

# An Investigation of the Relationship between Pathogen Disgust Sensitivity and Stigma Towards Mental Illness

## Overview

- The **stigmatisation of atypical individuals** motivates discriminatory behaviours including stereotyping, prejudice, and persecution towards such individuals- including those with mental health conditions (Corrigan, 2012). Psychologists have extensively studied stigma toward mental illness with the aim to understand the psychological mechanisms underlying it (e.g., Brelet et al., 2021; Corrigan et al., 2003; Oaten et al., 2011).
- Some of the recent literature has indicated that non-infectious stigmatised individuals, including those who are obese (Park et al., 2007) and those who are homeless (Clifford & Piston, 2017), are socially avoided in the same way as individuals exhibiting cues of infectious disease (Murray & Schaller, 2016).
- It is hypothesised that this may be explainable through an **overgeneralised behavioural immune system (BIS)** response in which infectious disease avoidance may be “over-inclusive” in its nature (Oaten et al., 2011). In other words, since an increased rate of false-positive detection of pathogenic threat is less costly than an increased rate of false-negative detection (Nesse, 2005), then perceptions of infectious and non-infectious stigmatised individuals may both be considered as a pathogenic threat.
- This over-activation of the BIS has been shown to coincide with the emotion of **disgust**, in which stimuli that are considered a pathogenic threat trigger a disgust response (Curtis et al., 2011). This over-activation of the BIS can therefore cause unwarranted disgust reactions to harmless stimuli, including individuals with mental health conditions (Dawydiak et al., 2020).
- It is necessary for research to build on the existing literature surrounding this relationship for a better understanding of the psychological mechanisms underlying stigma toward mental illness which would potentially enable future anti-discrimination interventions.
- Thus, the current study aimed to replicate Dawydiak et al.’s (2020) findings by investigating whether results replicate over a different set of stigmatised mental health conditions: **paedophilic disorder; bulimia nervosa; and borderline personality disorder**.
- **Hypothesis:** positive relationship between pathogen disgust scores and stigmatising attitudes toward each mental health condition

## Methods

- In a sample of 114 participants aged between 18 and 71 ( $M = 38.82$  years,  $SD = 15.95$ ), we tested whether higher scores from the pathogen, sexual, and moral subscales of the Three Domain Disgust Scale (TDDS) predicted greater AQ-27 stigma scores towards individuals described in a vignette with one of three mental health conditions: paedophilic disorder; bulimia nervosa; and borderline personality disorder.
- Study was correlational using scores from the pathogen, sexual, and moral subscales of the TDDS as predictor variables and AQ-27 scores for each mental health condition used as outcome variables.

## Results

All data and analysis are publicly available to view through the Open Science Framework (<https://osf.io/2eyj375/>).

- Results of a **linear-mixed effects model** indicated that there was no significant relationship between any of the three domains of disgust and stigma towards these mental health conditions.
- When each mental health vignette was analysed separately in separate **multiple regression analyses**, sensitivity to pathogen, sexual, and moral disgust did not significantly predict stigma toward individuals with paedophilic disorder, bulimia, or BPD respectively.
- Thus, the results of the current study did not provide sufficient evidence to conclude that pathogen disgust sensitivity has an effect on stigma toward mental illness. Therefore, **we fail to reject the null hypothesis**.

## Implications of the Current Study

- While previous researchers have found evidence of a significant relationship between pathogen disgust sensitivity and stigma toward mental illness (e.g., Coneo, 2022; Dawydiak et al., 2020), results of the present study indicate that this relationship is not observable across a different set of mental health conditions: bulimia; paedophilic disorder; and BPD.
- Since the study was powered to detect a medium effect size ( $r = \sim .31$ ), then these results suggest that it is unlikely that any relationship between disgust sensitivity and stigma exists with any moderate practical significance. Furthermore, since the  $R^2$  values for each of the multiple regressions are very low (1-3%), this indicates that the variation observed in stigma scores is not explainable through disgust sensitivity.
- Therefore, in contrast with the findings of previous research (e.g., Coneo, 2022; Dawydiak et al., 2020), results of the present study indicate that **disgust sensitivity may not be a good predictor of stigmatising attitudes toward the three mental health conditions under current analysis**.

## Future Research Directions

- Existing research within this area is sparse and therefore the inclusion of these insignificant results are necessary for transparent and open science communication within the research field.
- Importantly, There are **some potential limitations**, such as the low internal consistency for bulimia vignette ( $\alpha = .61$ ) , which may have directly impacted the reliability of the findings.
- Thus, future researchers are encouraged to avoid these limitations and produce more reliable results in determining the underlying motivations for stigma towards mental illness.