

Hypersexuality and binge eating in a non-clinical population: psychopathological factors evaluated according to a gender perspective

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This study investigates the interplay between post-traumatic symptomatology (such as disturbance of self-organization) and uncontrolled eating behavior and hypersexual behavior, according to a gender perspective. Drawing on established literature linking trauma exposure with emotional dysregulation and difficulties in impulse control,¹ our study aimed to clarify the psychological pathways through which post-traumatic symptoms manifest as disordered behaviors in both men and women. Although the literature has long recognized neurofunctional similarities between eating and sexual behaviors,² it remains unclear whether, despite these shared underpinnings, the two behaviors may diverge in their expression and could be differently associated with exposure to traumatic experiences. This possible divergence might be particularly relevant when considering the moderating role of gender, as men and women may vary in how such common processes manifest at the behavioral level, potentially leading to different psychopathological outcomes. Further clarification is needed to understand whether these shared mechanisms might diverge across behaviors and whether gender could play a role in shaping such differences.

We conducted an observational, cross-sectional study involving 1024 participants (731 females and 293 males) aged 18–60 years ($M = 29.6$, $SD = 10.9$), recruited via social media. Participants completed a battery of validated psychometric instruments: the International Trauma Questionnaire to assess PTSD and disturbances in self-organization (DSO), the Binge Eating Scale, the Hypersexual Behavior Inventory (HBI), a dimensional tool widely used in non-clinical populations but not equivalent to the ICD-11 diagnosis of CSBD; the Patient Health Questionnaire (PHQ-9) for depressive symptoms, and the Multidimensional State Boredom Scale. Ethical approval

was granted by the Department of Dynamic and Clinical Psychology and Health Studies at Sapienza University of Rome. All data were collected anonymously, and participants gave informed consent digitally.

The results (see supplementary materials) revealed significant gender differences across all psychopathological domains except boredom. Specifically, males scored higher in hypersexuality ($M = 36.70$) compared to females ($M = 31.74$), while females exhibited significantly greater levels of binge eating ($M = 10.97$ vs. 7.69), PTSD, depression, and DSO. These findings align with prior research showing that men are more likely to express distress through externalizing behaviors such as impulsivity or sexual acting-out, whereas women tend to internalize distress through mood disorders and disordered eating.³

Pearson's correlations demonstrated significant associations between HBI, BED, PTSD, DSO, boredom, and depression. Of particular note, DSO showed strong positive correlations with both binge eating ($r = .418$) and hypersexuality ($r = .430$), reinforcing the central role of disrupted self-organization in trauma-related psychopathology. Gender also correlated negatively with BED ($r = -.197$) and positively with HBI ($r = .173$), reflecting gendered behavioral patterns.

We performed two parallel mediation analyses to examine indirect effects of PTSD and DSO on binge eating and hypersexuality through depression and boredom. Results confirmed that DSO had a significant direct effect on hypersexuality ($\beta = 0.253$, $P < .001$) and on binge eating ($\beta = 0.134$, $P = .004$). PTSD had no direct effect on either outcome but demonstrated significant indirect effects through depression and boredom. Specifically, hypersexuality was mediated by both boredom ($\beta = 0.011$, $P = .030$) and depressive symptoms

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($\beta = 0.019$, $P = .021$), whereas binge eating was mediated almost exclusively by depression ($\beta = 0.057$, $P < .001$). This distinction may reflect different emotional triggers underlying each behavior. For example, hypersexuality may be used to counteract states of under-stimulation and low arousal, whereas binge eating may reflect a more depressive, internalized coping style.

To further examine the unique contribution of gender, two ANCOVA models were conducted controlling for PTSD, DSO, depression, and boredom. Results confirmed that gender remained a significant predictor: male gender was associated with higher hypersexuality ($F[1,1017] = 66.93$, $P < .001$), while female gender predicted higher levels of binge eating ($F[1,1017] = 30.37$, $P < .001$), even after accounting for all covariates.

From a theoretical perspective, our findings are consistent with models suggesting that hypersexuality and binge eating may function as maladaptive emotion-regulation strategies associated with trauma-related disturbances, particularly disturbance of self-organization.⁴

The fact that hypersexuality was mediated by boredom highlights the potential role of under-recognized states such as low stimulation and anhedonia, particularly in men, in the development of problematic sexual behaviors.

In line with these patterns, the role of depressive symptoms as a universal mediator across genders and behaviors cannot be overstated. Depression emerged as a robust predictor of both BED and HBI in the mediation models, and also held significance in ANCOVA models. These results suggest that trauma-related disturbances (DSO) often progress to behavioral symptoms through mood dysregulation. Given that women in our sample reported significantly higher depressive symptoms, this may help explain their higher scores in binge eating.

The results also align with gender-based coping theories: women generally engage in emotional and internalizing coping strategies (eg, eating, withdrawal), while men show a preference for instrumental or externalizing behaviors (eg, sex, impulsivity). This has important clinical implications, as it points to the necessity of gender-sensitive therapeutic approaches tailored to the specific psychopathological profiles of individuals.

This study contributes to an understanding of how gender influences trauma-related psychopathology and offers empirical evidence to inform clinical screening and treatment strategies. Interpretation of gender-specific findings should also take into account the gender imbalance of the sample (71% women), which may have amplified effects in women and reduced sensitivity to detect patterns in men. Nonetheless, gender remained a significant predictor even after adjusting for covariates, suggesting that the differences observed are not solely due to this imbalance. Although the sample was limited to a non-clinical population and did not represent non-binary or gender diverse groups, the results provide a solid basis for future research in the clinical setting. Future studies should aim to replicate these findings in more heterogeneous

populations and, ideally, with longitudinal data to elucidate causal mechanisms.

In conclusion, our findings suggest that post-traumatic stress and disturbances in self-organization may be linked to distinct patterns of dysfunctional behavior, moderated by gender. Hypersexuality and binge eating may represent behavioral manifestations of difficulties in emotion regulation, although this interpretation should be considered preliminary as no direct measure of emotional dysregulation was included. These results underscore the value of integrated, trauma-informed, and gender-sensitive approaches in the prevention and treatment of psychopathological behaviors in the general population.

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Author contributions

G.O. contributed to the Conceptualization, Data curation, Formal analysis, Survey, Methodology, Resources, Software, Visualization, Writing—original draft & editing the article after revisions. D.D. contributed to the Conceptualization, Project administration, Supervision, and Writing—review & editing. T.G. revised the article (writing—review & editing). E.C. contributed to the Conceptualization and revised the article (writing—review & editing). E.L. proofread the article. D.M. contributed to the Conceptualization, Data curation, Methodology, Resources, and revised the article. A.S. contributed to the review & editing. E.A.J. and L.F. contributed to the Conceptualization and revised the article. G.C. contributed to the Conceptualization, Data curation, Fund acquisition, Survey, Methodology, Project administration, Resources, Supervision, and review of the article.

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Conflicts of interest

None declared.

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