	3.26 (1.74)	1.03 (1.11)	2.00 (1.65)
EDE-Q: Total Score (mean, SD)	-	0.91 (0.88)	1.89 (1.46)
BSSS (mean, SD)	3.17 (0.74)	3.42 (0.70)	2.71 (0.89)
Outfit Choice Task (OCT) score (mean, 95% CI)	5.05 (4.91, 5.19)	5.53 (5.53, 5.71)	4.78 (4.52, 5.04)
“Camouflage” factor of OCT (mean, 95% CI)	5.79 (5.64, 5.94)	6.02 (5.79, 6.24)	5.68 (5.41, 5.95)
“Abdomen bare” factor of OCT (mean, 95% CI)	3.63 (3.42, 3.84)	4.31 (4.02, 4.61)	2.93 (2.58, 3.27)
“Arms bare” factor of OCT (mean, 95% CI)	4.61 (4.34, 4.79)	5.27 (5.04, 5.49)	4.27 (3.92, 4.61)
“Leggings” factor of OCT (mean, 95% CI)	5.68 (5.52, 5.84)	6.21 (5.99, 6.43)	5.64 (5.29, 5.99)
“Legs bare” factor of OCT (mean, 95% CI)	5.31 (5.14, 5.49)	5.76 (5.56, 5.97)	5.13 (4.82, 5.43)

Table 1: Descriptive data from all studies

Existing Measure	Study	Regression with Outfit Choice Task total (95% CI, p)	Regression with "Camouflage" (95% CI, p)	Regression with "Abdomen bare" (95% CI, p)	Regression with "Arms bare" (95% CI, p)	Regression with "Leggings" (95% CI, p)	Regression with "Legs bare" (95% CI, p)
Current or previous eating disorder (N/Y)	1	0.41 (0.27, 0.61) p<0.001	0.63 (0.47, 0.85), p=0.002	0.57 (0.42, 0.78), p<0.001	0.42 (0.29, 0.61), p<0.001	0.62 (0.48, 0.82) p=0.001	0.66 (0.50, 0.86), p=0.002
	3	0.20 (0.09, 0.45), p<0.0001	0.51 (0.29, 0.92), p=0.026	0.34 (0.19, 0.62), p=0.001	0.23 (0.11, 0.47), p<0.001	0.53 (0.33, 0.87), p=0.011	0.36 (0.20, 0.66), p=0.001
EDE-Q: Shape concern (continuous score)	1	-0.37 (-0.45, -0.29), p<0.001	-0.23 (-0.33, -0.14), p<0.001	-0.59 (-0.71, -0.47), p<0.001	-0.44 (-0.54, -0.33), p<0.001	-0.28 (-0.39, -0.18), p<0.001	-0.37 (-0.47, -0.26), p<0.001
	2	-0.37 (-0.50, -0.25), p<0.001	-0.27 (-0.44, -0.09), p=0.003	-0.64 (-0.84, -0.44), p<0.001	-0.43 (-0.59, -0.26), p<0.001	-0.27 (-0.44, -0.10), p=0.002	-0.31 (-0.46, -0.15), p<0.001
	3	-0.38 (-0.50, -0.25), p<0.001	-0.21 (-0.37, -0.05), p=0.010	-0.43 (-0.61, -0.25), p<0.001	-0.57 (-0.73, -0.41), p<0.001	-0.32 (-0.53, -0.12), p=0.002	-0.38 (-0.54, -0.21), p<0.001
EDE-Q: Weight concern (as a continuous score)	1	-0.26 (-0.34, -0.19), p<0.001	-0.18 (-0.27, -0.10), p<0.001	-0.41 (-0.52, -0.30), p<0.001	-0.30 (-0.39, -0.20), p<0.001	-0.19 (-0.28, -0.10), p<0.001	-0.26 (-0.35, -0.17), p<0.001
	2	-0.39 (-0.53, -0.24), p<0.001	-0.28 (-0.48, -0.09), p=0.004	-0.61 (-0.84, -0.37), p<0.001	-0.44 (-0.63, -0.25), p<0.001	-0.32 (-0.51, -0.14), p=0.001	-0.32 (-0.49, -0.15), p<0.001
	3	-0.37 (-0.49, -0.25), p<0.001	-0.24 (-0.39, -0.08), p=0.003	-0.38 (-0.57, -0.20), p<0.001	-0.52 (-0.69, -0.36), p<0.001	-0.39 (-0.58, -0.19), p<0.001	-0.39 (-0.55, -0.23), p<0.001
EDE-Q: Total Score	2	-0.48 (-0.66, -0.29), p<0.001	-0.35 (-0.60, -0.10), p=0.006	-0.80 (-1.09, -0.50), p<0.001	-0.54 (-0.78, -0.30), p<0.001	-0.35 (-0.59, -0.11), p=0.005	-0.38 (-0.60, -0.16), p=0.001
	3	-0.43 (-0.57, -0.30), p<0.001	-0.26 (-0.44, -0.09), p=0.004	-0.46 (-0.67, -0.26), p<0.001	-0.62 (-0.80, -0.44), p<0.001	-0.42 (-0.64, -0.21), p<0.001	-0.45 (-0.63, -0.27), p<0.001
BSSS	1	0.91 (0.75, 1.06), p<0.001	0.64 (0.45, 0.82), p<0.001	1.29 (1.06, 1.53), p<0.001	1.09 (0.89, 1.29), p<0.001	0.71 (0.50, 0.91), p<0.001	0.89 (0.68, 1.09), p<0.001
	2	0.71 (0.49, 0.92), p<0.001	0.55 (0.24, 0.85), p=0.001	1.13 (0.78, 1.48), p<0.001	0.76 (0.46, 1.04), p<0.001	0.54 (0.25, 0.83), p<0.001	0.62 (0.36, 0.89), p<0.001
	3	0.69 (0.46, 0.91), p<0.001	0.25 (-0.05, 0.56), p=0.096	1.05 (0.78, 1.33), p<0.001	1.03 (0.74, 1.32), p<0.001	0.56 (0.19, 0.93), p=0.004	0.68 (0.38, 0.99), p<0.001
Age	1	-0.01 (-0.04, 0.01), p=0.289	-0.00 (-0.03, 0.02), p=0.826	-0.02 (-0.05, 0.02), p=0.345	-0.03 (-0.06, 0.00), p=0.063	-0.01 (-0.04, 0.01), p=0.33	-0.00 (-0.03, 0.03), p=0.928
	2	0.02 (-0.04, 0.08), p=0.552	-0.01 (-0.08, 0.06), p=0.762	0.04 (-0.05, 0.14), p=0.359	0.04 (-0.03, 0.11), p=0.284	-0.02 (-0.08, 0.06), p=0.682	0.04 (-0.03, 0.10), p=0.267
	3	-0.01 (-0.05, 0.02), p=0.541	0.01 (-0.02, 0.05), p=0.514	-0.03 (-0.08, 0.01), p=0.149	-0.03 (-0.08, 0.02), p=0.197	0.01 (-0.03, 0.06), p=0.575	0.02 (-0.06, 0.02), p=0.363

BMI	1	-0.08 (-0.11, -0.04), p<0.001	-0.02 (-0.07, 0.02), p=0.262	-0.59 (-0.71, -0.47), p<0.001	-0.11 (-0.16, -0.06), p<0.001	-0.06 (-0.11, -0.01), p=0.010	-0.09 (-0.14, -0.04), p<0.001
	2	-0.10 (-0.19, -0.02), p=0.017	-0.004 (-0.11, 0.10), p=0.939	-0.28 (-0.40, -0.15), p<0.001	-0.14 (-0.25, -0.03), p=0.012	-0.07 (-0.17, 0.03), p=0.181	-0.08 (-0.18, 0.01), p=0.088
	3	0.05 (-0.01, 0.12), p=0.107	0.06 (-0.01, 0.13), p=0.100	0.04 (-0.05, 0.13), p=0.412	0.06 (-0.03, 0.15), p=0.203	0.08 (-0.02, 0.17), p=0.104	0.04 (-0.04, 0.12), p=0.351

Table 2: Regression analyses of *Outfit Choice Task* factor mean values and other measures of body size and satisfaction

Existing Measure	Study	Regression with Outfit Choice Task total (95% CI, p)	Regression with "Camouflage" (95% CI, p)	Regression with "Abdomen bare" (95% CI, p)	Regression with "Arms bare" (95% CI, p)	Regression with "Leggings" (95% CI, p)	Regression with "Legs bare" (95% CI, p)
Current or previous eating disorder (Y/N) (logistic regression)	1	0.39 (0.26, 0.59), p<0.001	0.63 (0.47, 0.84), p=0.002	0.53 (0.38, 0.73), p<0.001	0.38 (0.26, 0.56), p<0.001	0.60 (0.46, 0.80), p<0.001	0.63 (0.48, 0.84), p=0.001
	3	0.15 (0.05, 0.44), p=0.001	0.56 (0.30, 1.07), p=0.080	0.27 (0.12, 0.60), p=0.001	0.13 (0.04, 0.42), p=0.001	0.55 (0.32, 0.95), p=0.032	0.33 (0.17, 0.65), p=0.001
EDE-Q: Shape concern (continuous score)	1	-0.35 (-0.43, -0.27), p<0.001	-0.23 (-0.33, -0.14), p<0.001	-0.55 (-0.67, -0.43), p<0.001	-0.41 (-0.51, -0.30), p<0.001	-0.27 (-0.38, -0.17), p<0.001	-0.34 (-0.44, -0.23), p<0.001
	2	-0.35 (-0.48, -0.21), p<0.001	-0.29 (-0.48, -0.11), p=0.003	-0.52 (-0.73, -0.32), p<0.001	-0.38 (-0.56, -0.21), p<0.001	-0.25 (-0.43, -0.07), p=0.007	-0.28 (-0.44, -0.11), p=0.001
	3	-0.38 (-0.51, -0.24), p<0.001	-0.22 (-0.39, -0.05), p=0.011	-0.41 (-0.61, -0.21), p<0.001	-0.56 (-0.73, -0.38), p<0.001	-0.34 (-0.56, -0.12), p=0.003	-0.37 (-0.55, -0.19), p<0.001
EDE-Q: Weight concern (continuous score)	1	-0.24 (-0.32, -0.17), p<0.001	-0.18 (-0.27, -0.10), p<0.001	-0.37 (-0.48, -0.26), p<0.001	-0.27 (-0.37, -0.17), p<0.001	-0.17 (-0.26, -0.08), p<0.001	-0.23 (-0.32, -0.14), p<0.001
	2	-0.36 (-0.52, -0.20), p<0.001	-0.32 (-0.54, -0.11), p=0.003	-0.47 (-0.71, -0.23), p<0.001	-0.39 (-0.59, -0.18), p<0.001	-0.31 (-0.51, -0.11), p=0.003	-0.30 (-0.48, -0.11), p=0.002
	3	-0.36 (-0.49, -0.23), p<0.001	-0.23 (-0.39, -0.07), p=0.006	-0.35 (-0.55, -0.16), p=0.001	-0.50 (-0.67, -0.33), p<0.001	-0.39 (-0.59, -0.19), p<0.001	-0.38 (-0.55, -0.21), p<0.001
EDE-Q: Total Score (continuous measure)	2	-0.43 (-0.63, -0.24), p<0.001	-0.38 (-0.65, -0.12), p=0.005	-0.63 (-0.93, -0.34), p<0.001	-0.48 (-0.73, -0.22), p<0.001	-0.32 (-0.58, -0.06), p=0.015	-0.34 (-0.57, -0.10), p=0.006
	3	-0.44 (-0.59, -0.29), p<0.001	-0.26 (-0.46, -0.07), p=0.008	-0.46 (-0.70, -0.24), p<0.001	-0.63 (-0.83, -0.43), p<0.001	-0.44 (-0.68, -0.20), p=0.001	-0.47 (-0.67, -0.26), p<0.001
BSSS	1	0.89 (0.73, 1.05), p<0.001	0.68 (0.48, 0.87), p<0.001	1.24 (0.99, 1.49), p<0.001	1.06 (0.85, 1.26), p<0.001	0.70 (0.49, 0.92), p<0.001	0.83 (0.62, 1.05), p<0.001
	2	0.66 (0.44, 0.89), p<0.001	0.58 (0.26, 0.89), p=0.001	0.96 (0.62, 1.30), p<0.001	0.69 (0.39, 0.99), p<0.001	0.51 (0.20, 0.82), p=0.001	0.58 (0.31, 0.86), p<0.001
	3	0.66 (0.43, 0.90), p<0.001	0.24 (-0.06, 0.55), p=0.116	1.02 (0.74, 1.30), p<0.001	0.98 (0.69, 1.28), p<0.001	0.55 (0.17, 0.93), p=0.005	0.66 (0.34, 0.97), p<0.001

Table 3: Regression analyses of *Outfit Choice Task* factor mean values and other measures of body size and satisfaction, adjusted for age and BMI

	Mean Outfit Choice Task score (95% CI)	"Camouflage"	"Abdomen bare"	"Arms bare"	"Leggings"	"Legs bare"
Control	5.35 (5.05, 5.64)	5.99 (5.58, 6.40)	3.60 (3.11, 4.09)	5.12 (4.77, 5.48)	6.11 (5.70, 6.52)	5.70 (5.27, 6.13)
Case	4.22 (3.91, 4.52)	5.37 (5.03, 5.71)	2.25 (1.91, 2.60)	3.42 (3.00, 3.84)	5.17 (4.64, 5.70)	4.57 (4.22, 4.92)

Supplementary Table 1: *Outfit Choice Task Scores by Case/Control*

Mean Task and Individual Factor Scores, by Case and Control Groups

Figure 2 : *Outfit Choice Task Scores by Case/Control*

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