Gender-aware mental healthcare: counteracting sex and gender disparities in diagnosis and treatment for women

ARTICLE

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SUMMARY

Sex and gender are often overlooked factors in the delivery of mental healthcare, resulting in a gender blindness that ignores the specific needs of women and, in some circumstances, men. A lack of gender-disaggregated data and balanced sex and gender representation in clinical research has led to knowledge gaps in women's health overall. This article explores the influence of gender bias across a spectrum of conditions where disparities in diagnosis, treatment and research exist, including psychosis, mood disorders, neurodevelopmental disorders, eating disorders and substance use disorders. The influence of female reproductive hormones (oestrogen and progesterone) on symptom onset, presentation and treatment response is also discussed where clinically relevant. Gender-aware approaches to delivering mental healthcare are needed, including trauma-informed care, in order to deliver equitable and effective mental healthcare for all.

LEARNING OBJECTIVES

After reading this article you will be able to:

- describe sex and gender disparities in the presentation and diagnosis of common mental disorders
- recognise the research gaps in the understanding of these disparities
- understand the impact of reproductive hormones on the presentation and clinical course of mood and psychotic disorders in females in order to improve patient outcomes.

KEYWORDS

Gender awareness; reproductive psychiatry; neuroendocrinology; neurodevelopmental disorders; precision medicine.

Sex and gender are important determinants of health and this applies to mental illness, which does not affect men and women equally. In England in 2023–2024, 24.2% of women had a common mental health condition, compared with 15.4% of men (Liubertiene 2025),[a] and globally, 60% of the burden of disability of mental disorders managed by adult psychiatric services (i.e. affective disorders, schizophrenia, anxiety and eating disorders) is borne by women (World Health Organization 2024b). Although males are three times more likely to die by suicide than females (Office for National Statistics 2024c) and are less likely to seek help after a suicide attempt, women are more likely to report having ever attempted suicide (8.6% of women *v.* 6.9% of men) or to have self-harmed (12.6% of women *v.* 8.5% of men) (Butt 2025). Women may live longer than men but have similar healthy life expectancies (61.5 years for males and 61.9 years for females in England) (Office for National Statistics 2024b), meaning that they live proportionally longer with disability. The divergence of mental distress emerges during adolescence, with females experiencing greater mental health problems from their early teenage years (Yoon 2023). The nature of mental disorders differs greatly between males and females – women show a preponderance of internalising disorders (lifetime prevalence: 10.8–44.5% of women *v.* 5.9–26.5% of men), whereas men are more prone to externalising disorders (lifetime prevalence: 0.2–6.6% of women *v.* 2.2–22.4% of men) (Boyd 2015). Recognising these sex and gender differences is crucial for clinicians to deliver equitable healthcare to their patients.

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Terminology

Sex and gender, while related terms, are not synonymous. Sex is a classification centred on biological characteristics such as chromosomal make-up and reproductive anatomy, whereas gender is a sociocultural construct encompassing the person's representation of themselves and how they are perceived by others, which is influenced by both their biology and life experiences (Institute of Medicine 2001). The language surrounding sex and gender is rapidly evolving. In this article we intend to be as inclusive as possible in our recognition of diverse gender expressions. It is often not possible to fully separate the discussion of sex and gender as distinct variables because of the lack of clear delineation of these highly interrelated variable terms in the literature. For readability, we use gender-specific language. When referring to biological differences, we refer to those of that biological sex; when referring to sociocultural differences, we refer to those who identify with that gender. A person's sex/gender also does not exist in isolation. It is important to consider other social characteristics that may compound inequalities, such as race, age, disability or other ethnic group, i.e. intersectionality (Crenshaw 1989).

National healthcare strategies

There has been momentum in recent years to address shortcomings in women's healthcare in Anglosphere countries with publicly funded or universal-insurance health systems – England (Department of Health and Social Care 2022), Scotland (Scottish Government 2021), Wales (NHS Wales 2024), the Republic of Ireland (Department of Health 2022, 2023), Australia (Australian Government Department of Health 2019) and New Zealand (Minister of Health 2023) have developed national strategies for addressing inequalities in women's health. These national policy documents, developed through extensive consultations with women, share many similar goals, primarily to improve access to health services tailored to women's specific needs. A life course approach has been adopted by most of these strategies, where the different stages of life are considered – from adolescence to middle years through to later life.

Delivering accessible health information to the population, improved education and training for all healthcare professionals and promoting research into female health conditions have been identified as paths to address health gaps. Addressing health disparities among groups of women, which are intensified by social factors beyond sex/gender, such as race, age or disability (i.e. by intersectionality), and responding to the impact of violence against women and girls are also key priorities. Most of these policies identify the importance of women's mental health, with Ireland notably formulating a stand-alone national strategy specifically targeting this concern (Department of Health 2022).

The current article

This article seeks to provide an overview of key gender issues in the provision of mental healthcare, focusing on specific mental disorders, including neurodevelopmental disorders, schizophrenia, mood disorders, anxiety disorders, stress-related disorders, eating disorders and substance use disorders. For women, mental health encompasses the entire lifespan, not just during pregnancy and the postpartum. The perinatal period is a highly significant time of gender-based differences, but as this has received much more extensive academic and clinical interest, it will not be considered in detail here. As will be discussed below, there are significant practice gaps and inequalities that predominantly affect women and girls, although in some cases, men and boys are also affected. The article also aims to motivate healthcare leaders to implement the necessary changes to meet the needs of people of all genders, enabling practitioners to deliver gender-aware mental healthcare that is sensitive to the differing needs and presentations of their male and female patients.

From gender blindness to gender awareness

Medicine, having been historically male dominated, has often failed to incorporate the specific needs of females in clinical practice and research. It is only in recent months that the number of female doctors registered in the UK has surpassed male doctors for the first time (General Medical Council 2025). Even the scientific basis on which medicine is founded arises largely from male research participants. Up to the 1990s, women were excluded from clinical trials owing to concerns about teratogenicity and the influence of cyclical reproductive hormones on measured variables (Liu 2016). Only more recently has it become mandatory to conduct preclinical research on both male and female cells or animals (Zucker 2010). Much work remains in achieving sex/gender balance in healthcare research, with females remaining underrepresented in clinical trials relative to the female prevalence of the conditions being investigated (Agmon 2022), and funding for female-dominated conditions lags behind that of male-dominated conditions (Mirin 2021). This has resulted in a stark imbalance in

what is known about male and female illness, with much of the evidence base used to treat female patients being extrapolated from male research participants.

Clinical encounters can be affected by the gender of the patient or clinician. Gender bias manifests where a clinician perceives differences when they do not exist or fails to perceive genuine differences (Risberg 2009). We are all susceptible to biases as we cannot practise in isolation from the culture in which we live. However, lack of awareness of our biases has real implications for female patients, for example where their pain is treated less aggressively (Zhang 2021) or when their cardiovascular disease is treated less effectively (Al Hamid 2024). In mental illness, bias can exist in diagnostic classification systems, which are based on observed behaviours, if the same condition manifests differently in different sexes/genders. The impact of classification bias will be discussed specifically in relation to neurodevelopmental disorders.

The higher rates of mental ill health and differences in presentation and illness course in females are due to a complex interaction between biological, psychological and social factors. Sex and gender can affect mental health through structural gender inequalities, like the gender pay, promotion and pension gaps, and gender-based or sexual violence (Trevillion 2012; Chandan 2020). Sex/gender also play a key role in shaping gendered experiences of healthcare, where women and girls commonly do not feel they are listened to or their concerns taken seriously in clinical interactions; this phenomenon is identified as a key priority to address in the women's health strategies mentioned above. It should be a goal for all health services to move beyond such 'gender blindness', where 'the roles and responsibilities of men/boys and women/girls [that] are assigned to them in specific social, cultural, economic, and political contexts and backgrounds' are not considered (European Institute for Gender Equality 2025), and become gender aware.

Gender awareness is composed of the interrelated and overlapping subdimensions of (Miller 1999):

- gender sensitivity (the professional's appreciation of the inequalities and differing healthcare needs of women and men)
- gender ideology (a professional's attitude, biases or stereotypes towards female and male patients and doctors)
- knowledge (the professional having the information about gender differences in illness course and treatment).

To address the gender sensitivity and ideology subdimensions in a meaningful way is beyond the scope of a single academic paper and requires intentional self-reflection on the part of the practitioner. An overview of common mental disorders where there are significant sex/gender disparities is described below to begin to address the knowledge subdimension of gender awareness. Readers are also directed to the recently published *Clinical Descriptions and Diagnostic Requirements for ICD-11 Mental, Behavioural and Neurodevelopmental Disorders* (World Health Organization 2024a) to supplement their understanding of sex/gender differences across all mental disorders. Throughout this article, common transdiagnostic themes arise across different disorders, and these are summarised in Box 1.

BOX 1 Common transdiagnostic themes regarding sex and gender in mental healthcare

- Underrepresentation of women in mental health research leads to knowledge gaps
- Gender-biased diagnostic constructs (diagnostic bias)
- Externalising symptoms (more common in males) lead to prompter referral and diagnosis (referral bias)
- Psychosocial considerations: gender-based violence, parenting roles, financial dependence, structural inequalities
- Effect of reproductive hormone transitions on brain function
- Need for integration of reproductive health considerations into mental healthcare for women
- Failure to enquire about or discomfort in eliciting reproductive history and asking about hormonal transitions
- Need for policy changes to promote gender equity in mental healthcare access and delivery
- Need to tailor mental health services to meet the unique needs of women and girls (e.g. enhanced trauma-informed services, single-sex wards/environments, provision of childcare at clinics)

Neurodevelopmental disorders

Autism

Autism has been described as an 'extreme male brain' (Baron-Cohen 2002) and has been traditionally viewed as a male-dominated condition. The difference in prevalence by sex is not as marked as previously thought: the ratio is as low as 3:1 male: female in populations that have not been referred for asessment, compared with 4:1 in a referred sample (Loomes 2017). The rate of increase in diagnoses in recent years has been greater for females than

males, with closer sex ratios in adults (Russell 2022). The gender ratio in clinical samples reduces markedly with age, from 5.5:1 in younger children to closer to 2:1 in adults (Rutherford 2016). These figures suggest that many autistic females are going undetected. There are several plausible explanations for these differences.

The first possibility is that there is truly a sex difference in prevalence. The 'female protective effect' theory purports that females need a higher genetic or aetiological load to manifest the phenotype (Wigdor 2022). Although this may be the case, biases in diagnostic practices cannot be ignored (Brickhill 2023). Females display less severe externalising problems than their male peers, experience fewer difficulties in the school environment and so are less prone to being referred for assessment (Mandy 2012).

Second, the female phenotype of autism is not yet fully understood and diagnostic tools and constructs, which were validated in largely male samples, do not capture it adequately, nor are they sensitive to gender differences (Cruz 2025). Biases in these tools have been exposed, where females need more severe symptom expression to reach a threshold for diagnosis (Dworzynski 2012), and previous research relies on these scales, thus compounding the male bias (Ratto 2018). There is a pressing need to develop instruments that are more sensitive to symptom expression in women and girls (Brickhill 2023). This clinical ascertainment bias contributes to many high-functioning women and girls being missed or diagnosed late (Lai 2015).

Third, the diagnosis of autism relies on two core components: repetitive and restrictive behaviours (RRBs) and social communication deficits (World Health Organization 2019/2021), both of which manifest differently in females and so contribute to underdiagnosis. Autistic females show fewer RRBs and their focus may overlap with neurotypical interests, such as fashion, celebrities or music (Bourson 2024), and so may not be appreciated as an RRB. Social communication deficits may be obscured by masking or camouflaging – strategies used by autistic people to present themselves in a neurotypical manner, with females employing these strategies to a greater extent than males, potentially because females recognise the importance of social relationships more (Cook 2021). Masking is exhausting and is associated with poorer mental health outcomes in both sexes (Hull 2021; Cruz 2025).

Fourth, reproductive events may affect the psychological health of autistic women to a greater extent than non-autistic women, although the literature is still limited: autistic women experience greater levels of perinatal depression and anxiety (Hampton 2022), some autistic women find menstruation distressing due to difficulties with emotion regulation and sensory challenges (Steward 2018), and autistic women experience the menopausal transition as more challenging as it may destabilise their ability to mask their autistic symptoms, exacerbate sensory difficulties and lead to greater deterioration in their mental health (Moseley 2020).

Attention-deficit hyperactivity disorder

There are similar patterns in the sex and gender disparities in attention-deficit hyperactivity disorder (ADHD). Females are diagnosed later than males, with the gender balance in diagnosis shifting considerably from childhood (10:1 male:female) to adulthood (2.73:1 male:female) (Williamson 2015). Adult women with ADHD self-report moreimpairment from their ADHD symptoms (Williamson 2015).

Referral, diagnosis and treatment are largely influenced by levels of hyperactivity and impulsivity rather than inattention, resulting in many girls and women being overlooked by parents or teachers as they display less hyperactivity and less severe externalising problems than their male counterparts (Mowlem 2019; Young 2020). In clinical settings, girls with ADHD exhibit comparable levels of hyperactivity to boys with ADHD but more inattentive symptoms and internalising problems (Young 2020; Loyer Carbonneau 2021). Ratings scales may not reflect the symptom profile in females and, where available, sex-specific cut-offs should be used along with greater reliance on collateral history (Young 2020; Loyer Carbonneau 2021). The use of clinical samples in ADHD research, which is already subject to referral and reporter bias, has resulted in a gender data gap for this disorder. Transitional stages, such as the move to university, employment or the postpartum and matrescence, can reveal otherwise unnoticed ADHD symptoms in women (Young 2020).

In line with ADHD-affected females experiencing more internalising problems than men, they suffer greater rates of comorbid mood, anxiety and eating disorders (Gershon 2002). Men with ADHD are more often diagnosed with antisocial personality and conduct disorders compared with women with ADHD (Williamson 2015). However, both sexes with ADHD have a greater rate of substance use compared with their unaffected counterparts. Additionally, women and girls with ADHD are at an increased risk of unplanned pregnancy compared with unaffected peers (Young 2020).

Sex hormones (oestrogen or progesterone) also have an impact on symptom trajectory and treatment response across various stages of women's

reproductive life, including menarche, the menstrual cycle, the postpartum and menopause (Roberts 2018; Young 2020). Premenstrual exacerbation has been observed in ADHD (Nolan 2022). Doses of stimulant medication may need to be adjusted in hypo-oestrogenic states, such as in the perimenstrual phase of the cycle or postmenopause, to maintain stable treatment response (Roberts 2018).

Schizophrenia

The male to female prevalence ratio for schizophrenia is 1.1:1 (GBD 2019 Mental Disorders Collaborators 2022). Men are diagnosed at an earlier age, with a sharp peak in late adolescence, whereas women have a more level incidence rate and a peak in midlife that may be related to menopause (formal studies using menopausal staging rather than simply age have yet to be completed) (Hafner 2019; Sommer 2020). Because of the later age at onset in women, they benefit from more time to amass social and educational advantages compared with men and initially do better than their male counterparts, although they lose this advantage several years into their illness (Sommer 2020). After midlife, women have a worse illness course than men (Riecher-Rossler 2018). Symptomatically, females experience more positive and fewer negative symptoms than males (World Health Organization 2024a) but suffer more affective symptoms (Sommer 2020).

The female reproductive hormone oestrogen is believed to be responsible for the gender disparities observed in schizophrenia and appears to have a protective effect against psychosis (Riecher-Rossler 2018). Hypothalamic–pituitary–gonadal axis dysfunction has been observed in those with psychosis independent of antipsychotic medication side-effects (Riecher-Rossler 2018; Brand 2021). Oestrogen has neuroprotective properties and increases sensitivity to and bioavailability of dopamine (Brand 2021; Culbert 2022). Symptoms of psychosis can fluctuate across the menstrual cycle and states of oestrogen withdrawal, both physiological and pharmacological, can trigger psychosis (Reilly 2020; Nolan 2022). The most dramatic example of this is the extraordinarily high incidence of psychosis in the postpartum relative to the entire lifespan (Kendell 1987). Higher psychiatric admissions for psychosis have also been observed during phases of the menstrual cycle when oestrogen levels are lowest (i.e. the late luteal and menstrual phases) (Reilly 2020) but it is unclear whether this is a subgroup of women driving these increased rates or an effect seen in the majority of women.

There are important sex differences in the treatment effects of antipsychotics and this evolves across the female life cycle. There is a reduced antipsychotic response postmenopause due to reduction in endogenous oestrogen (Brand 2021). Early promising evidence indicates that oestradiol may be an effective add-on treatment for women with schizophrenia as they approach menopause (Reilly 2020; Brand 2021) and there is also emerging evidence of a benefit of adjuvant selective oestrogen receptor modulators (SERMs) such as raloxifene, which act on the brain and bones but not the uterus or breast tissue (Brand 2021). Females are more prone to antipsychotic side-effects, specifically metabolic effects and hyperprolactinaemia (Ercis 2024). Hyperprolactinaemia, which exerts negative feedback on the hypothalamic–pituitary–gonadal axis, reduces oestrogen levels, and therefore prolactin-sparing antipsychotics should be favoured for reproductive age women to maximise treatment efficacy and avoid the hypo-oestrogenic effects on bone and cardiovascular health (Brand 2021). Prolactin-raising antipsychotics may also contribute to an increased risk of breast cancer observed in women with schizophrenia (Leung 2022). The risk of cardiovascular disease increases for women around menopause, underscoring the importance of proactive metabolic monitoring and management of cardiovascular risk factors such as smoking (Seeman 2012). Aside from the effect of oestrogen on dopamine transmission, the physical symptoms of menopause, such as sleep disturbance and hot flushes, could provoke a relapse of psychotic symptoms (Riecher-Rossler 2017).

There is a pressing need to tailor treatment of psychosis in women according to their reproductive hormone status, particularly low oestrogen states such as the perimenstrual and postmenopausal periods. Although the evidence is not at the point yet of recommending adjunctive oestrogen to treat schizophrenia, hormone replacement therapy (HRT) for women with schizophrenia is potentially more important than for the general population and they should be counselled effectively on this within the psychiatric setting (Brand 2022).

Mood disorders

Women are twice as likely to develop depression in their lifetime compared with men (Salk 2017). Reduced help-seeking and underdiagnosis in men may partly explain disparities in prevalence, as certain features of 'male-typical' depression, i.e. aggression, violence and substance use, may obscure underlying mood symptoms (Call 2018). It is promising that treatment-seeking among males for common mental health conditions such as depression has improved in recent years in the UK, and is now similar to that in females (Clery 2025). Differing

incidence between sexes emerges early during puberty, and is likely due to a convergence of biological and psychosocial factors (Salk 2017).

From a biological perspective, female reproductive hormones (oestrogen and progesterone) have potent effects on the brain and interact with many neurotransmitter systems (Deecher 2008). The female brain is subjected to fluctuating hormone levels that it must adapt to during each menstrual cycle, and it experiences more erratic changes at both the beginning and the end of the reproductive life cycle (i.e. menarche and perimenopause) (Deecher 2008).

Psychosocial stressors also play a part. From puberty, the emergence of body dissatisfaction, compounded by greater social media use, affects girls to a greater extent than boys (Kelly 2018). Women are also more frequently exposed to serious adversity, including childhood sexual abuse and domestic violence (Kuehner 2017), with nearly triple the risk for developing depression in those who have experienced intimate partner violence (Chandan 2020). (We explore body dissatisfaction and serious adversity in the sections on eating disorders and violence/trauma below.) Women live with the stress of wider societal inequalities to varying degrees and this includes gender discrimination and the gender pay, promotion and pension gaps, which has implications for their economic security. The burden of caring responsibilities also disproportionately lies with women, which affects both their susceptibility to depression and their ability to seek treatment.

The sex ratio for bipolar disorder is balanced between males and females, although males are more prone to manic episodes and females more to depressive, hypomanic and mixed episodes (Diflorio 2010; World Health Organization 2024a). As is the case for mental disorders more widely, men are more likely to suffer comorbid substance use disorders, which is a barrier to accessing appropriate treatment (Diflorio 2010; World Health Organization 2024a). The most significant sex/gender considerations in bipolar disorder are the impact of reproductive events, i.e. the perinatal period, the menstrual cycle and menopause. The perinatal period is a critical time for onset of new mood disorders or relapse of pre-existing ones, owing to both biological and psychosocial factors, but this will not be discussed here.

Mood disorders and menopause

Higher incidences of affective episodes have been observed at perimenopause compared with pre- and postmenopause, especially in women who have experienced prior episodes (de Kruif 2016). The relative risk at perimenopause for depressive episodes has been observed to be 1.30 (95% CI 1.16–1.45) and for manic episodes to be 2.12 (95% CI 1.30–3.52) (Shitomi-Jones 2024). This risk diminishes beyond the menopausal transition. Surgically induced menopause, where there is rapid withdrawal of gonadal hormones, is associated with double the risk of depression in the subsequent year (Hickey 2021). Critically, the suicide rate for women also peaks at age 50–54 (Office for National Statistics 2024c), which coincides with the average age at menopause, of 51 years.

Midlife is frequently associated with a confluence of psychosocial stressors, such as caring for elderly parents, the development of new medical conditions, and marital breakdown, and these are important factors in the pathogenesis of perimenopausal depression (de Kruif 2016). Oestrogen withdrawal itself has been implicated as a biological factor in the aetiology of perimenopausal depression (Schmidt 2015; Kulkarni 2024), along with vasomotor symptoms and sleep disturbance, which can exacerbate affective symptoms (de Kruif 2016; Hickey 2021).

Although hormone replacement therapy is not currently recommended solely for the treatment of perimenopausal depression, it should be considered where there are other menopausal symptoms, such as vasomotor symptoms (Maki 2019), particularly early in perimenopause (Kulkarni 2024). It is important for mental health professionals to appreciate the interrelation between reproductive and mental health in their patients, so that new symptoms that would be more effectively managed with hormone replacement do not go unrecognised.

Mood disorders and the menstrual cycle

The lifetime prevalence of premenstrual dysphoric disorder (PMDD) is at least 3% in women of reproductive age (Reilly 2024), although a higher number have symptoms that affect their quality of life but do not fulfil diagnostic criteria (Halbreich 2003). The condition has a similar burden, calculated as disability-adjusted life-years (DALY) lost, as major depression (Halbreich 2003).

Symptoms are triggered by fluctuations of reproductive hormones (predominantly progesterone) across the menstrual cycle, which manifests as irritability, affective lability, depressed mood or anxiety confined to the luteal phase (Epperson 2012). Despite PMDD being a recognised diagnostic entity in the DSM since 2013 (DSM-5: American Psychiatric Association 2013) and in the ICD since 2022 (ICD-11: World Health Organization 2018/2022 ; Schroll 2022), those with the disorder face barriers to diagnosis and treatment owing to lack of healthcare professionals' awareness of the

condition and a lack of clarity about which medical specialty is responsible for it (Osborn 2020). According to the International Society for Premenstrual Disorders, reliable diagnosis requires prospective administration of a validated symptom rating scale over at least two consecutive menstrual cycles (Nevatte 2013).

Treatment strategies fall into two categories: either modifying the central effects of reproductive hormones on the brain using selective serotonin reuptake inhibitors or suppressing ovulation using combined oral contraceptives or, in severe cases, chemically or surgically induced menopause (Nevatte 2013).

Misdiagnosing PMDD as depression (Epperson 2012), personality disorder (Osborn 2020) or bipolar disorder is common (Hantsoo 2022). Differentiating it from bipolar disorder can be difficult, owing to overlapping symptoms (e.g. irritability or mood lability), and the cyclicity of PMDD can mimic rapid cycling bipolar disorder if the association with menstrual cycle phase is not identified (Slyepchenko 2021). Comorbidity with other mental disorders is not only possible but the more common presentation and associated with a worse illness course (Slyepchenko 2021; Eisenlohr-Moul 2022a). Premenstrual exacerbation of an underlying disorder has been observed in many mental disorders, including bipolar disorder and depression (Slyepchenko 2021; Nolan 2022).

The prevalence of suicidal thoughts and behaviours in PMDD is staggering. Even in the absence of psychiatric comorbidities, over two-thirds of those affected have experienced active suicidal ideation in their lifetime, one-third have previously attempted suicide and over half have self-harmed (Eisenlohr-Moul 2022a). Perimenstrual increases in suicidal ideation can also occur in premenstrual exacerbation of depression or borderline personality disorder (Eisenlohr-Moul 2022b). At a population level, higher rates of suicide deaths, suicide attempts and psychiatric hospital admissions have been observed in the premenstrual and menstrual phases (Jang 2019).

Cyclical changes in symptomatology and suicide risk are important clinically so that care plans are adapted to target foreseeable deterioration in symptoms. Appreciating the role of the menstrual cycle in suicide risk in those susceptible also represents an enormous opportunity to target a modifiable and predictable risk factor for suicide prevention.

Anxiety and obsessive–compulsive disorders

Women have double the lifetime prevalence of generalised anxiety disorder (GAD), panic disorder, agoraphobia and specific phobia (World Health Organization 2024a). One-third of women will meet criteria for any anxiety disorder at some point in their life, in contrast to 22% of men (McLean 2011). Comorbidities follow similar trends to the prevalence of mental disorders more widely, with females more prone to comorbid affective symptoms and males more prone to comorbid substance use disorders (McLean 2011), which, as mentioned above, has important implications for men accessing appropriate services. Intimate partner violence doubles risk of developing anxiety disorder (Chandan 2020).

The sex ratio for obsessive–compulsive disorder (OCD) is similar, with lifetime prevalence of 1.5% for females and 1% for males (Fawcett 2020). The nature of OCD symptoms differs between sexes, with symmetry and taboo intrusive thoughts being more common in males, and females being more affected by symptoms revolving around cleaning and contamination (World Health Organization 2024a).

Premenstrual exacerbation of anxiety disorders, particularly panic disorder, can occur in a subset of women with these diagnoses (Nolan 2022) and there is some evidence of premenstrual worsening of OCD but evidence remains limited (Green 2022). Postpartum onset or exacerbation of OCD is common – compulsions frequently revolve around contamination or checking the baby, often to the detriment of sleep; ego-dystonic intrusive thoughts of causing harm to the baby are also common and are extremely distressing for new parents, who may be fearful of disclosing these to a healthcare professional (Hudepohl 2022).

Violence, trauma and stress-related disorders

The diagnosis of post-traumatic stress disorder (PTSD) has historically been associated with male experiences of trauma, originating from descriptions of soldiers returning from the Vietnam War and earlier accounts of ‘war neurosis’ and ‘shell shock’ of the First World War (Crocq 2000). In an English population survey, PTSD was more prevalent in females (6.1% of women *v.* 5% of men), which should be unsurprising, given that 37.4% of females reported a lifetime traumatic event, compared with 32% of males (Wilson 2025). Females are also more likely to present with complex PTSD (cPTSD), where core PTSD symptoms are accompanied by difficulties with ‘affect regulation, persistent negative beliefs about oneself, and persistent difficulties in sustaining relationships’ (World Health Organization 2024a).

Sex differences in PTSD prevalence may arise from both psychosocial and biological factors: the distribution of traumatic events experienced by women differs from that for men. Females are more

likely to be the victim of domestic and sexual violence, with mostly male perpetrators of this violence (Office for National Statistics 2024a) and 19% of women experience birth as psychologically traumatic (Xu 2025). The female stress response has also been described as differing from males – with females tending towards the 'tend and befriend' response to traumatic events, mediated by oxytocin, rather than the typically recognised 'fight or flight' response (Taylor 2006).

Psychiatric care can cause iatrogenic retraumatisation, particularly where use of restrictive practices is high (Sweeney 2018). Those with severe mental illness are more likely to have been victims of gender-based, domestic or childhood physical or sexual abuse (Fisher 2009; Kessler 2010) and so it is essential that mental health and wider health services deliver trauma-informed care.

Eating disorders and body dysmorphia

Eating disorders are typically perceived in both the wider population and among healthcare professionals as conditions that affect predominantly women. Traditional thinness-oriented eating disorders (anorexia nervosa and bulimia nervosa) occur in 8.4% of women and 2.2% of men and disordered eating is increasing at a faster rate in males (Galmiche 2019), with higher prevalence among sexual and gender minorities (Thapliyal 2014). Of course, owing to these sex ratios and the high mortality rates associated with anorexia, it is mostly women who die from this condition (Krug 2025).

Cultural gender norms are central to the pathology of eating disorders. The Western idealised female body is thin and the idealised male body is muscular (mesomorphic), and so body dissatisfaction and subsequent disordered eating behaviour inherently differ between genders. Male participants are poorly represented in eating disorder research (Thapliyal 2014), with resultant diagnostic classification being based on typical female symptoms and commonly used scales for symptom severity being developed using female patient populations (Murray 2016).

Muscle dysmorphia, a form of body dysmorphia classified under 'obsessive–compulsive and related disorders' in ICD-11 (World Health Organization 2019/2021), centres on an overvaluation of weight and shape (idealising the mesomorphic body type) and body image disturbance (a belief that one's own body is too thin), with extreme behaviours to control weight and shape (such as excessive weight training, protein consumption and anabolic steroid use). The prevalence of muscle dysmorphia in men is in line with eating disorders in women and the associated behaviours can pose as great a medical and psychological harm to the patient as those of traditional eating disorders (Murray 2016).

The perception of eating disorders as female illnesses is a major barrier to them being recognised by male patients, their families and professionals, and hinders seeking and receiving treatment (Thapliyal 2014; Murray 2016). Services and treatments that are designed for thinness-oriented eating disorders fail to meet the specific needs of males who are affected by muscularity-oriented psychopathology (Thapliyal 2014; Bomben 2022). Delayed recognition of the problem, along with internalised stigma due to perception of eating disorders as a 'female problem', prevent men from accessing timely treatment (Bomben 2022).

Substance use disorders

Males have higher rates of comorbid substance use disorders across the spectrum of mental disorders (World Health Organization 2024a), although the historical gender gap in prevalence is closing (McHugh 2018). There are biological differences in the effect of substances between the sexes, such as where females experience higher levels of intoxication than their male counterparts for the same quantity of alcohol ingested and greater levels of physical harm (McHugh 2018). The 'telescoping' effect, where females develop dependence at a faster rate than males, has been observed for alcohol and opiates (Towers 2023).

Women with substance use disorders engage in treatment at lower rates than men (Greenfield 2007). Fear of losing custody of their children or being unable to attend either out-patient or residential treatment programmes owing to lack of childcare are frequently described barriers to seeking treatment (Adams 2021). Parenting responsibilities can be a strong motivator to address substance use, even if this is mandated by child protection agencies or the courts (Elms 2018). Women with substance use disorders are more at risk for gender-based or sexual violence, either in the past or present (The European Monitoring Centre for Drugs and Drug Addiction 2023) and the majority have experienced childhood trauma (Covington 2008). The combination of unsupportive co-parenting relationships and the threat of losing custody of their children means they are at greater risk of further trauma without appropriate support and services that are responsive to their needs.

Treatment programmes are male oriented and women experience significant barriers in accessing treatment and maintaining recovery – mixed-sex services, which may erode their sense of safety because of potential exposure to volatile male

BOX 2 Key diagnosis-specific gender considerations in mental healthcare

Autism and attention-deficit hyperactivity disorder

- Diagnosis in females is increasing
- Underrepresentation of females in research has led to biases in diagnostic criteria and referral rates
- Clinicians need to be alert that transitional stages can reveal neurodevelopmental conditions in women
- Females display repetitive and restrictive behaviours that may seem more similar to neurotypical interests
- Masking is common in women and is associated with negative mental health outcomes
- Reproductive events (menarche, the perinatal period, the menstrual cycle and menopause) can destabilise symptoms

Schizophrenia

- Low oestrogen states are associated with more symptoms of psychosis
- Consider reproductive status in prescribing antipsychotics – menstrual, menopause, pregnancy and peripartum
- Use prolactin-sparing antipsychotics for women in reproductive years
- Carefully review medication doses and treatment response during menopausal transition
- Hormone replacement therapy should be considered for those with severe mental illness at menopause.

Mood disorders

- Reproductive hormones interact with neurotransmitter systems in the brain
- A subset of women are sensitive to fluctuations of reproductive hormones
- There is an increased risk of depressive symptoms during perimenopause, particularly in those with a previous history
- There is a complex relationship between mood symptoms, sleep and vasomotor symptoms of menopause
- Premenstrual dysphoric disorder (PMDD) affects about 3% of women of reproductive age
- There is a risk of misdiagnosis if cyclicity of symptoms associated with menstrual cycle is not appreciated
- Suicidality is very commonly associated with PMDD, even in the absence of other mental disorders

Anxiety and obsessive–compulsive disorder (OCD)

- Females are more prone to all anxiety disorders and OCD
- Reproductive events (e.g. the premenstrual period and the postpartum phase) can exacerbate symptoms

Trauma

- Although both women and men experience sexual violence and domestic abuse, women are disproportionately the victims.
- There is a need for trauma-informed practices throughout healthcare

Eating disorders

- The idealised body is different for males than females
- Males are poorly represented in eating disorder research
- Eating disorder assessment scales and treatment programmes do not cater for male presentations

Substance use disorders

- Males are more prone to comorbid substance use disorders across a range of psychiatric diagnoses
- There is a high risk of gender or sexual violence for women with substance use disorders
- Treatment programmes are male oriented and do not consider parenting roles
- There are high rates of psychiatric comorbidity in females

participants or ex-partners, the lack of childcare or child-friendly services that women can bring their children with them, and societal and self-stigma of being a woman or mother with a substance use disorder (Elms 2018). Gender-responsive addiction interventions that are adapted to their specific needs have the potential to improve treatment outcomes for women compared with mixed-sex programmes (Johnstone 2023). It is crucial that these are integrated with other services, including those for mental and physical health, and most importantly are trauma-informed in their delivery (Covington 2008; McHugh 2018).

Conclusions

As highlighted in this article, significant sex and gender disparities exist across a range of common mental health conditions from diagnosis to treatment and outcomes. Key sex and gender considerations for some of these diagnostic categories are summarised in Box 2. Key transdiagnostic themes include:

- the underdiagnosis and misdiagnosis of conditions in both women and men owing to gender-biased diagnostic criteria and research (e.g. autism, ADHD, eating disorder)

MCQ answers
1 b 2 a 3 c 4 b 5 b

- reproductive hormone influence on symptom onset, presentation and treatment response of many common mental disorders (e.g. psychosis, perimenopausal depression, premenstrual disorders)
- the sociocultural factors that shape gendered experiences of mental illness and access to care (e.g. eating disorders, substance use disorders)
- the need for gender-sensitive approaches in mental healthcare delivery, including trauma-informed care for people with histories of gender-based violence and other traumas
- critical research and clinical knowledge gaps regarding mental health conditions specific to women across the lifespan
- lack of gender-disaggregated data in all clinical research.

It is essential that clinicians, researchers, policy-makers and service providers take a more gender/sex-aware approach informed by these considerations and themes, in order to deliver effective and equitable mental healthcare.

Supplementary material

The supplementary material is available online at https://doi.org/10.1192/bja.2025.10163.

Data availability

Data availability is not applicable to this article as no new data were created or analysed in this study.

Author contributions

Y.H.: conceptualisation, writing – original draft; S.M.: writing – review and editing; R.D.: writing – review and editing, supervision.

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Declaration of interest

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Note: the Reference list continues in the supplementary material, available online at https://doi.org/10.1192/bja.2025.10163.

MCQs

Select the single best option for each question stem

1 Gender bias in diagnosis occurs when:

a a clinician recognises genuine differences between men and women
b a clinician believes there are differences when there are none
c a clinician recognises their own implicit biases and cultural perspective
d a clinician considers the biopsychosocial needs of all genders
e a clinician uses diagnostic instruments that are specific to the patient's gender.

2 In relation to psychosis in women:

a psychotic symptoms are worst when oestrogen is low
b psychotic symptoms are worst when oestrogen is high
c hormone replacement therapy is contraindicated in women with psychosis
d elevated prolactin cannot affect psychotic symptoms
e response to antipsychotics improves after menopause.

3 It is recommended that the diagnosis of premenstrual dysphoric disorder is based on:

a blood tests
b psychiatric history
c at least 2 months of prospective symptom tracking
d a one-off structured clinical interview, such as the SCID-PMDD
e gynaecological history.

4 In autism:

a females present with more externalising symptoms than males
b female present with more internalising symptoms than males
c females have similar repetitive and restricted interests to males
d females are diagnosed at a younger age than males
e females are less likely to develop comorbid mental disorders than males.

5 Relating to menopausal depression:

a postmenopause is the time of highest risk of depressive symptoms
b the menopausal transition is the time of highest risk of depressive symptoms
c hormone replacement therapy is a first-line treatment of major depression at menopause
d physical symptoms of menopause have no impact on mood
e hormone replacement therapy has no role in the management of menopausal depression.