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Guest Editorial

Addressing disparities in eating disorders: underfunding, research gaps and clinical training deficiencies among males and men

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Summary

This paper highlights systemic research and clinical deficiencies in addressing eating disorders among males and men, focusing on societal stigma, gender-biased diagnostics and barriers to care. It advocates for comprehensive reforms, including addressing systemic underfunding, closing research gaps, improving clinician training and tailored interventions to reduce disparities and improve outcomes.

Keywords

Eating disorders; sex; gender; healthcare; education and training.

Eating disorders are defined as persistent disturbances in eating or weight-control-related behaviours accompanied by impaired physiological and psychosocial functioning. The DSM-5-TR classifies anorexia nervosa, bulimia nervosa, binge eating disorder (BED), avoidant/restrictive food intake disorder (ARFID) and other specified feeding or eating disorders (OSFED) as distinct disorders within the eating disorder spectrum. These disorders can carry a high risk of going unnoticed until they reach life-threatening stages, creating significant repercussions for not only individuals but also families, broader communities and public health systems.

Key considerations in eating disorders

Given the biological and sociocultural complexities of eating disorders, gender and sex are distinct yet closely related variables that must be appropriately considered in research and clinical settings. Sex refers to biological attributes, including anatomy (e.g. the reproductive system), physiology (e.g. sex hormones) and genetics (e.g. gene expression), typically assigned at birth and categorised as female or male, although variations exist. In contrast, gender refers to the socially constructed roles, behaviours, expressions and identities of girls, women, boys, men and gender-diverse individuals. Gender exists along a continuum and can fluctuate throughout life, with diversity in how it is understood, experienced and expressed across contexts. However, throughout the literature, sex and gender are often conflated, used interchangeably or lack sufficient specificity, which may obscure distinctions or perpetuate biases in research and practice. To maintain consistency and accurately represent eating disorders and the findings of cited studies, this paper will use 'male' and 'female' when referring to sex-based aspects of eating disorders, and 'men' and 'women' when referring to gender-based aspects of eating disorders. When the relationship between gender and sex is unclear or when reporting statistics, it uses the terminology of the cited studies while recognising the need for greater precision in language.

According to the Global Burden of Disease 2021 study, eating disorders contribute to approximately 1.26 million years of healthy life lost caused by disability (YLDs) in males. Of these, approximately 219 000 YLDs are attributable to anorexia nervosa, while approximately 1.04 million YLDs are attributable to bulimia nervosa.[1] However, there is a growing incongruence between the global burden of mental health conditions and the investment in their prevention and treatment. In eating disorders, this incongruence is pronounced, with funding for eating disorder research being the most discrepant from the burden of illness they represent compared to other psychiatric or neurodevelopmental disorders.[2] While the reasons for low funding are not known, gender biases, whether a disregard for what is perceived as a women-only condition or biases that downplay the severity of eating disorders in men, contribute to this disparity.[2] Cumulatively, this has led to a scarcity of research focused on eating disorders in males and men, with less than 1% of anorexia nervosa studies including male participants, and in some instances, males are excluded from research because of being deemed 'atypical' cases.[3] As a result, there is a general lack of understanding of eating disorders in males and men, with diagnostic criteria and treatment approaches inconsiderate of sex and gender diversity. Evidently, there is a need for increased awareness and research on eating disorders experienced by males and men. In this paper, we offer practical recommendations for advancing research and clinical practice for males and men with eating disorders.

Sex and gender influences on eating disorders

Few studies consider both gender and sex in eating disorders, limiting the understanding of within-sex variability, psychosocial factors linked to gender diversity and the interplay of gender, sex and environment.[4] Puberty serves as a key example of this interaction, representing a period of heightened vulnerability to eating disorders, where changes influenced by both sex and gender intersect with environmental stressors, increasing risk.[4,5] For example, for individuals whose gender identity differs from their sex assigned at birth, pubertal changes may exacerbate the discrepancy between their body and gender identity, contributing to higher eating disorder risk.[4,5] The endocrine system plays a key role in these processes, as sex hormones influence development, appetite and reward pathways, while weight-control behaviours and nutritional status can influence the endocrine system, complicating the role of gender and sex in eating disorders.[4,5] Androgens (e.g. testosterone) influence male eating disorders, but their effects, and the factors that modulate them, such as maturational stages, remain under-researched.[4,5] For example, prenatal testosterone exposure in males contributes to sex-differentiated patterns of eating behaviour, including a

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lower post-pubertal prevalence of binge eating, although the mechanisms underlying these effects and the role of maturational stages require further investigation.[4,5]

In addition to the broader considerations of sex and environmental influences, the aetiology and presentation of eating disorders vary by gender.[3,4,6] While individuals of all genders may experience body dissatisfaction, the idealised body type often varies across individuals.[3,4,6] For example, women with eating disorders often strive for thinness, a goal heavily influenced by societal standards.[3,4,6] In contrast, men typically aim to build muscle, engaging in activities to reduce body fat and increase muscle mass, with up to 60% of males in the USA altering their diets for these purposes.[3,6,7] In cases of bulimia nervosa, women tend to binge on sugary foods and may use purging or laxatives as compensatory actions,[3,4,6] whereas men are more likely to focus on high-protein and high-fat foods coupled with intense dietary restriction and exercise.[3,4,6] These patterns of gender-specific behaviours, reflecting societal pressures of muscularity or thinness, persist across eating disorder types.[3,4,6] However, as current understandings of eating disorders are largely informed by research on women, behaviours more prevalent among men (e.g. excessive exercise) often lack clear definitions, making diagnosis more difficult. In addition, men with eating disorders face stigma of the presence of a psychiatric disorder as well as stigma associated with what is seen as a women-specific condition.[3,6] These stigmas can lead to feelings of emasculation and decreased self-worth, causing men to conceal their eating disorders and engage in treatment-avoidant behaviour, ultimately inhibiting diagnoses.[3,8] Importantly, while focusing on gender-specific manifestations can enhance treatment efficacy, it is crucial to avoid overgeneralisation, and further research should be framed within the context that eating disorders exist across a spectrum, beyond traditional gender binaries.

Sociodemographic factors and comorbidities

The complexity of eating disorders extends beyond sex and gender differences, with sociodemographics and comorbidities influencing their pathology. Minority men, because of their sociodemographic background, often encounter unique societal stressors and body image expectations that heighten their risk of developing eating disorders.[3,4,9] The varying societal pressures they face may lead to diverse coping behaviours related to eating disorders, as men with different sociodemographic characteristics internalise different body image ideals.[3,4,9] For example, Hispanic males exhibit a higher prevalence of purging and fasting and report more weight loss compared to non-Hispanic males, suggesting cultural variations in coping strategies among males.[3,9] However, the limited representation of minority and socioeconomically disadvantaged men in eating disorder research and treatment highlights the need for more inclusive research and tailored interventions.

The majority of patients with eating disorders have comorbid psychiatric conditions, yet research on these comorbidities in males and men is lacking, leaving primary care providers under-prepared to address eating disorder cases. While anxiety disorders, mood disorders and personality disorders are the main psychiatric conditions linked to eating disorders, males with eating disorders tend to report a wider range of comorbid psychiatric conditions compared to females.[3] Notably, young adult males with eating disorders are identified as having a higher risk for comorbid substance misuse.[3] Yet, the intricacies of these comorbidities, including their onset and treatment implications, are largely unexplored.[3] For example, psychotic comorbidities and symptoms are more strongly associated with eating disorders in males, possibly because of clinicians' tendency to interpret cognitive distortions and aversions to foods as indicative of psychotic illness in males, whereas they are more likely to be viewed as eating-disorder-related overvalued ideas in females, although this requires further exploration.[3,6] Furthermore, studies indicate variations in comorbidity patterns across eating disorders, suggesting a relationship between specific eating disorder types and co-occurring somatic and psychiatric conditions.[6] Therefore, given that the aetiology of eating disorders in males and men may contribute to distinct presentations, there may be corresponding differences in patterns of comorbidity compared to females and women with the same diagnosis.

Health interventions in males

Generally, primary care providers express a lack of confidence in diagnosing and managing eating disorders.[2–4] In men, the lack of knowledge may further complicate diagnosis, as eating disorder symptoms may not be readily recognised as indicative of a mental health issue.[2–4] Furthermore, men with symptoms of eating disorders commonly display treatment-avoidant behaviour, because of the related stigma.[3,4,6] This avoidance of an intervention increases the risk of severe long-term comorbidities, as over 50% of male eating disorder patients warrant urgent in-patient admission because of cardiovascular disease or a low heart rate.[3] Given that most existing knowledge and treatment protocols for eating disorders are based on eating disorders that are more typical in women, the varied presentation in men can lead to lower detection rates on traditional diagnostics focused on weight and shape concerns.[3,6,9] The underrepresentation of minority sociodemographic groups in research exacerbates these challenges, as it limits the development of inclusive diagnostic tools and treatment guidelines. Furthermore, in healthcare currently, there is a lack of established male-specific eating disorder treatments. Little research exists comparing the perspectives of males with eating disorders or the effectiveness of sex-specific treatment programmes versus current sex-unspecific approaches. Among the few studies that thoroughly examine treatment options tailored specifically for males with eating disorders, a longitudinal study found that adding a male-specific, hospital-based eating disorder programme increased both the number of males referred to treatment and the likelihood of maintaining treatment after referral, compared to generalised programmes.[8] However, overall, the current literature offers no clear consensus on the optimal treatment model for males and men with eating disorders.

Future research and clinical practice

Standardising eating disorder data by enhancing burden of disease estimates to include all subtypes, improving diagnostic clarity to avoid misclassification because of comorbidities and requiring granting agencies to publish applicant numbers, proposed medical conditions and sociodemographics could help address funding disparities.[2] Existing eating disorder and social media studies primarily focus on women, but expanding research to men and incorporating sociodemographic factors could provide a cost-effective approach to understanding how societal pressures shape diverse eating disorder experiences and raise awareness of eating-disorder-related health misinformation.[2,8]

Future research should integrate data on sex, gender, sexual orientation and related correlates within a biopsychosocial framework, considering how biological, psychological and social factors intersect to influence risk and development.[4,5] Empirical investigations into gender- and sex-related factors that contribute to both overlaps and differences across individuals could guide

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interventions and research directions.[4,5] To improve the applicability of research, future studies should use precise language that distinguishes between sex and gender; where distinctions are ambiguous, this should be stated to ensure accurate interpretation and a clearer foundation for future research.[4,5] Longitudinal studies should be prioritised to explore the relationship among development, biological mechanisms (e.g. hormones) and eating disorders, particularly within gender-diverse populations, where the interaction between biological and environmental factors may vary.[4,5] Although current research suggests that the majority of eating disorders in men align with a muscularity-oriented subtype, eating disorder experiences are diverse and not limited to this single narrative, nor is this narrative constrained to a specific group. Further, information on eating disorder comorbidities in females and women is widely available; however, the understanding of comorbid conditions in males and men with eating disorders is limited, warranting more research. Research to date investigating eating disorders in men has been conducted in Western settings with predominantly Caucasian samples.[3] As the aetiology of eating disorders extends beyond psychological factors and is influenced by social and cultural factors, further research is needed to investigate how sociodemographics affect different subgroups of men, including those from minority backgrounds.[4,9]

Misconceptions and stigma may prevent men from recognising eating disorder symptoms, as they may not see their behaviour as fitting stereotypical eating disorders or may struggle to differentiate healthy weight-related behaviours from disordered ones (e.g. dysfunctional exercise). Public health campaigns reducing stigma around eating disorders in men and promoting recognition of healthy weight-control behaviours could encourage earlier help-seeking and awareness of disordered eating. Clinicians should explore patients' relationship with food, exercise and body image during routine checkups to help recognise eating disorder behaviour that patients may not identify themselves. If an eating disorder is suspected, a referral to a psychiatrist for a comprehensive evaluation and treatment can be crucial. Collaboration between researchers and clinicians is essential to explore clinicians' perceptions of eating disorders in males and men, attitudes towards treatment options and to develop tailored interventions to ensure effective, evidence-based practices. Integrating physical activity professionals into eating disorder treatment could help address dysfunctional exercise patterns and improve body image perceptions, with emerging evidence supporting their role in multidisciplinary interventions; however, further research is needed to establish their scope of practice and clinical guidelines (e.g. comorbidities and eating disorder subtypes). Notably, sports medicine and other healthcare professionals who have frequent contact with athletes could play a role in the early intervention of eating disorders, given their higher prevalence among athletes.[7,9] Medical education reform that highlights the diversity and severity of eating disorders, improves clinicians' ability to identify often-misattributed eating-disorder-related symptoms and enhances understanding of psychopathology and risk factors is essential.[2–4] For practising clinicians, online training programmes can be an effective method to enhance eating-disorder-related literacy and improve the delivery of appropriate care or referrals.

Current knowledge and approaches to eating disorders are constrained and fail to capture their diverse and multifaceted nature, resulting in gaps in understanding and healthcare practices, particularly regarding eating disorders in males and men. More research is needed to understand the full spectrum of eating disorders, including sociodemographic variability, differences in coping behaviours, comorbidities and the interaction among gender, sex and environmental factors that influences these variations. A comprehensive approach, including increased funding for eating disorder services, reforms in medical education to improve training for healthcare professionals and public health campaigns to reduce stigma, is essential for improving early diagnosis and treatment accessibility for all individuals affected by eating disorders.

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