Hidden in plain sight: delayed ADHD diagnosis among girls and women - a commentary on Skoglund et al. (2023)

Some women diagnosed with ADHD in adulthood may reflect on their childhood and teenage years with a kind of grief—for their younger selves, feeling self-blame and shame, and for "what could have been" if their ADHD had been recognised and properly treated at a younger age (Morgan, 2023). In the current issue of JCPP, Skoglund et al. (2023) sheds light on this issue of delayed ADHD diagnosis among women using registry data ranging from January 2011 to December 2021 and including 85,330 individuals with ADHD and 426,626 population controls from the Stockholm-area. They find that women with ADHD experience a nearly 4-year delay in receiving an ADHD diagnosis compared to men, with a mean age of 23.5 years at diagnosis compared to a mean age of 19.6 years among men despite having high rates of prior contact with the mental health care system. These findings illustrate how large, population-based registry studies can be used to shine a light on women who, despite contact with the mental health care system over several years, are overlooked for an ADHD diagnosis— in effect, hidden in plain sight. Skoglund et al. joins several other studies in identifying a later age of ADHD diagnosis among girls and women compared to boys and men (Dalsgaard et al., 2019; Martin et al., 2023) and helps us to reflect on possible explanations for this later diagnosis, as well as the need to focus on women-specific issues in considering ADHD diagnosis and treatment.

One possible explanation for a later age of ADHD diagnosis among women is perhaps that women do not "need" an ADHD diagnosis until they are older: it could be that women are successfully coping at younger ages and thus less likely to experience impairment until later in life. However, the findings by Skoglund et al. do not support this explanation, at least on a group-level: women diagnosed with ADHD experienced a range of other mental health problems prior to their ADHD diagnosis, most strikingly high rates of anxiety and mood disorders, at levels severe enough to warrant clinical diagnoses. These diagnoses may indicate co-/premorbid mental health problems, and could also reflect the costs of coping with undiagnosed ADHD: women with ADHD may expend considerable energy 'masking' or compensating for their ADHD symptoms, which could increase stress and lead to anxiety, for example. These findings suggest women with a later diagnosis of ADHD may be struggling, often over many years, prior to their ADHD diagnosis.

Another explanation for the delay in diagnosis among women could be diagnostic overshadowing—that a potential ADHD diagnosis is not considered for women because it is eclipsed by the possibility of a mood or anxiety disorder. Indeed, Skoglund et al. finds that women arrive at their first ADHD diagnosis with high rates of mood and anxiety disorder diagnoses. While suggestive of diagnostic overshadowing, it is difficult to prove that these earlier diagnoses are *misdiagnoses* per se: disentangling ADHD from other commonly co-occurring mental health disorders is complex, even for experienced clinicians who have at their disposal in-depth clinical interviews. Additionally, depression and anxiety are often truly comorbid with ADHD, further complicating the clinical picture. It is difficult from registry-data available in large-scale population-based studies to make clear conclusions as to whether these represent true misdiagnoses. However, the possibility that mood and anxiety disorder diagnoses may overshadow their ADHD rings true for many women. Qualitative research provides evocative viewpoints of women with lived experience of late-diagnosed ADHD, with one woman stating: "I think that was why my ADHD got missed as the focus was always on my binge-eating, my alcohol use, and my self-harm and I suppose, for me, that was the right thing to do, maybe, as the interventions that I had probably saved my life … but who knows maybe if I had been diagnosed with ADHD then I wouldn't have been self-harming in the first place" (Morgan, 2023).

Other evidence for diagnostic overshadowing or misdiagnosis for women with ADHD comes from a striking finding from a recent registry-based study in Wales. This study used national healthcare

records and corroborated Skolgund et al (2023) on two key points: women were older at age of first ADHD diagnosis than men, and they were also more likely to have been prescribed an antidepressant prior to their ADHD diagnosis (Martin, et al. 2023). Furthermore, this study found that women prescribed an antidepressant prior to their ADHD diagnosis were more likely than men to discontinue this medication after their ADHD diagnosis (Martin et al., 2023). This suggests the earlier diagnosis of mood or anxiety disorder amongst women who go on to receive an ADHD diagnosis is, at the least, secondary to ADHD, or at the extreme, a misdiagnosis.

Shifting from women's experiences pre- to post-diagnosis, Skoglund et al. also highlights that an ADHD diagnosis is not a magic bullet. Even after receiving their diagnosis, women with ADHD continue to experience high rates of other mental health problems, including higher rates of inpatient psychiatric care than men with ADHD and than women without an ADHD diagnosis (Skoglund, et al., 2023). Thus, a diagnosis—and associated opportunities for treatment— on its own do not solve the struggles these women face. The extent to which continued high health care utilization amongst women with ADHD may be exacerbated by a delayed diagnosis is unknown. Further research should investigate the impact age of diagnosis may have on later functioning-- if we were able to identify women with ADHD at younger ages, would they fare better after their diagnosis? Previous research does suggest that earlier age of treatment is associated with better outcomes later on, but much of this work focuses on boys (Mannuzza, et al., 2008). The journey for women with ADHD does not end with a diagnosis, and further research is needed to determine the best way to support women post ADHD diagnosis.

Relatedly, this research aims a spotlight squarely on the need to consider women-specific issues with regards to ADHD. There is increasing interest in the role of hormonal change in functioning of women with ADHD, for example during puberty, across the menstrual cycle, pre- and postnatally, as well as during perimenopause and menopause. Research has just begun to tackle some of these issues, for example a study from the Netherlands identified higher rates of premenstrual dysphoric disorder (PMDD) among women with ADHD (Dorani, et al, 2021). A registry study from Sweden identified 5 times the prevalence of postpartum depression and anxiety among women with ADHD compared to those without an ADHD diagnosis (Andersson, et al., 2023). Research has also identified that women with ADHD are at six times higher risk of receiving a diagnosis of depression after prescription of an oral hormonal contraceptive than women without ADHD (Lundin, et al., 2023). As women grow older, perimenopause and menopause are important times of hormonal change and women with ADHD have profound concerns regarding the impact these changes may have on their functioning. Research on this developmental period for women is especially lacking, as both women and older populations are understudied in ADHD research. That women with ADHD experience and have particular concerns around pregnancy, menstruation and menopause is astonishingly under-recognised and under-investigated.

The findings of Skoglund et al. piece together a pattern of struggle that women experience to receive an ADHD diagnosis, including high rates of depression and anxiety diagnoses, polypharmacy, and multimorbidity. While these women often receive *other* mental health diagnoses, the health care system does not seem to provide to them the same chance for an ADHD diagnosis as boys and men, a finding that is consistent with work from other studies and countries (Dalsgaard, et al., 2019; Martin, et al., 2023). Encouragingly, there is evidence that the diagnostic gender gap has decreased in recent years (Martin, et al., 2023), and women are increasingly vocal about the possibility of an ADHD diagnosis, their need for post-diagnosis support, and issues specific to women such as hormonal changes. But while research has identified this delay in ADHD diagnosis, it is still too often that women describe their ADHD symptoms to health care professionals only to be told they have depression or borderline personality disorder or anxiety instead, or that they "can't have ADHD" because they were able to function at school or are "too successful". In order for research on ADHD

in women to result in real, concrete change, these findings need to be translated to day-to-day clinical interactions. Increasingly women with ADHD are speaking up, and we need to be sure that when they do, researchers and clinicians are listening.

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