

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/355483677>

# Self-Disgust as a Potential Mechanism Underlying the Association Between Body Image Disturbance and Suicidal Thoughts and Behaviours

Article in *Journal of Affective Disorders* · October 2021

CITATIONS

0

READ

1

10 authors, including:



**Umair Akram**

Sheffield Hallam University

53 PUBLICATIONS 228 CITATIONS

[SEE PROFILE](#)



**Sarah Allen**

Teesside University

33 PUBLICATIONS 144 CITATIONS

[SEE PROFILE](#)



**Jodie Stevenson**

University of Lincoln

16 PUBLICATIONS 63 CITATIONS

[SEE PROFILE](#)



**Lambros Lazuras**

Sheffield Hallam University

112 PUBLICATIONS 1,832 CITATIONS

[SEE PROFILE](#)

Some of the authors of this publication are also working on these related projects:



Every body matters: inclusivity in body image research [View project](#)



Project LEGIT (Anti-Doping Policy Legitimacy and Support among Clean Athletes: A Cross-National Study) [View project](#)

# **Self-disgust as a potential mechanism underlying the association between body image disturbance and suicidal thoughts and behaviours**

Umair Akram, PhD<sup>1\*</sup> Sarah Allen<sup>2</sup>, Jodie C. Stevenson PhD<sup>3</sup>, Lambros Lazarus PhD<sup>1</sup>, Antonia Ypsilanti<sup>1</sup>, Millicent Ackroyd BSc<sup>4</sup>, Jessica Chester BSc<sup>4</sup>, Jessica Longden BSc<sup>1</sup>, Chloe Peters BSc<sup>1</sup>, Kamila R. Irvine PhD<sup>3</sup>

<sup>1</sup>Department of Psychology, Sociology and Politics, Sheffield Hallam University, UK

<sup>3</sup>School of Social Sciences, Humanities and Law, University of Teesside, Middlesbrough, UK

<sup>4</sup>School of Psychology, University of Lincoln, UK

<sup>4</sup>Department of Psychology, University of Derby, UK

**Accepted Manuscript:** Journal of Affective Disorders

**Words:** 4226

**References:** 72

**Number of Tables:** 3

**Number of Figures:** 1

**Keywords:** Body Image; Self-conscious emotions; Self-perception; Self-disgust; Suicide

**Data Availability Statement:** Data will be made available on reasonable request.

**Declaration of Competing Interests:** No conflicts of interest declared in relation to this paper.

**Author contribution:** The experiment was designed and conceived by UA. Data was collected by UA, KI, SA, JS, MA, JC, JL, CP. Data was analysed by UA, LL & KI. An initial version of the manuscript was written by UA and KI. Following, input was sought from KI, SA, JS, & LL. All authors approved the final version of the manuscript.

**Funding:** No funding was received for this research

**\*Corresponding Author:** u.akram@shu.ac.uk Department of Psychology, Sociology and Politics, Collegiate Crescent, Sheffield, South Yorkshire, S10 2BP, UK.

**Abstract**

This study examined whether self-disgust added incremental variance to and mediated the multivariate association between measures of body image disturbance and suicidal thoughts and behaviours. We hypothesized that self-disgust would be associated with suicidal ideation above the effects of body image disturbance, and that self-disgust would mediate the relationship between body image disturbance and suicidal ideation. A total of N=728 participants completed The Body Image Disturbance Questionnaire, The Self-Disgust Scale, and the Suicidal Behaviours Questionnaire-Revised. Suicidality was significantly related to increased levels of self-disgust and body image disturbance, whereas self-disgust was associated with greater body image disturbance. Linear regression analysis showed that self-disgust was associated with suicidal thoughts and behaviours, over and above the effects of body image disturbance. Multiple mediation modelling further showed that self-disgust mediated the relationship between body image disturbance and suicidal thoughts and behaviours. Our findings highlight the role of self-disgust in the context of body image disturbance and support the notion that body image disturbance is associated with aversive self-conscious emotions. Interventions aiming to reduce the risk of suicidality in people with body image disturbance may address self-disgust and negative self-conscious emotions.

## **1. Introduction**

Suicide represents an important public health concern and was the second leading cause of death among adolescents and young adults between 15-29 years of age globally in 2016 (World Health Organization, 2019). In the United Kingdom, the British National Psychiatric Morbidity Survey found that 15% of individuals have reported the experience of suicidal thoughts, whereas 4.4% have made an attempt at taking their life (Bebbington et al., 2010). Additionally, suicidal thoughts and behaviours (i.e. suicidal ideation) are associated with greater risk of future suicide attempts and completion (Ribeiro et al., 2016), and the experience of mental health difficulties (Cracknell, 2015; Garlow et al., 2008). In particular, symptoms of anxiety, depression, disordered eating, insomnia, psychosis, stress, and post-traumatic stress have been associated with higher levels of suicidal ideation (Becker et al., 2018; Eskin et al., 2016; Gould et al., 2003; Russell et al., 2018; Strandheim et al., 2014; O'Neil et al., 2014). Likewise, a number of psychological factors including thwarted belongingness, perceived burdensomeness, self-disgust, and loneliness are also known to increase the risk of suicidal ideation (Brake, Rojas, Badour, Dutton, & Feldner, 2017; Hill & Pettit, 2014; Lester & Gunn, 2012; Lockman & Servaty-Seib, 2016; Stravynski & Boyer, 2001).

### **1.1 Body image disturbance as a risk factor for suicidal ideation**

Body image disturbance (BID) refers to dysfunctional self-oriented attitudes and behaviours specifically related to disliked aspect of one's own body (Cash et al., 2004). Body image disturbance encompasses body dissatisfaction, excessive self-evaluation of appearance, adverse emotions associated with body image, and appearance-focused comparison and/or making of undesirable psychical attributes of the self (Cash et al., 2011; Cash & Grasso, 2005; Vossbeck-Elsebusch et al., 2015). Body image disturbance can vary in severity, with less severe BID having little impact on daily functioning, and more severe BID being associated with higher levels of psychological distress and psychosocial impairment (Callaghan et al., 2012; Cash et al., 2004). The experience of body image disturbances is also related to obesity (Sarwer et al., 2005; Schwartz & Brownell, 2004; Thompson et al., 1998), disordered eating (Braun et al., 2016), and body dysmorphic disorder (Rosen et al., 1998; Sarwer et al., 1998). Further, according to recent meta-analytic data, body image disturbances appear to be more prevalent in the female population (Feingold et al., 1998; He et al., 2020), typically emerging in the teenage years with a linear decrease of risk with age from adulthood (Feingold et al., 1998).

Suicidal thoughts and behaviours have also been associated with body image dissatisfaction and disturbance (e.g., cutaneous body image dissatisfaction, body dysmorphic disorder; Angelakis, Gooding & Panagioti, 2016; Gupta & Gupta, 2013). Different studies have also shown that both negative attitudes towards one's own body and negative body experiences were associated with suicidality in males and females with or without a history of psychiatric disorder (Miotto, de Coppi, Frezza, & Preti, 2003; Orbach et al., 2006). Accordingly, individuals scoring higher on body dissatisfaction are more likely to endorse suicidal ideation, even after controlling for other risk factors, such as depression, poor emotion regulation, past suicidal behaviour, and hopelessness (Brausch & Muehlenkamp, 2007; Rufino, Viswanath, Wagner, & Patriquin, 2018).

A possible explanation of the association between BID and suicidality is that dysfunctional views of the self, such as body dissatisfaction, increase the risk for self-destructive behaviour (Orbach, 1996; Orbach et al., 2001). Another explanation is that BID symptoms may facilitate perceived detachment from the physical self, which consequently facilitates self-harm behaviours and suicidal ideation (Johnson, Gooding, & Tarrier, 2008; O'Connor & Nock, 2014; Orbach, 1996; Tarrier et al., 2013; Williams, 1997). Here, the experience of negative physical self-appraisal accentuates a state of self-disregard for the body where the body is considered a separate object compared to the self. In turn, this line of thinking facilitates self-injurious behaviour (Orbach,

1996; Orbach et al., 2001). This proposition is tentatively supported by studies demonstrating greater reports of suicidal ideation amongst individuals experiencing negative attitudes, feelings, and aberrations toward their body (Orbach et al. 2001). Despite this, studies examining the relationship between BID and suicidal ideation remain sparse. Nevertheless, several studies examined factors mediating these relationships, showing that the associations between both cutaneous body image dissatisfaction (Gupta & Gupta, 2013) and body image dissatisfaction (Kent et al., 2001; Gupta & Gupta 1989) to be mediated by interpersonal sensitivity, a dimension measuring self-consciousness, personal inadequacy and feelings of inferiority, self-deprecation, interpersonal difficulties, and social exclusion.

## **1.2 The role of self-disgust**

Past research has indicated that aversive emotional experiences, such as disgust, can be triggered in response to violations of societal norms and expectations about "ideal" body shape and size, such as obesity (O'Brien et al., 2013; Vartanian, 2010). Research has also shown that disgust may be present in people displaying BID (Stasik-O'Brien & Schmidt, 2018). For instance, people with higher scores in body image concerns (e.g., fear of gaining weight) displayed attentional bias to disgusting images (Onden-Lim, Wu, & Grisham, 2012), suggesting an automatic process of orienting attention to disgusting stimuli when body image concerns are present. Other studies have shown that, in both males and females, higher scores in BID measures were significantly associated with perceived disgust towards others, and that this disgust mediated the association between BID dimensions and dislike of obese individuals (O'Brien et al., 2013). Furthermore, studies have shown that disgust directed to the self (or self-disgust) is associated with symptoms of eating disorders, and higher levels of body image disturbance (Espeset et al., 2012; Ille et al., 2014; Stasik-O'Brien & Schmidt, 2018). Self-disgust refers to a self-conscious emotion of disgust and revulsion directed towards the self in a way which manifests as physical (e.g., I find myself repulsive) and/or behavioural (e.g., I often do things I find revolting) in nature (Overton et al., 2008). It is considered to result from an interaction between an evolved tendency to experience disgust, internalization of socially comparative processes in the early developmental stages, and eventual alterations in self-concept which consequently may activate an individual's perception of disgust (Amir et al., 2010; Lazuras, Ypsilanti, Powell, & Overton, 2019; Powell, Simpson & Overton, 2015; Ypsilanti et al., 2019). Features of self-disgust share similarities with other negative self-conscious emotional states including guilt, shame, self-hatred and criticism. However, qualitative research demonstrates self-disgust involves unique phenomenological characteristics, including visceral aspects of revulsion and nausea directed to the self (Espeset, Gulliksen, Nørbdø, Skårderud, & Holte, 2012; Powell, Overton, & Simpson, 2014).

## **1.2 The present study**

Self-appraisal of physical appearance remains a key feature of BID (Stasik O'Brien & Schmidt, 2018). Self-disgust may represent an important correlate of BID and may also account for the relationship between BID and behavioural responses, such as self-destructive behaviour, for the following reasons. Firstly, recent evidence points towards self-disgust as a unique predictor of BID after accounting for negative affect, anxiety sensitivity, and disgust propensity and sensitivity (Stasik O'Brien & Schmidt, 2018). This suggests that self-disgust can add unique incremental variance in models of BID and helps us better understand the emotional experiences of people with higher scores in body image concerns. Secondly, self-disgust can play a role in self-destructive and suicidal behaviour (Akram, Ypsilanti, Drabble, & Lazuras, 2019; Brake et al., 2017), so, it is theoretically plausible that self-disgust can account for the association between body image disturbance and suicide risk. This is in accordance with cognitive-behavioural explanations of BID whereby body image concerns are assumed to lead to maladaptive self-appraisal and the experience of aversive, self-conscious, and self-directed emotional states (i.e., shame and guilt) which may subsequently trigger certain behavioural

outcomes, such as experiential avoidance (Blakey, Reuman, Buchholz, & Abramowitz, 2017; O'Brien et al., 2013; Stasik O'Brien & Schmidt, 2018). To the extent that suicidality can be seen as a behavioural response to higher BID (Brausch & Muehlenkamp, 2007; Rufino, Viswanath, Wagner, & Patriquin, 2018), it is also plausible that self-disgust can mediate the relationship between BID and suicidality.

This study examined the relationship between physical body image disturbance and suicidal ideation, whilst examining the mediating role of self-disgust. More specifically, whether body image disturbance would be related to increased reports of suicidal ideation (hypothesis 1) and whether the experience of self-disgust would mediate the association between body image disturbance and suicidal ideation after controlling for age and sex (hypothesis 2).

## **2. Material and methods**

### **2.1 Sample and Procedure**

The protocol was approved by the [Masked for Review] Research Ethics Committee and Ethics Committees of collaborating institutions. A cross-sectional online questionnaire-based study was implemented comprising of questions designed to examine levels of self-disgust, suicidal ideation, and body image disturbance. Students from UK universities were recruited through institutional course participation schemes, social media, and faculty emails. Members of the general population were recruited using social media platforms and online forums. Potential participants responded to an advertisement for a study examining self-perception. Overall, 877 participants began or accessed the questionnaire, after incomplete entries were discarded 728 completed entries (mean age=28.81±12.59, range 19-75, 89% female; 66% student population; final response rate = 83%) were retained for analysis. This sample size was sufficient for a 95% confidence level, exceeding our target of 500 responses leaving an acceptable 4.5% margin of error (Niles, 2006).

### **2.2 Measures**

#### **2.2.1 Suicidal Ideation**

Suicidal thoughts and behaviours were examined using the four-item self-report Suicidal Behaviours Questionnaire-Revised (SBQ-R; Osman et al., 2001). Specifically, four items examine lifetime ideation/attempt, frequency of ideation over the past 12 months, telling someone else about ideation, and likelihood of attempting suicide in the future. Items can be analysed individually and summated to create a total score ranging between 3-18. Higher total scores indicate greater risk of suicidal ideation. A score of  $\geq 7$  indicates significant risk for suicidal behaviour (Sensitivity, 93% and Specificity 91% in the adult general population; Osman et al., 2001). The SBQ-R has consistently demonstrated a good degree of both predictive and concurrent validity (Amini-Terani et al., 2020; Aloba et al., 2017; Adjoloro et al., 2020; Cassidy et al., 2020; Gómez-Romero; Rueda-James et al., 2017). Moreover, according to a systematic review of nineteen measures for suicidal ideation and behaviours, the SBQ-R remained one of three brief measures deemed appropriate as a measure of suicidal ideation and behaviour (Batterham et al., 2014). The internal consistency (Cronbach's  $\alpha$ ) of the scale in the present study was 0.86.

#### **2.2.2 Self-Disgust**

The Self-Disgust Scale (SDS; Overton et al., 2008) is an 18-item measure reflecting disgust and repulsion directed to the self. Twelve items, rated on a 7-point Likert style scale, reflect disgust towards the physical self (e.g., "I find myself repulsive") and one's behaviour/actions (e.g., "I often do things I find revolting"), whereas six items are filler questions. Items are summated to create a total score ranging between 12-84, whereby

higher scores indicate higher levels of self-disgust. The internal consistency (Cronbach's  $\alpha$ ) of the scale in the present study was 0.92.

### 2.2.3 Body Image

The Body Image Disturbance Questionnaire (BIDQ; Cash & Grasso, 2005) is a 7-item measure of body-image dissatisfaction, distress, and dysfunction. Items examine appearance-related concerns (e.g. Are you concerned about the appearance of some part(s) of your body which you consider especially unattractive?), preoccupation with such concerns (e.g. If you are at least somewhat concerned, do these concerns preoccupy you? That is, you think about them a lot and they're hard to stop thinking about?), experience emotional distress (e.g. Has your physical "defect" often caused you a lot of distress, torment, or pain?), and impairments in social, occupational, and other areas of functioning (e.g. Has your physical "defect" caused you impairment in social, occupational or other important areas of functioning?). The internal consistency of the scale was high (Cronbach  $\alpha$  = .90).

### 2.3 Data Analysis

SPSS (version 24, IBM Corp) was used to perform formal statistical analyses, with significance considered at the  $p < .05$  level. First, the percentage prevalence of suicidal thoughts and behaviours were calculated. Next, correlational analyses (Pearson's bivariate) examined the relationship between participant age, suicidal ideation, each item of the SBQ-R, self-disgust and body image disturbance. This was followed by a series of between group analyses to examine potential sex differences in relation to self-disgust, body image disturbance and suicidal ideation. Finally, a hierarchical linear regression analysis (using the enter method) that empirically examined the multivariate association between suicidal ideation (outcome variable), self-disgust and body image disturbance. Regression-based multiple mediation modelling was used with the SPSS PROCESS macro by Hayes (2009), to examine the indirect association between body image disturbance and suicidal ideation, via self-disgust.

## 3. Results

Mean scores for the final sample were as follows: suicidal ideation,  $6.23 \pm 3.59$ ; self-disgust,  $39.07 \pm 14.20$ ; and BIDQ,  $2.32 \pm 0.94$ . Examination of individual SBQ-R items for the whole sample revealed that 20.7% of had planned their suicide whereas 10.2% reported making an attempt. Moreover, 43.0% contemplated suicide at least once within the past twelve months, and 26.2% reported telling someone about these thoughts at least once. Finally, 6.8% of the sample stated the possibility of a future attempt.

Suicidal ideation was significantly related to increased levels of self-disgust ( $r = .51, p = .001$ ) and body image disturbance ( $r = .42, p = .001$ ). Likewise, self-disgust was significantly associated with increased reports of body image disturbance ( $r = .63, p = .001$ ). Moreover, each individual item of the SBQ-R was significantly related to increased levels of self-disgust and body image disturbance (all  $p$ 's  $< .001$ ; see Table 1). Whilst no sex differences were observed in relation to suicidality ( $F[2,726] = 3.01, p > .05$ ) and self-disgust ( $F[2,726] = 2.98, p > .05$ ), relative to males ( $1.85 \pm 0.83$ ), female participants ( $2.38 \pm 0.94$ ) reported greater levels of body image disturbance ( $F[2,726] = 12.89, p < .001$ ). Participant age was not related to levels of self-disgust ( $r = .02, P = .561$ ) or body image disturbance ( $r = .02, P = .561$ ). However, age was negatively related to suicidality ( $r = -.11, P = .004$ ). Considering this, age and sex were entered as control variables in further analysis. Finally, whilst no differences between students and non-students were observed in relation to self-disgust ( $F[1,726] = 3.08, p < .05$ ) and body image disturbance ( $F[1,726] = 0.40, p < .05$ ), students reported greater levels of suicidality ( $F[1,726] = 7.81, p = .005$ ) as expected for this population (Akram et al., 2020; Becker et al., 2018).

**[Insert Table 1]**

A bootstrapped (1000 resamples) hierarchical linear regression analysis was used to evaluate the direct and multivariate association between body image disturbance, self-disgust and body image disturbance, after controlling for the effects of demographic variables (age and sex). The analysis was completed in two steps, with demographics and body image disturbance added in the first step, and self-disgust added in the second step of the analysis. At the first step of the analysis age and body image disturbance were significantly associated with suicidal ideation (Adjusted  $R^2 = 18\%$ ,  $F = 53.51$ ,  $p < .001$ ). Whilst the addition of self-disgust in the second step of the analysis significantly increased predicted variance in suicidal ideation by 10.4% ( $F$  change = 104.55,  $p < .001$ ), the effects of age and body image disturbance remained significant. The outcomes from the regression analysis are presented in Table 2.

**[Insert Table 2]**

Mediation analysis was conducted to test the indirect effects model suggesting that the association between body image disturbance and suicidal ideation may be due, in part, to self-disgust and/or younger age. More specifically, we tested multiple mediation models with a single predictor, single mediator, and single outcome while controlling for age. To accomplish this, a bootstrapping approach was used, setting the bootstrap samples to 10,000 (e.g., Hayes, 2009; Preacher & Hayes, 2008). The summary statistics for the mediation model are presented in Table 3, with the graphical depictions illustrated in Figure 1. This model explained 29% of the variance in suicidal ideation after controlling for age ( $R^2 = .29$ ,  $F [3, 721] = 96.17$ ,  $p < .001$ )

**[Insert Table 3 & Figure 1]**

#### **4. Discussion**

The present study examined whether: a) reports of body image disturbance would be related to increased reports of suicidal thoughts and behaviours; and b) self-disgust would mediate the relationship between body image disturbance and suicidal thoughts and behaviours. In support of our first hypothesis, significant bivariate and multivariate associations were observed between body image disturbance, self-disgust, and suicidal thoughts and behaviours. Specifically, our results provide further evidence that reports of: body image disturbance are associated with the experience of suicidal thoughts and behaviours and self-disgust; the experience of self-disgust is related to greater levels of suicidal ideation. These results support and extend previous research demonstrating a positive association between body image disturbances and suicidal ideation (Angelakis et al., 2016; Gupta & Gupta, 2013), and self-disgust (Ille et al., 2014; Fox, Grange & Power, 2018; Stasik, O'Brein, & Schmidt, 2018; Spreckelsen et al., 2018). In support of our second hypothesis, linear regression analyses determined that self-disgust significantly added incremental variance in suicidal ideation in the multivariate model (i.e., increasing predicted variance in suicidal ideation by 10%), whilst also mediating the association between body image disturbance and suicidal ideation. This supports previous research evidencing self-disgust to be associated with greater reports of body image disturbance after accounting for negative affect, anxiety sensitivity, and disgust propensity and sensitivity (Stasik et al., 2018). Similarly, our outcomes are in line with previous work evidencing measures of self-conscious emotions and related cognitive dysfunction (i.e., interpersonal sensitivity) to mediate the relationship between both cutaneous body image dissatisfaction and body image dissatisfaction with reports of suicidal thoughts and behaviours (Kent et al.,



2001; Gupta & Gupta 1989, 2013). Taken together, our findings suggest that self-disgust may serve to accentuate the experience of body image disturbances.

The current outcomes suggest that aversive self-conscious emotional experiences, such as self-disgust, provide a possible route through which body image disturbance may emerge. This is an important addition to the extant literature because, unlike cognitive factors (e.g., distortion, rumination), self-disgust is characterized by unique phenomenological features which may elicit distinctive behavioural responses in the context of eating disorders and associated symptoms (Espeset et al., 2012). This supports Cash's (2004) cognitive-behavioural model of BID whereby body image concerns lead to the experience of aversive self-conscious emotions, such as shame and guilt, which then facilitate the manifestation of behavioural responses (O'Brien et al., 2013; Stasik, O'Brien, & Schmidt, 2018). Our findings suggest that self-disgust may provide another manifestation of aversive self-conscious emotion experiences in the context of body image disturbance, and this may increase the risk for self-destructive behaviour, such as suicide.

The experience of social isolation is one of the most prominent risk factors for suicide (Van Orden et al., 2010). In this context, cognitive and behavioural factors associated with body image disturbance may theoretically precipitate social isolation in this population. Negative self-appraisal may contribute to hopelessness, perceived burdensomeness (i.e., viewing oneself as a burden and valuing death over life) and thwarted belongingness (i.e., perceived alienation and deteriorated connection from social groups), reducing the threshold for suicidal thoughts and behaviours (Akram et al., 2019; Rudd, 2004). Negative self-appraisal may also prompt social withdrawal and sacrifice of social commitments (e.g., "I don't look good enough to go out") due to a fear of judgment from others (e.g., "Others may comment on my appearance"; Akram et al., 2019). Avoidance coping of this nature is likely to maintain physical and behavioural self-disgust and over time, the concurrence of additional psychological factors (e.g., loneliness, depression; Ypsilanti et al., 2019). Outward disgust involves significant withdrawal from all aspects of life, above social interaction, and is commonly observed before suicide (Chu et al., 2013; Robins, 1981). Persistent isolation may therefore shift the focus of disgust externally to others/the world (as a source of blame) eventually contributing to total withdrawal from life and suicidal ideation (Akram et al., 2019; Robins, 1981).

Suicidal ideation and non-suicidal self-injury have been preceded by reports of self-conscious emotions including guilt, shame, self-directed anger and disappointment, and self-disgust (Armey, Crowther, & Miller, 2011; Hom et al., 2019; Smith et al., 2015). Alternatively, self-disgust in individuals experiencing body image disturbance may accentuate the desire to eliminate revolting aspects of oneself (Moll et al., 2005), a response which increases suicidal thoughts and behaviours where the individual cannot satisfy this desire by other means (Brake et al., 2017). Therefore, self-disgust may represent an important target for prevention and treatment of body image disturbance above traditional methods of cognitive behavioural therapy (CBT). Indeed, many patients presenting body image disturbances fail to benefit from CBT (Harrison et al., 2016; National Institute for Health and Clinical Excellence, 2006). In eating disorders, disturbances in body image often persist post-treatment in anorexia nervosa (Bachner-Melman, Zohar, & Ebstein, 2006) and their presence increases the likelihood of relapse, with rates reported to be as high as 22%-51% (Berkman, Lohr, & Bulik, 2007; Carter, Blackmore, Sutandar-Pinnock, & Woodside, 2004; Castro et al., 2004; Channon & DeSilva, 1989; Keel, Dorer, Franko, Jackson, & Herzog, 2005; Strober, Freeman, & Morrell, 1999). The risk of relapse presents a further problem when considering its relationship with increased suicide risk (Carter et al., 2012; Pompili et al., 2006).

In line with previous outcomes, the current data also demonstrates that the relationship between measures of body image disturbance and suicidal ideation was mediated by age. Whilst greater dissatisfaction has been observed amongst those under the age of 31 years (Feingold et al., 1998; Mellor et al., 2010), mechanisms influencing the self-perception of likely change across the lifespan. In particular, the emergence of early emotional, social, and physiological changes in young adulthood may contribute to more negative self-judgments concerning appearance (Brausch & Muehlenkamp, 2007). In contrast, the focus of concern may shift when considering the shift life priorities and psychological factors (Kilpela et al., 2015). Further work is now required amongst older adults to examine whether the role of self-disgust in mediating the relationship between suicidal thoughts and behaviours can be extrapolated to this population.

Several limitations should be noted. The cross-sectional nature used in the present study leaves the current outcomes vulnerable to inflation bias between variables, and also limits the ability to draw conclusions about causal relationships. As the present sample was mostly comprised of young adult females, further research using a more balanced sample should clarify the role of sex. Finally, the role of additional psychiatric symptoms known to be associated with suicidal ideation should be perused in further work (e.g., depression). To that end, longitudinal examination of the current research questions should clarify whether body image disturbance predicts suicidal ideation, or whether the reverse is true.

To summarise, the current outcomes highlight the relationship between self-disgust, suicidal thoughts and behaviours and body image disturbance. More crucially, dimensions of self-disgust mediated all associations between body image disturbance measures and suicidal ideation. These findings highlight the role of self-disgust in the context of body image disturbance and support the notion that body image disturbance is associated with aversive self-conscious emotions. Interventions aiming to reduce the risk of suicidality in people with body image disturbance should address self-disgust and other negative self-conscious emotions.

## Reference

- Adjorlolo, S., Anum, A., & Amin, J. M. (2020). Validation of the suicidal behaviors questionnaire-revised in adolescents in Ghana. *Journal of Mental Health*, 1-7.
- Akram, U., Ypsilanti, A., Drabble, J., & Lazuras, L. (2019). The role of physical and behavioral self-disgust in relation to insomnia and suicidal ideation. *Journal of clinical sleep medicine*, 15(03), 525-527.
- Akram, U., Ypsilanti, A., Gardani, M., Irvine, K., Allen, S., Akram, A., ... & Lazuras, L. (2020). Prevalence and psychiatric correlates of suicidal ideation in UK university students. *Journal of Affective Disorders*, 272, 191-197.
- Aloba, O., Ojeleye, O., & Aloba, T. (2017). The psychometric characteristics of the 4-item Suicidal Behaviors Questionnaire-Revised (SBQ-R) as a screening tool in a non-clinical sample of Nigerian university students. *Asian Journal of Psychiatry*, 26, 46-51.
- Amini-Tehrani, M., Nasiri, M., Jalali, T., Sadeghi, R., Ghotbi, A., & Zamanian, H. (2020). Validation and psychometric properties of suicide behaviors questionnaire-revised (SBQ-R) in Iran. *Asian Journal of Psychiatry*, 47, 101856.
- Amir, N., Najmi, S., Bomyea, J., & Burns, M. (2010). Disgust and anger in social anxiety. *International Journal of Cognitive Therapy*, 3(1), 3-10.
- Angelakis, I., Gooding, P. A., & Panagioti, M. (2016). Suicidality in body dysmorphic disorder (BDD): A systematic review with meta-analysis. *Clinical Psychology Review*, 49, 55-66.
- Angrish, A., & Dhillon, R. (2020). Body Image Concern in Relation with Stress, Loneliness and Self-Esteem Among Adolescents. *Studies in Indian Place Names*, 40(50), 3626-3636.
- Armey, M. F., Crowther, J. H., & Miller, I. W. (2011). Changes in ecological momentary assessment reported affect associated with episodes of non-suicidal self-injury. *Behavior Therapy*, 42, 579-588.
- Azlan, H. A., Overton, P. G., Simpson, J., & Powell, P. A. (2017). Effect of partners' disgust responses on psychological wellbeing in cancer patients. *Journal of clinical psychology in medical settings*, 24(3-4), 355-364.
- Bachner-Melman, R., Zohar, A. H., & Ebstein, R. P. (2006). An examination of cognitive versus behavioral components of recovery from anorexia nervosa. *The Journal of nervous and mental disease*, 194(9), 697-703.
- Batterham, P. J., Ftanou, M., Pirkis, J., Brewer, J. L., Mackinnon, A. J., Beautrais, A., ... & Christensen, H. (2015). A systematic review and evaluation of measures for suicidal ideation and behaviors in population-based research. *Psychological Assessment*, 27(2), 501.
- Bebbington, P. E., Minot, S., Cooper, C., Dennis, M., Meltzer, H., Jenkins, R., & Brugha, T. (2010). Suicidal ideation, self-harm and attempted suicide: results from the British psychiatric morbidity survey 2000. *European Psychiatry*, 25(7), 427-431.
- Becker, S. P., Dvorsky, M. R., Holdaway, A. S., & Luebke, A. M. (2018). Sleep problems and suicidal behaviors in college students. *Journal of Psychiatric Research*, 99, 122-128.
- Berkman, N. D., Lohr, K. N., & Bulik, C. M. (2007). Outcomes of eating disorders: a systematic review of the literature. *International Journal of Eating Disorders*, 40(4), 293-309.
- Blakey, S. M., Reuman, L., Buchholz, J. L., & Abramowitz, J. S. (2017). Experiential avoidance and dysfunctional beliefs in the prediction of body image disturbance in a nonclinical sample of women. *Body Image*, 22, 72-77.
- Bodell, L. P., Smith, A. R., & Witte, T. K. (20). Dynamic associations between interpersonal needs and suicidal ideation in a sample of individuals with eating disorders. *Psychological Medicine*. Advance online publication. DOI: 10.1017/S0033291720000276

- Brake, C.A., Rojas, S.M., Badour, C.L., Dutton, C.E., & Feldner, M.T. (2017). Self-disgust as a potential mechanism underlying the association between PTSD and suicide risk. *Journal of Anxiety Disorders*, 47, 1-9.
- Braun, T. D., Park, C. L., & Gorin, A. (2016). Self-compassion, body image, and disordered eating: A review of the literature. *Body Image*, 17, 117-131.
- Callaghan, G. M., Duenas, J. A., Nadeau, S. E., Darrow, S. M., Van der Merwe, J., & Misko, J. (2012). An empirical model of body image disturbance using behavioral principles found in Functional Analytic Psychotherapy and Acceptance and Commitment Therapy. *International Journal of Behavioral Consultation and Therapy*, 7, 16–24.
- Carter, J. C., Mercer-Lynn, K. B., Norwood, S. J., Bewell-Weiss, C. V., Crosby, R. D., Woodside, D. B., & Olmsted, M. P. (2012). A prospective study of predictors of relapse in anorexia nervosa: implications for relapse prevention. *Psychiatry research*, 200(2-3), 518-523.
- Cash, T. F. (2002). Cognitive-behavioral perspectives on body image. In T. F. Cash & T. Pruzinsky (Eds.), *Body image: A handbook of theory, research, and clinical practice* (pp. 38-46). New York: Guilford Press.
- Cash, T. F., & Grasso, K. (2005). The norms and stability of new measures of the multidimensional body image construct. *Body Image*, 2, 199–203.
- Cash, T. F., & Labarge, A. S. (1996). Development of the Appearance Schemas Inventory: A new cognitive body-image assessment. *Cognitive Therapy and Research*, 1, 37-50.
- Cash, T. F., Melnyk, S. E., & Hrabosky, J. I. (2004). The assessment of body-image investment: An extensive revision of the Appearance Schemas Inventory. *International Journal of Eating Disorders*, 35, 305-316.
- Cash, T. F., Phillips, K. A., Santos, M. T., & Hrabosky, J. I. (2004). Measuring “negative body image”: Validation of the Body Image Disturbance Questionnaire in a nonclinical population. *Body Image*, 1, 363–372.
- Cash, T. F., Santos, M. T., & Williams, E. F. (2005). Coping with body-image threats and challenges: Validation of the Body Image Coping Strategies Inventory. *Journal of Psychosomatic Research*, 58(2), 190-199.
- Cassidy, S. A., Bradley, L., Cogger-Ward, H., Shaw, R., Bowen, E., Glod, M., ... & Rodgers, J. (2020). Measurement properties of the suicidal behaviour questionnaire-revised in autistic adults. *Journal of Autism and Developmental Disorders*, 50(10), 3477-3488.
- Castro, J., Gila, A., Puig, J., Rodriguez, S., & Toro, J. (2004). Predictors of rehospitalization after total weight recovery in adolescents with anorexia nervosa. *International Journal of Eating Disorders*, 36(1), 22-30.
- Cattarin, J. A., & Thompson, J. K. (1994). A three-year longitudinal study of body image, eating disturbance, and general psychological functioning in adolescent females. *Eating Disorders*, 2(2), 114-125.
- Channon, S., De Silva, P., Hemsley, D., & Perkins, R. (1989). A controlled trial of cognitive-behavioural and behavioural treatment of anorexia nervosa. *Behaviour research and therapy*, 27(5), 529-535.
- Chu, C., Buchman-Schmitt, J. M., Michaels, M. S., Ribeiro, J. D., & Joiner, T. (2013). Discussing disgust: The role of disgust with life in suicide. *International Journal of Cognitive Therapy*, 6(3), 235-247.
- Clarke, A., Simpson, J., & Varese, F. (2019). A systematic review of the clinical utility of the concept of self-disgust. *Clinical Psychology & Psychotherapy*, 26(1), 110-134.
- Cracknell, B. (2015). Improving the quality of initial management of self harm and suicide patients in A+ E at the James Paget Hospital. *BMJ Open Quality*, 4(1), u207272-w2919.
- Eskin, M., Sun, J. M., Abuidhail, J., Yoshimasu, K., Kujan, O., Janghorbani, M., ... & Hamdan, M. (2016). Suicidal behavior and psychological distress in university students: a 12-nation study. *Archives of suicide research*, 20(3), 369-388.
- Espeset, E. M., Gulliksen, K. S., Nordbø, R. H., Skårderud, F., & Holte, A. (2012). The link between negative emotions and eating disorder behaviour in patients with anorexia nervosa. *European Eating Disorders Review*, 20, 451-460.

- Feingold, A., & Mazzella, R. (1998). Gender differences in body image are increasing. *Psychological Science*, 9(3), 190-195.
- Fox JRE. (2009). Eating disorders and emotions. *Clin Psychol Psychother*. 16(4):23–239.
- Fox, J. R., Grange, N., & Power, M. J. (2018). Self-disgust in eating disorders: A review of the literature and clinical implications. In *The Revolting Self* (pp. 167-186). Routledge.
- Garlow, S. J., Rosenberg, J., Moore, J. D., Haas, A. P., Koestner, B., Hendin, H., & Nemeroff, C. B. (2008). Depression, desperation, and suicidal ideation in college students: results from the American Foundation for Suicide Prevention College Screening Project at Emory University. *Depression and anxiety*, 25(6), 482-488.
- Gómez-Romero, M. J., Tomás-Sábado, J., Montes-Hidalgo, J., Brando-Garrido, C., & Limonero, J. T. (2019). The suicidal behaviors questionnaire-revised. Spanish form. *Death Studies*, 1-7.
- Gould, M. S., Greenberg, T. E. D., Velting, D. M., & Shaffer, D. (2003). Youth suicide risk and preventive interventions: A review of the past 10 years. *Journal of the American Academy of Child & Adolescent Psychiatry*, 42(4), 386-405.
- Gupta, M. A., & Gupta, A. K. (2013). Cutaneous body image dissatisfaction and suicidal ideation: mediation by interpersonal sensitivity. *Journal of Psychosomatic Research*, 75(1), 55-59.
- Harrison, A., Fernández de la Cruz, L., Enander, J., Radua, J., & Mataix-Cols, D. (2016). Cognitive-behavioral therapy for body dysmorphic disorder: A systematic review and meta-analysis of randomized controlled trials. *Clinical Psychology Review*, 48, 43–51.
- Hayes, A. F. (2012). PROCESS: A versatile computational tool for observed variable mediation, moderation, and conditional process modeling.
- Hayes, A. F., & Preacher, K. J. (2013). Conditional process modeling: Using structural equation modeling to examine contingent causal processes.
- He, J., Sun, S., Zickgraf, H. F., Lin, Z., & Fan, X. (2020). Meta-analysis of gender differences in body appreciation. *Body Image*, 33, 90-100.
- Hill, R. M., & Pettit, J. W. (2014). Perceived burdensomeness and suicide-related behaviors in clinical samples: Current evidence and future directions. *Journal of Clinical Psychology*, 70(7), 631-643.
- Hom, M. A., Stanley, I. H., Chu, C., et al. (2019). A Longitudinal Study of Psychological Factors as Mediators of the Relationship Between Insomnia Symptoms and Suicidal Ideation Among Young Adults. *Journal of clinical sleep medicine: JCSM: official publication of the American Academy of Sleep Medicine*, 15(1), 55-63.
- Hrabosky, J. I., Cash, T. F., Veale, D., et al. (2009). Multidimensional body image comparisons among patients with eating disorders, body dysmorphic disorder, and clinical controls: a multisite study. *Body Image*, 6(3), 155-163.
- Ille, R., Schögl, H., Kapfhammer, H. P., Arendasy, M., Sommer, M., & Schienle, A. (2014). Self-disgust in mental disorders—symptom-related or disorder-specific?. *Comprehensive Psychiatry*, 55(4), 938-943.
- Jakatdar, T. A., Cash, T. F., & Engle, E. K. (2006). Body-image thought processes: The development and initial validation of the Assessment of Body-Image Cognitive Distortions. *Body image*, 3(4), 325-333.
- Johnson, J., Gooding, P., & Tarrier, N. (2008). Suicide risk in schizophrenia: explanatory models and clinical implications, The Schematic Appraisal Model of Suicide (SAMS). *Psychology and Psychotherapy: Theory, Research and Practice*, 81(1), 55-77.
- Keel, P. K., Dorer, D. J., Franko, D. L., Jackson, S. C., & Herzog, D. B. (2005). Postremission predictors of relapse in women with eating disorders. *American Journal of Psychiatry*, 162(12), 2263-2268.
- Kilpela, L. S., Becker, C. B., Wesley, N., & Stewart, T. (2015). Body image in adult women: Moving beyond the younger years. *Advances in Eating Disorders: Theory, Research and Practice*, 3(2), 144-164.

- Laursen, B., & Hartl, A. C. (2013). Understanding loneliness during adolescence: Developmental changes that increase the risk of perceived social isolation. *Journal of Adolescence*, 36(6), 1261-1268.
- Lazuras, L., Ypsilanti, A., Powell, P., & Overton, P. (2019). The roles of impulsivity, self-regulation, and emotion regulation in the experience of self-disgust. *Motivation and Emotion*, 43(1), 145-158.
- Lester, D., & Gunn, J. F. (2012). Perceived burdensomeness and thwarted belonging: An investigation of the interpersonal theory of suicide. *Clinical Neuropsychiatry*, 9(6), 221-224.
- Lockman, J. D., & Servaty-Seib, H. L. (2016). College student suicidal ideation: Perceived burdensomeness, thwarted belongingness, and meaning made of stress. *Death Studies*, 40(3), 154-164.
- Mellor, D., Fuller-Tyszkiewicz, M., McCabe, M. P., & Ricciardelli, L. A. (2010). Body image and self-esteem across age and gender: A short-term longitudinal study. *Sex roles*, 63(9-10), 672-681.
- Miotto, P., De Coppi, M., Frezza, M., & Preti, A. (2003). Eating disorders and suicide risk factors in adolescents: An Italian community-based study. *The Journal of Nervous and Mental Disease*, 191(7), 437-443.
- Moll, J., de Oliveira-Souza, R., Moll, F. T., Ignácio, F. A., Bramati, I. E., Caparelli-Dáquer, E. M., & Eslinger, P. J. (2005). The moral affiliations of disgust: A functional MRI study. *Cognitive & Behavioral Neurology*, 18(1), 68-78.
- National Institute for Health and Clinical Excellence. (2006). Obsessive-compulsive disorder: Core interventions in the treatment of obsessive compulsive disorder and body dysmorphic disorder (a guideline from the National Institute for Health and Clinical Excellence). London, England: British Psychiatric Society and Royal College of Psychiatrists.
- O'Neill, S., McLafferty, M., Ennis, et al. (2018). Socio-demographic, mental health and childhood adversity risk factors for self-harm and suicidal behaviour in College students in Northern Ireland. *Journal of Affective Disorders*, 239, 58-65.
- O'Brien, K. S., Danielsdóttir, S., Ólafsson, R. P., Hansdóttir, I., Fridjónsdóttir, T. G., & Jónsdóttir, H. (2013). The relationship between physical appearance concerns, disgust, and anti-fat prejudice. *Body Image*, 10(4), 619-623.
- Olatunji, B. O., Cox, R., & Kim, E. H. (2015). Self-disgust mediates the associations between shame and symptoms of bulimia and obsessive-compulsive disorder. *Journal of Social and Clinical Psychology*, 34(3), 239-258.
- Onden-Lim, M., Wu, R., & Grisham, J. R. (2012). Body image concern and selective attention to disgusting and non-self appearance-related stimuli. *Body Image*, 9(4), 535-538.
- Orbach, I. (1996). The role of the body experience in self-destruction. *Clinical Child Psychology and Psychiatry*, 1(4), 607-619.
- Orbach, I., Gilboa-Schechtman, E., Sheffer, A., Meged, S., Har-Even, D., & Stein, D. (2006). Negative bodily self in suicide attempters. *Suicide and Life-Threatening Behavior*, 36, 136-153.
- Orbach, I., Stein, D., Shani-Sela, M., & Har-Even, D. (2001). Body attitudes and body experiences in suicidal adolescents. *Suicide and Life-Threatening Behavior*, 31(3), 237-249.
- Osman, A., Bagge, C.L., Gutierrez, P.M., Konick, L.C., Kopper, B.A., Barrios, F.X., 2001. The suicidal behaviors questionnaire-revised (SBQ-R): validation with clinical and nonclinical samples. *Assessment*, 8 (4), 443-454
- Overton, P. G., Markland, F. E., Taggart, H. S., Bagshaw, G. L., & Simpson, J. (2008). Self-disgust mediates the relationship between dysfunctional cognitions and depressive symptomatology. *Emotion*, 8(3), 379.
- Pompili, M., Girardi, P., Innamorati, M., Tatarelli, G., Ruberto, A., Ferrari, V., & Tatarelli, R. (2007). Body uneasiness and suicide risk in a non-clinical sample of university students. *Archives of Suicide Research*, 11(2), 193-202.

- Pompili, M., Girardi, P., Tatarelli, G., Ruberto, A., & Tatarelli, R. (2006). Suicide and attempted suicide in eating disorders, obesity and weight–image concern. *Eating behaviors*, 7(4), 384-394.
- Powell, P. A., Overton, P. G., & Simpson, J. (2014). The revolting self: An interpretative phenomenological analysis of the experience of self-disgust in females with depressive symptoms. *Journal of Clinical Psychology*, 70, 562-578.
- Powell, P. A., Simpson, J., & Overton, P. G. (2015). Self-affirming trait kindness regulates disgust toward one's physical appearance. *Body Image*, 12, 98-107.
- Ribeiro, J. D., Franklin, J. C., Fox, K. R., Bentley, K. H., Kleiman, E. M., Chang, B. P., & Nock, M. K. (2016). Self-injurious thoughts and behaviors as risk factors for future suicide ideation, attempts, and death: a meta-analysis of longitudinal studies. *Psychological Medicine*, 46(2), 225-236.
- Robins E. *The Final Months: A Study of the Lives of 134 Persons Who Committed Suicide*. New York, NY: Oxford University Press; 1981.
- Rosen, J. C., & Ramirez, E. (1998). A comparison of eating disorders and body dysmorphic disorder on body image and psychological adjustment. *Journal of Psychosomatic Research*, 44(3-4), 441-449.
- Rueda-Jaimes, G. E., Castro-Rueda, V. A., Rangel-Martínez-Villalba, A. M., Corzo-Casasadiago, J. D., Moreno-Quijano, C., & Camacho, P. A. (2017). Validity of the Suicide Behaviors Questionnaire-Revised in patients with short-term suicide risk. *The European Journal of Psychiatry*, 31(4), 145-150.
- Rufino, K. A., Viswanath, H., Wagner, R., & Patriquin, M. A. (2018). Body dissatisfaction and suicidal ideation among psychiatric inpatients with eating disorders. *Comprehensive Psychiatry*, 84, 22-25.
- Russell, K., Allan, S., Beattie, L., Bohan, J., MacMahon, K., & Rasmussen, S. (2019). Sleep problem, suicide and self-harm in university students: A systematic review. *Sleep Medicine Reviews*, 44, 58-69.
- Sarwer, D. B., Thompson, J. K., & Cash, T. F. (2005). Body image and obesity in adulthood. *Psychiatric Clinics*, 28(1), 69-87.
- Sarwer, D. B., Wadden, T. A., Pertschuk, M. J., & Whitaker, L. A. (1998). Body image dissatisfaction and body dysmorphic disorder in 100 cosmetic surgery patients. *Plastic and Reconstructive Surgery*, 101(6), 1644-1649.
- Schwartz, M. B., & Brownell, K. D. (2004). Obesity and body image. *Body Image*, 1(1), 43-56.
- Snyder, C. F., & Dinoff, B. L. (1999). Coping: Where have you been? In C. R. Snyder (Ed.), *Coping: The psychology of what works* (pp. 3-19). New York: Oxford University Press.
- Spreckelsen, P. V., Glashouwer, K. A., Bennis, E. C., & Wessel, I. (2018). Negative body image: Relationships with heightened disgust propensity, disgust sensitivity, and self-directed disgust. *PloS One*, 13(6), e0198532-e0198532.
- Stasik-O'Brien, S. M., & Schmidt, J. (2018). The role of disgust in body image disturbance: Incremental predictive power of self-disgust. *Body Image*, 27, 128-137.
- Stice, E., Hayward, C., Cameron, R. P., Killen, J. D., & Taylor, C. B. (2000). Body-image and eating disturbances predict onset of depression among female adolescents: a longitudinal study. *Journal of Abnormal Psychology*, 109(3), 438.
- Strandheim, A., Bjerkeset, O., Gunnell, D., Bjørnelv, S., Holmen, T. L., & Bentzen, N. (2014). Risk factors for suicidal thoughts in adolescence-a prospective cohort study: the Young-HUNT study. *BMJ open*, 4(8), e005867.
- Stravynski, A., & Boyer, R. (2001). Loneliness in relation to suicide ideation and parasuicide: A population-wide study. *Suicide and Life-Threatening Behavior*, 31(1), 32-40.
- Strober, M., Freeman, R., & Morrell, W. (1999). Atypical anorexia nervosa: Separation from typical cases in course and outcome in a long-term prospective study. *International Journal of Eating Disorders*, 25(2), 135-142.

- Thompson, J. K., & Tantleff-Dunn, S. (1998). MINI-REVIEW Assessment of Body Image Disturbance in Obesity. *Obesity Research*, 6(5), 375-377.
- Trujillo, A., Forrest, L. N., Claypool, H. M., & Smith, A. R. (2019). Assessing longitudinal relationships among thwarted belongingness, perceived burdensomeness, and eating disorder symptoms. *Suicide and Life-Threatening Behavior*, 49, 1609-1620.
- Vartanian, L. R. (2010). Disgust and perceived control in attitudes toward obese people. *International Journal of Obesity*, 34(8), 1302-1307.
- Vossbeck-Elsebusch, A. N., Waldorf, M., Legenbauer, T., Bauer, A., Cordes, M., & Vocks, S. (2015). Overestimation of body size in eating disorders and its association to body-related avoidance behavior. *Eating & Weight Disorders*, 20, 173–178
- Whelton, W. J., & Greenberg, L. S. (2005). Emotion in self-criticism. *Personality & Individual Differences*, 38(7), 1583-1595.
- Ypsilanti, A., Lazuras, L., Powell, P., & Overton, P. (2019). Self-disgust as a potential mechanism explaining the association between loneliness and depression. *Journal of Affective Disorders*, 243, 108-115.
- Ypsilanti, A., Lazuras, L., Robson, A., & Akram, U. (2018). Anxiety and depression mediate the relationship between self-disgust and insomnia disorder. *Sleep Health*, 4(4), 349-351.



**Table 1***Correlation matrix for measures of body image disturbance, self-disgust and suicidal ideation.*

|  | 1    | 2    | 3    | 4    | 5    | 6    |
|--|------|------|------|------|------|------|
| 1. Body Image Disturbance                |      |      |      |      |      |      |
| 2. Self-Disgust                          | .63* |      |      |      |      |      |
| 3. Suicidal Ideation                     | .42* | .50* |      |      |      |      |
| 4. SBQ-R: Lifetime ideation              | .36* | .44* | .87* |      |      |      |
| 5. SBQ-R: Ideation Frequency (Past Year) | .38* | .47* | .88* | .70* |      |      |
| 6. SBQ-R: Threat of Suicide Attempt      | .24* | .29* | .73* | .59* | .54* |      |
| 7. SBQ-R: Likelihood of Future Attempt   | .40* | .46* | .89* | .69* | .69* | .56* |

Note:

\* Sig at &lt; .001

**Table 2***Multivariate Associations between Body Image Disturbance, Self-Disgust, and Suicidal Ideation.*

| <i>Predictors</i>      | <i>Adjusted R<sup>2</sup></i> | <i>β</i> | <i>B</i> | <i>Sig.</i> | <i>95% CIs for B</i> |
|------------------------|-------------------------------|----------|----------|-------------|----------------------|
| Step 1                 | .182                          |          |          |             |                      |
| Age                    |                               | -.09     | -0.03    | .003*       | -0.045, -0.007       |
| Sex                    |                               | -.02     | -0.21    | .577        | -0.963, 0.548        |
| Body Image Disturbance |                               | .42      | 1.58     | .001**      | 1.328, 1.841         |
| Step 2                 | .286                          |          |          |             |                      |
| Age                    |                               | -.11     | -0.03    | .001**      | -.049, -.014         |
| Sex                    |                               | -.01     | -0.06    | .853        | -0.769, 0.644        |
| Body Image Disturbance |                               | .15      | 0.58     | .001**      | 0.257, 0.876         |
| Self-Disgust           |                               | .42      | 0.11     | .001**      | 0.085, 0.125         |

*Note:* \* Sig at  $\leq .05$ , \*\*  $\leq .01$ , \*\*\*  $\leq .001$ 

Bootstrapped with 1000 bias corrected resamples.

**Table 3**

*Mediation model of the effect of body image disturbance on suicidal ideation through self-disgust, controlling for age (10,000 bootstrap samples).*

| IV                     | Mediator     | DV                | Total effect<br>(c path) | Direct effect<br>(c' path) | Total indirect effect |            |
|------------------------|--------------|-------------------|--------------------------|----------------------------|-----------------------|------------|
|                        |              |                   |                          |                            | Point est.            | 95% CI     |
| Body image disturbance | Self-disgust | Suicidal ideation | 1.57***                  | 0.56***                    | 1.01***               | 0.78, 1.25 |

\*\*\* p < .001; 10,000 bootstrap samples

**Figure 1**

*Mediation model of the effect of body image disturbance on suicidal ideation through self-disgust, controlling for age (10,000 bootstrap samples)*

