Exploring trauma symptomology and physical health profiles, and their relative associations, in a female inpatient EUPD population

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Abstract

Background: Obesity is prevalent in personality disorder and trauma-exposed populations. Analogously, comorbidity of cPTSD and EUPD symptomology is apparent. This study explored BMI and perceptions of physical health, and their associations with trauma symptomology, in an EUPD sample. **Methods:** Clinical data pertaining to trauma symptomology, physical health perceptions, and BMI was extracted for 24 females with EUPD residing in a Dialectical Behaviour Therapy (DBT) service. **Results:** Obesity was highly prevalent (n=18, 72%). There were no significant differences in BMI nor physical health perceptions between those who did and did not meet cPTSD diagnostic criteria. Trauma symptomology did not predict BMI nor self-perceived physical health. **Conclusions:** Obesity appears a considerable health challenge within inpatient EUPD services, advocating the need for a holistic treatment approach addressing the mental and physical health needs of this population.

Introduction

Obesity and trauma
Obesity is the second leading cause of preventable death (Brahmbhatt et al., 2017). An estimated 64.2% of UK adults are obese or morbidly obese (Baker, 2021), and this is expected to rise (Webber et al., 2012). Evidence documents strong links between trauma exposure and physical health outcomes, including obesity (Morris et al., 2021).

Complex Post Traumatic Stress Disorder (cPTSD) in EUPD samples
Preliminary research has highlighted the pervasiveness of cPTSD symptomology among patients with a primary diagnosis of EUPD (Morris et al., 2021), both of which are conditions that share core features and aetiology (Porter et al., 2020). Whilst there has been extensive investigation into the relationship between obesity and trauma, more broadly, exploration of this relationship among EUPD samples, and within the ICD-11 theoretical framework, is limited.

Study aims

The current study aimed to explore the associations between trauma symptomology and physical health in an EUPD population. Specifically, the study sought to:

1. Explore and compare BMI profiles and perceptions of own physical health, dependent on trauma symptomology

H_1. Individuals with EUPD + cPTSD would be more obese than individuals with EUPD only.

H_2 Higher total ITQ scores will predict higher BMI values.

2. Explore the predictive effect of trauma symptomology on BMI and perceptions of own physical health

H_3. Trauma symptomology will predict perceptions of own physical health,

Method

Design:
Service evaluation of existing clinical data for admissions to a female adult inpatient DBT service.

Participants:
24 females, aged 18- 55, admitted to a specialist inpatient DBT service. All participants were of Caucasian ethnicity and had a primary diagnosis of EUPD.

Procedure:
Trauma symptomology was assessed on the International Trauma Questionnaire (ITQ; Cloitre et al., 2011). Physical health perceptions were assessed using the Recovering Quality of Life (ReQoL; Keetharuth et al., 2018) scale. BMI is routinely collected as per patient care.

Ethical consideration:
Ethical permissions for the service evaluation were attained from internal clinical governance structures.
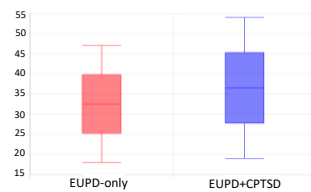
Results

H_1. BMI profiles

Figure 1. BMI profiles of those with EUPD-only and EUPD+cPTSD.

Mann- Whitney U
- BMI scores did not significantly differ between the groups (U=154.00, p=.509).

Chi- square test for association
- There was no significant association between BMI (categorical) and cPTSD, as χ^2(3, n=33)=1.45, p=.694, r=.1.
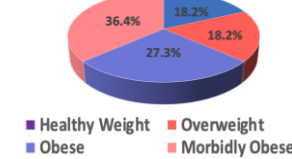- The distribution of participants across BMI categories did not differ between groups (see Figure 2).

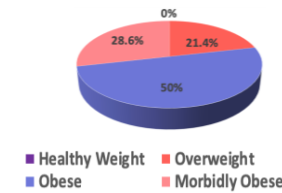
Figure 2. BMI profiles of those with EUPD-only

Figure 3. BMI profiles of those with EUPD + cPTSD

Results

H_2. **Trauma symptomology and BMI**

Spearman's Rank Correlation
- There was no significant association between BMI & trauma symptomology severity, measured as total ITQ score (r (31) = .008, p= .965).

Ordinal regression
- Trauma symptomology severity (total ITQ score) did not predict the likelihood of obesity (Wald x^2(1)= 3.16, p= .075, 95% CI [-5.3, .26].
- The model (total ITQ scores + BMI) explained 5.6% of the variance in BMI.

H_3. **Trauma symptomology and physical health perceptions**

Mann- Whitney U
- Median ReQoL physical health scores did not significantly differ between participants who did and did not meet CPTSD diagnostic criteria (U=116.00, p=.191).

Linear regression
- Total ITQ scores were not predictive of physical health scores, and thus perceptions of physical health F (1, 34) = 1.305, p=.261.
- Total ITQ scores accounted for 9% of the explained variability in ReQoL physical health scores.

Discussion

Findings
The study illustrates the high prevalence of obesity in females with EUPD, irrespective of trauma symptomology. The presence of cPTSD symptoms was not predictive of BMI nor self- perceived in this population. However, a BMI above the healthy range was highly prevalent within this sample.

Whilst a linear relationship between trauma symptomology, physical health and BMI was not apparent, the high prevalence of both obesity and cPTSD symptomology may have masked significant findings. Given the high comorbidity between EUPD and eating disorders (Miller et al., 2021), it is also possible that the relationship between trauma and BMI in this population is quadratic. Given the small sample size, this could not be explored here, however.

Implications
- Despite the lack of any significant association, EUPD still appears to be a risk factor, albeit indirect, for obesity. It is crucial that EUPD services address the physical, as well as mental health needs of this population.

Limitations
- The study was limited by the size of the sample, lacking statistical power. Thus, results must be interpreted cautiously.
- All participants were female and of Caucasian ethnicity.

Future directions
- Future research should explore the role of inpatient settings, anti-psychotics and HPA axis disruptions, to better understand the causes of obesity in this population.
- Additionally, conducting longitudinal studies would be helpful in examining BMI status upon admission, in comparison to BMI status during inpatient stay and upon discharge, thus providing a more holistic picture of this potential relationship within an institutional setting.

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