SELF-DISGUST WITHIN EATING PSYCHOPATHOLOGY

ASSOCIATIONS WITH DISGUST SENSITIVITY, DEPRESSION, ANXIETY AND LEVELS OF SENSORY PROCESSING.

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Today’s Presentation:

- Defining Self-Disgust
- Current literature on Self-Disgust within Eating Psychopathology
- Outline of Study
- Results and Conclusions
What is Self-Disgust?
Shame

Disgust

Self-Disgust

Internal Disgust

External Disgust

Disgust Sensitivity
Defining Self-Disgust

- Disgust is considered to be a fundamental and universal emotion (Darwin, 1965; Ekman 1992).

- Feelings of revulsion or strong disapproval aroused by something unpleasant or offensive and results in distinctive facial, behavioural and physiological responses (Rozin et al, 1999).

- Involves the extreme experiences of loathing directed towards our self, the body in general or particular body parts and our own actions (Moncrieff- Boyd & Nunn., 2014, p8)
disgust

① nose wrinkling
② upper lip raised
Why Self-Disgust within Disordered Eating?
Why Self-Disgust within Disordered Eating

- Disgust plays a significant role within several psychopathologies. These include depression (Overton et al., 2008), anxiety (Mayer et al., 2006) and eating disorders (Davey et al, 1998).

- Research surrounding disgust has focused heavily on its role within disease avoidance however more recently there is an emerging line of enquiry showing it can be directed towards one-self (Power, Overton & Simpson., 2015).

- Focusing on self-directed disgust may be a more appropriate focus when understanding the emotion within psychopathology (Muris et al, 2000; Schienle ey al, 2003).
The role of self-disgust within disordered eating is a relatively under-researched area within clinical psychology.

Self-oriented disgust may result in a more global psychological disturbance consisting of many emotional components (McKay & Lo Presti., 2015) and there may be a shared emotional component between depression, anxiety and disordered eating (Power, Overton & Simpson., 2013).

Disgust may be used within disordered eating to suppress and ‘redirect’ the emotion of anger, which when combined with continued weight loss leads to a coupling of the two emotions (Power & Fox., 2013).
Why Self-Disgust within Disordered Eating

- Compared to non-clinical group, self-disgust was elevated across a range of mental health disorders, with eating disorders scoring the highest (Ille et al., 2014).

- In line with this significant positive relationships between levels of self-disgust and symptoms of disorder eating behaviour have been demonstrated (Moncrieff-Boyd & Nunn., 2014)
Where does Self-Disgust come from?

- The factors that may contribute to the emergence of self-disgust have not yet been established.

- Feelings of self-disgust are likely to develop throughout childhood and adolescence; with preliminary quantitative evidence showing that self-disgust may be more likely to be rooted from this time of development (Powell et al, 2014).

- From this, it can be argued that a possible pre-cursor or predisposing factor to self-disgust could be explained by a person’s sensory processing.
What is Sensory Processing

- “The ability to register and modulate sensory information and to organise this sensory input to response to situational demands” (Humphry 2002, p172) and this type of processing is suggested to form the basis of both temperament and personality (Dunn, 1997).

- It is estimated that 15% of the total population experience more intense sensory processing patterns (Simeonsson et al, 2003; Miller et al, 2007).

- It is believed that the coping strategies associated with this have a significant effect on behaviour, emotions, mental health and overall quality of life (Abernethy, 2010).
Dunn’s Model of Sensory Processing (1997)

- There is a relationship between the way a person’s nervous system operates and their ability to self-regulate.

- Emphasis on neurological thresholds, which are suggested to range from hyposensitivity to hypersensitivity (Dunn, 2006).

- Four basic patterns of sensory processing which represent one extreme of the threshold and self-regulation continua (Dunn, 1997, 2001).
Aims

To assess the relationship between self-disgust and sensory processing, while controlling for possible confounding variables such as anxiety, depression and anger.

If associations were found between self-disgust and the sensory processing variables, this study aimed to identify whether sensory variables were able to statistically predict self-disgust above and beyond the identified confounding variables.
Method: Participants

- Participants were 304 females, with either a diagnosis of anorexia nervosa (n=270) or bulimia nervosa (n=104).
- Participants were recruited from either a university campus or online.
- For those who were recruited online, participants were invited to take part through a number of sources including Beat’s research participation scheme, Call for Participants or face book support groups.
Method: Materials

- The Self Disgust Scale (SDS; Overton et al, 2008).
- Disgust Propensity and Sensitivity Scale-Revised (DPSS-R; Fergus & Valentiner, 2009).
- Sensory Profile, Adolescent and Adult Report Version—(SP; Dunn, 1999).
- The Beck Depression Inventory II (BDI-II: Beck et al., 1961)
- The Beck Anxiety Inventory (BAI: Beck., 1988)
- The Clinical Anger Scale (CAS: Snell et al., 1995)
Method: Procedure

- Participants who were interested in taking part in the study were asked to follow the web-link within the advertisement created using the Qualtrics software.

- Full ethical approval for this project was provided by the Ethics Committee of the Department of Health and Life Sciences within De Montfort University.

- Once full consent was gained, participants completed a series of on-line self-report measures.
Statistical analysis was carried out on IBM SPSS 22.

Spearman’s correlations between disgust, anxiety, anger, depression and sensory variables were used to outline significant relationships between these variables.

Finally, linear and hierarchal regressions were conducted to identify statistically significant predictors of self-disgust and to identify the stronger predictors out of these variables.

All analyses were bootstrapped, to account for errors that may have occurred as a result of the normality of the data.
Tests of difference showed that both clinical groups (anorexia and bulimia) had higher levels of eating disorder symptomology, disgust sensitivity, anger, depression, anxiety, self-disgust, poor registration, sensory sensitivity and sensation avoiding than the non-clinical group.

Both clinical groups had lower levels of sensation seeking than the non-clinical group.
Correlations

- Self-disgust was significantly positively correlated with all the disgust, anxiety, depression and anger variables (p<.001).

- Significant positive correlations were also found between three of the sensory variables (low registration, sensory sensitivity and sensation avoidant; p<.001) and significantly negatively correlated with sensation seeking (p<.001).
Hierarchical regressions revealed that within the bulimia group, levels of self-disgust were most strongly associated with depression.

In the clinical group with anorexia nervosa, self-disgust was associated with levels of depression, anxiety and lower sensation seeking.
Hierarchical Regression

**Table 5.** Hierarchical Regression Analysis to Examine Whether Sensory Variables are Related to Self-Disgust after Controlling for Anxiety, Disgust-Sensitivity, Depression and Anger in a sample of 270 Female Participants with a Diagnosis of Anorexia Nervosa.

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>Std Error</th>
<th>β</th>
<th>Bootstrap CI</th>
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<tbody>
<tr>
<td><strong>Model 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anxiety</td>
<td>.226</td>
<td>.074</td>
<td>.205</td>
<td>(.085, .372)**</td>
</tr>
<tr>
<td>Disgust Sensitivity</td>
<td>.126</td>
<td>.118</td>
<td>.090</td>
<td>(-.103, .377)</td>
</tr>
<tr>
<td>Depression</td>
<td>.390</td>
<td>.071</td>
<td>.423</td>
<td>(.251, .537)**</td>
</tr>
<tr>
<td>Anger</td>
<td>.024</td>
<td>.078</td>
<td>.017</td>
<td>(-.129, .177)</td>
</tr>
<tr>
<td><strong>Model 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anxiety</td>
<td>.183</td>
<td>.076</td>
<td>.166</td>
<td>(.043, .332)**</td>
</tr>
<tr>
<td>Disgust Sensitivity</td>
<td>.195</td>
<td>.107</td>
<td>.140</td>
<td>(-.003, .409)</td>
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<tr>
<td>Depression</td>
<td>.416</td>
<td>.068</td>
<td>.451</td>
<td>(.279, .557)**</td>
</tr>
<tr>
<td>Anger</td>
<td>-.015</td>
<td>.076</td>
<td>-.011</td>
<td>(-.171, .125)</td>
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<tr>
<td>Low Registration</td>
<td>.255</td>
<td>.094</td>
<td>.228</td>
<td>(.077, .440)**</td>
</tr>
<tr>
<td>Sensation seeking</td>
<td>-.154</td>
<td>.076</td>
<td>-.140</td>
<td>(-.308, -.003)**</td>
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<tr>
<td>Sensory Sensitivity</td>
<td>-.158</td>
<td>.117</td>
<td>-.165</td>
<td>(-.386, .066)</td>
</tr>
<tr>
<td>Sensation Avoidance</td>
<td>.010</td>
<td>.100</td>
<td>0.10</td>
<td>(-.198, .204)</td>
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</table>

**p < .001**
Table 6: Hierarchical Regression Analysis to Examine Whether Sensory Variables are Related to Self-Disgust after Controlling for Anxiety, Disgust-Sensitivity, Depression and Anger in a sample of 104 Female Participants with a Diagnosis of Bulimia Nervosa.

<table>
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<th>Std Error</th>
<th>$\beta$</th>
<th>Bootstrap CI</th>
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<tr>
<td><strong>Model 1</strong></td>
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<td></td>
</tr>
<tr>
<td>Anxiety</td>
<td>.228</td>
<td>.100</td>
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<tr>
<td>Disgust Sensitivity</td>
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<td>.186</td>
<td>.178</td>
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<td>Depression</td>
<td>.346</td>
<td>.084</td>
<td>.406</td>
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<tr>
<td>Anger</td>
<td>-.049</td>
<td>.088</td>
<td>-.041</td>
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<tr>
<td><strong>Model 2</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Anxiety</td>
<td>.167</td>
<td>.102</td>
<td>.162</td>
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<tr>
<td>Disgust Sensitivity</td>
<td>.281</td>
<td>.157</td>
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<tr>
<td>Depression</td>
<td>.348</td>
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<tr>
<td>Anger</td>
<td>-.072</td>
<td>.086</td>
<td>-.059</td>
</tr>
<tr>
<td>Low Registration</td>
<td>.025</td>
<td>.165</td>
<td>.024</td>
</tr>
<tr>
<td>Sensation seeking</td>
<td>-.198</td>
<td>.130</td>
<td>-.193</td>
</tr>
<tr>
<td>Sensory Sensitivity</td>
<td>-.120</td>
<td>.178</td>
<td>-.131</td>
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<tr>
<td>Sensation Avoidance</td>
<td>.174</td>
<td>.182</td>
<td>.191</td>
</tr>
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</table>

** $p < .001$, * $p < .05$
Conclusions

- These findings suggest that sensory processing may be implicated in levels of self-disgust in clinical groups with anorexia but not bulimia.

- However, more research would be needed to replicate this finding.

- The role of sensory processing in the expression of self-disgust is a novel area of investigation, and how it may relate to the understanding and treatment of individuals with eating disorders warrants further investigation.
My PhD Story

1. Where does self-disgust come from?
2. What impact can self-disgust have on our emotional regulation?
3. What happens to self-disgust over time?
4. What impact can self-disgust have on the treatment of disordered eating?
Questions