

Demystification of ADHD in Menopause

by

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Abstract

Attention-deficit/hyperactivity disorder (ADHD) is a common neurodevelopmental condition affecting 4%–6% of the Canadian population. While traditionally considered a childhood disorder, particularly among males, increasing numbers of adult females are being diagnosed, often after years of misdiagnosis or untreated symptoms. Research on ADHD in older women, especially during the climacteric period (CP), remains limited despite its growing relevance to counselling and therapeutic practice. This scoping review of current literature explores how hormonal transitions during perimenopause and menopause influence ADHD symptom severity, diagnostic timing, and treatment efficacy. Using an intersectional feminist poststructural framework, recent literature was analyzed to identify current knowledge and gaps. Findings indicate hormonal fluctuations, particularly declining estrogen, exacerbate ADHD symptoms, contributing to diagnostic delays and increased comorbidities such as anxiety and depression. Treatment challenges include reduced medication efficacy and the absence of female-specific guidelines. Evidence suggests that multimodal approaches, combining pharmacological and psychotherapeutic interventions, are most effective, with consideration of hormonal influences. These findings underscore the need for greater awareness of ADHD in climacteric women and highlight the importance of early screening, tailored interventions, and collaborative care. Addressing these gaps can improve clinical outcomes and enhance counselling practices for an often-overlooked population.

Keywords: ADHD, climacteric, estrogen, females, hyperactivity/impulsivity, inattention, menopause, older, reproductive hormones, women

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Dedication

This work is dedicated to all the women whose struggles with ADHD have gone unseen throughout their lives, only to be acknowledged as they enter the climacteric phase of their reproductive journey. It is especially dedicated to the women in my life, whose strength and resilience continue to inspire me.

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Chapter 1: Introduction

Attention-deficit/hyperactivity disorder (ADHD) is a neurodevelopmental condition characterized by inattention, disorganization, hyperactivity, and impulsivity (American Psychiatric Association [APA], 2022). It presents in three forms: inattentive, hyperactive-impulsive, and a combined type. Though often associated with childhood, ADHD is highly heritable and influenced by genetic, neurobiological, and environmental factors (Abdelnour et al., 2022; Dobrosavljevic et al., 2023).

According to the Centre for ADHD Awareness Canada (CADDAC, 2024), ADHD affects 5%–7% of children and 4%–6% of adults, about 1.8 million Canadians, or one in every 21 people. Globally, prevalence rates are similar (Liu et al., 2023). Symptoms can significantly impair daily functioning, affecting relationships, education, and work performance (Sonuga-Barke et al., 2023; Wood et al., 2019). ADHD is not a new disorder it has been documented for over 200 years. Early descriptions used terms like hyperkinetic reaction of childhood (APA, 2022), and diagnostic criteria have evolved significantly over time (Cheng et al., 2022; Faraone et al., 2021). The APA (2022) continues to revise ADHD criteria based on emerging research to improve diagnosis, treatment prediction, and clinical outcomes.

Recent changes in diagnostic awareness and criteria have led to a steady rise in ADHD diagnoses, particularly among females. Between 2020 and 2022, the number of women aged 23–49 newly diagnosed with ADHD nearly doubled. This surge has raised concerns about potential overdiagnosis and increased prescribing of stimulant and psychotropic medications (Abdelnour et al., 2022; Espinet et al., 2022; Gascon et al., 2022; Mayes, 2019). Historically, ADHD was diagnosed at a male-to-female ratio of 3:1 in children, but this ratio approaches 1:1 in adults (Littman et al., 2021; Youmshajekian & Timms, 2022).

The traditional image of ADHD as a hyperactive male child is shifting, thanks to evolving research that highlights broader age and gender variations in symptom presentation (Brzezińska et al., 2021; Vincenti et al., 2023; Youmshajekian & Timms, 2022). ADHD is now recognized as a lifelong

condition, with symptoms often persisting into adulthood and even older age, where they may be compounded by age-related health issues (Callahan & Plamondon, 2019; Dobrosavljevic et al., 2023). Historically viewed as a childhood disorder that faded with maturity, this belief has been challenged over the past two decades (Caye et al., 2016; Kooij et al., 2019). Current evidence supports ADHD as a childhood-onset, lifespan disorder, with up to 80% of diagnosed children continuing to experience symptoms into adulthood, often leading to clinical and psychosocial challenges if untreated (Breda et al., 2021; French et al., 2023; Rivas-Vazques et al., 2023).

Biological sex plays a significant role in ADHD diagnosis, as symptom patterns often differ between males and females. Historically, research has focused on males, creating a longstanding sex bias and limited understanding of female presentations (Cheng et al., 2022; Martin, 2024; Merone et al., 2022). This bias is partly due to the interchangeable use of sex and gender in research, despite their distinct meanings. *Sex* refers to biological attributes, chromosomes, hormones, and reproductive anatomy, assigned at birth (Camara et al., 2021; Clayton & Tannenbaum, 2016). In contrast, *gender* is a social construct encompassing cultural, behavioral, and psychological traits, including personal identity (Martin, 2024; Shai et al., 2021). For clarity, this work will refer to differences between males and females based on biological sex, not gender.

Despite making up over half the global population, females remain underrepresented in medical research, including ADHD studies, due to longstanding sex bias (Cheng et al., 2022; Mauvais-Jarvis et al., 2020; Merone et al., 2022). This gap stems partly from the biological complexity of female physiology, such as hormonal fluctuations, menstrual cycles, and life-stage changes, which often leads to their exclusion from hormone-related studies over concerns about variability and reproductive health risks (Eng, 2024; Mauvais-Jarvis et al., 2020). Although the gender gap in research has narrowed in recent decades, misogynistic attitudes persist, with male-focused studies still dominating and female-specific health concerns receiving less attention and funding (Lai et al., 2022; Shai et al., 2021). This

underrepresentation contributes to the myth that certain disorders, including ADHD, affect females less severely, resulting in inappropriate generalizations of male-centric findings to female populations, especially in pharmacological research (Mauvais-Jarvis et al., 2020). In ADHD, the unique physiology of females and the influence of reproductive hormones are often overlooked by researchers and healthcare providers. As a result, women face delays in diagnosis and treatment, are more likely to be misdiagnosed or receive ineffective care and may have appropriate treatments withheld (Attoe & Climie, 2023; Nussbaum, 2012). Sex bias in ADHD diagnosis is evident in the *Diagnostic and Statistical Manual of Mental Disorders* (5th ed., text rev.; DSM-5-TR; APA, 2022) where criteria reflect male-typical behaviors such as hyperactivity, impulsivity, and risk-taking (Arnett et al., 2015; Cheng et al., 2022). These overt and disruptive traits often lead to more frequent referrals for males, while females, whose symptoms tend to be less visible, are underdiagnosed (Klefsjo et al., 2021; Martin, 2024).

Although hyperactivity and impulsivity are traditionally seen as male traits, recent studies show minimal sex differences in adults, with some females reporting more severe symptoms like excessive talking (Abdelnour et al., 2022; Vildalen et al., 2019). Females often present with internalizing behaviors, such as daydreaming, disorganization, forgetfulness, and struggle more with social and relational functioning (Fratlicelli et al., 2022; Lai et al., 2022). These subtler symptoms, including interrupting conversations or being late for social events, are less aligned with current diagnostic criteria, making ADHD harder to identify in females (Attoe & Climie, 2023; Lynch & Davison, 2022). Females may also exhibit impulsivity and hyperactivity, though in less obvious ways, for example, changing topics abruptly, blurting out answers, or finishing others' sentences, suggesting a need to expand DSM criteria to better capture female presentations (APA, 2022; Klefsjo et al., 2021).

Research focusing on females entering the climacteric phase (CP), with reproductive hormones fading, is especially slim, and results in healthcare professionals (HCPs) often lacking the adequate knowledge to provide appropriate health care. The challenges encountered by younger females in

obtaining supports and services for ADHD are further exacerbated when age-related factors are considered. There continues to be misinformation and misunderstanding of this disorder, with either the notion that ADHD is a condition of childhood, and once individuals mature, their symptoms will wane or dissipate entirely, or that ADHD in females is rare, and females will experience fewer and less challenging symptoms (McDonnell, 2022; Merrick, 2023; Vincenti et al., 2023; Youmshajekian & Timms, 2022).

A persistent sex bias in ADHD research and diagnosis has led to limited understanding of female presentations. Historically, studies have focused on male participants, reinforcing the misconception that ADHD is primarily a male condition and rare in females (Merone et al., 2022; Shai et al., 2021). This has created a feedback loop: male-centric research informs diagnostic criteria, which in turn leads to underrecognition of ADHD in females. Although recent literature has begun to include female perspectives, a significant knowledge gap remains among HCPs regarding female-specific symptoms, reasons for late diagnosis in females, and subsequent treatment options (Cheng et al., 2022; Mauvais-Jarvis et al., 2020). Despite rising diagnosis rates in females, disparities persist in referrals, assessments, diagnoses, and treatment access (Merone et al., 2022; Shai et al., 2021).

Purpose Statement

Historically, a gender gap in medical research has led to the underdiagnosis, misdiagnosis, and undertreatment of females across numerous health conditions, including ADHD. Females often disproportionately experience delayed diagnosis and less aggressive treatment, contributing to ongoing disparities in care (Attoe & Climie, 2023; Ginsburg et al., 2023; Mauvais-Jarvis et al., 2020; Merone et al., 2022; Vohra-Gupta et al., 2023). Despite growing recognition of ADHD across the lifespan, little is known about how hormonal changes during the female CP influence ADHD symptom expression, diagnostic clarity, or treatment responsiveness. Empirical literature offers minimal guidance on whether

menopause exacerbates core symptoms, alters executive functioning, or contributes to diagnostic confusion with mood, anxiety, or cognitive aging processes.

These gaps are particularly significant for counselling psychology, as without an empirically based understanding of the presentation of ADHD in the CP, there are risks of misattributing symptoms changes to stress, depression, or normal aging, leading to inaccurate diagnostic formulation and ineffective intervention planning. Additionally, the lack of a solid research foundation limits the ability of clinicians to provide females with CP-specific psychoeducation, support their midlife transitions of identity, and address the stigma that impacts help-seeking and self-perception. Counselling psychology's emphasis on holistic, lifespan-oriented, biopsychosocial care underscores the need for clearer knowledge of how neurobiological changes during the counselling process interact with psychological functioning and the sociocultural environment.

This capstone aims to investigate the research problem of how the CP, a pivotal stage in female reproductive aging, impacts ADHD by influencing symptom severity, diagnostic timing, and treatment efficacy. By addressing literature gaps and increasing awareness of ADHD in older females, this project aims to enhance clinicians' knowledge and competence, reduce systemic barriers to timely and appropriate interventions, and promote counselling psychology practices that are more equitable, evidence-informed, and responsive to the unique needs of this population.

Theoretical Framework

This composition adopts an intersectional feminist poststructuralist framework to examine how overlapping identities, such as sex and age shape experiences of oppression and privilege within healthcare. Intersectional feminism emphasizes the interconnected nature of these identities and how language, culture, and social structures influence access to resources and recognition, while poststructural feminism critiques the production of medical knowledge through discourse, power relationships, and cultural norms (Willett & Etowa, 2023). Together, these perspectives provide a critical

lens for understanding how male-dominated medical models shape the recognition and interpretation of ADHD in females, and advocate for equity, inclusion, and the validation of diverse lived experiences (Benstead, 2021; Tseris, 2023).

This framework guided the analytic process, shaping how the literature was evaluated, summarized, and synthesized. Attention was directed to whose voices and experiences were represented or omitted, particularly regarding biological sex and age in ADHD research. The analysis examined how authors framed symptoms, causality, and treatment, and whether androcentric or ageist assumptions were treated as normative baselines that cast female or older-adult presentations as atypical or subthreshold. Author positionality, cultural context, and publishing location were considered, recognizing that collectivist versus individualist orientations, and androcentric versus egalitarian societal norms influence how symptoms and treatment outcomes are interpreted. For consistency, greater emphasis was placed on research from Western and more egalitarian contexts. Additionally, studies older than 10 years were excluded, to ensure the review reflected the most current developments in this rapidly expanding field, which increasingly addresses ageist and sexist biases. This approach enabled the identification of situated biases and revealed silences, exclusions, and gaps, particularly the absence of female-specific data resulting dominant androcentric research norms.

In the context of ADHD and menopause, both widely misunderstood and underresearched in females, this framework exposes and challenges structural stigma that restricts access to appropriate care. It also informed the applied practice component in the final chapter by emphasizing the need for specialized therapeutic groups adapted for older females with ADHD, and underscoring the broader imperative for inclusive research and healthcare practices that reflect the realities of individuals that are marginalized by assumptions that are based exclusively on biological sex (Ginsburg et al., 2023; Shai et al., 2021).

Methodology

This scoping review was conducted following the Arksey and O'Malley (2005) framework, which provides a systematic approach for mapping the breadth and depth of research on emerging topics. To ensure rigour and minimize bias, a comprehensive search strategy was implemented across multiple databases (EBSCO Psychology & Behavioral Sciences Collection, PubMed, PsycINFO) using both keywords and controlled vocabulary related to ADHD and menopause. The literature search employed the following key terms: ADHD, climacteric, estrogen, females, hyperactivity/impulsivity, inattention, menopause, older, reproductive hormones, and women. Study selection followed clear inclusion and exclusion criteria. Eligible peer-reviewed articles were published in English, within the past 10 years, and examined adult biological females diagnosed with ADHD, including those in their CP at the time of article retrieval; no studies were identified that specifically focused on ADHD during the CP. Consequently, three quantitative and four qualitative studies were included that examined adult females with ADHD, although the CP was not their primary focus. In addition, 14 literature reviews were included that addressed ADHD across the lifespan or in adulthood, again without specific emphasis on the CP. Studies focusing on children, males, non-biological females, or non-climacteric females, as well as editorials, opinion pieces, and small-sample studies, were excluded. Retrieved articles were systematically screened, organized into thematic categories, to support synthesis rather than evaluation of causal relationships. Each source was assessed for relevance and credibility by considering study design, sample characteristics, methodological transparency, key findings, and publication quality. Collaboration with Northern Health Authority librarians supported the access to and identification of high-quality, contemporary literature. This process allowed for a broad, systematic mapping of existing knowledge and highlighted patterns, gaps, and areas requiring further inquiry, consistent with the aims of a scoping review.

Positionality and Reflexivity Statements

As a 55-year-old cisgender, Eurocentric woman recently diagnosed with ADHD and currently experiencing the CP, I bring a deeply personal connection to this research. ADHD has affected multiple generations in my family, and my own symptoms, such as distractibility, impulsivity, and cognitive decline, have intensified with age and hormonal changes. These lived experiences have shaped my interest in exploring the intersection of ADHD and menopause.

My journey to diagnosis was marked by dismissive encounters with male physicians who minimized or denied the legitimacy of ADHD, attributing symptoms solely to menopause or other mental health issues. These experiences demonstrate ongoing stigma and gender bias affecting females' access to proper care and services. As a mental health professional and graduate student, I was able to advocate for myself, but I recognize that others may not have the same resources or voice.

Researcher reflexivity was maintained throughout the review process by acknowledging how personal perspectives and theoretical commitments could influence study selection and interpretation. My positionality introduces the potential for bias; therefore, I critically examined how my background, values, and assumptions may shape the research process. While reflexivity cannot eliminate bias, it promotes transparency and accountability. To mitigate these influences, strategies such as predefined inclusion and exclusion criteria and systematic screening were employed to ensure findings are grounded in evidence rather than personal experience. This structured approach reduced bias and facilitated the identification of silences and gaps in the literature, particularly where female data was absent due to male-centric research norms.

Contributions

This capstone seeks to demystify and normalize the complex interplay between ADHD and the physiological changes associated with female aging. While the existing literature provides fragmented insights into ADHD symptomatology, hormonal influences, and executive functioning challenges, it remains limited in scope and often excludes older females, leaving critical gaps in understanding.

This project builds on this foundation by synthesizing these disparate findings and applying an intersectional lens to highlight how the CP uniquely shapes ADHD experiences. Its unique contribution lies in improving visibility for an underresearched demographic, outlining gaps in evidence, and converting these insights into clinically relevant recommendations for screening, diagnosis, and therapeutic interventions. By promoting ADHD literacy among healthcare professionals and the public, this work aims to enhance care quality and guide the development of targeted supports for older females experiencing intensified ADHD-related challenges during the climacteric years.

Definition of Terms

ADHD: a neurodevelopmental disorder characterized by persistent symptoms of inattention, hyperactivity, and impulsivity that impair daily functioning (APA, 2022).

Climacteric: a transitional phase in female reproductive aging, encompassing perimenopause, menopause, and postmenopause, characterized by declining hormone levels (Conde et al., 2021; Hickey et al., 2022).

Comorbidities: the presence of additional health conditions alongside menopausal symptoms, which may share causes or interact, worsening overall symptom severity (Choi et al., 2022; Cumyn et al., 2009).

Executive functioning (EF): set of cognitive skills that regulate attention, memory, decision-making, and time management. EF deficits can affect focus, self-control, and relationships (Devi, 2018; Epperson et al., 2015).

Hormone replacement therapy (HRT): a treatment involving estrogen supplementation to alleviate menopausal symptoms and improve functioning and quality of life (Hickey et al., 2022; Kumar et al., 2023).

Menopause: the point at which a woman has gone 12 consecutive months without menstruation, signaling the end of reproductive capability. It may occur naturally or be induced (Conde et al., 2021; World Health Organization [WHO], 2024).

Perimenopause: the phase leading up to menopause, marked by fluctuating hormone levels and emerging symptoms. Duration varies from months to years (Conde et al., 2021; Hickey et al., 2022).

Postmenopause: the phase following menopause, where menstrual cycles have ceased. Symptoms like hot flashes may lessen or resolve (Hickey et al., 2022).

Sex: refers to biological and physiological traits (e.g., chromosomes, hormones, reproductive anatomy) typically categorized as male or female. Sex is not interchangeable with gender (Kaufman et al., 2023).

Stigma: the societal devaluation of individuals based on perceived undesirable traits or group membership, often leading to discrimination and reduced access to care (Nguyen & Hinshaw, 2020; Schoeman & Voges, 2022).

Chapter Outlines

This capstone project is organized into several chapters. In the first chapter, an overview of the capstone topic is provided, which focuses ADHD and the CP to emphasize the research problem. It includes the purpose statement, theoretical framework, and methodology, which outline how the literature review will be conducted. This chapter concludes with a discussion of the positionality and reflexivity of the author, along with contributions to counselling psychology, and the definitions of key terms used throughout the capstone.

The second chapter provides a comprehensive review of the literature on ADHD and the CP. It begins by examining ADHD symptomatology across age, highlighting lifespan changes and differences in older individuals. Biological sex is then addressed, comparing males and females before focusing on CP-related changes in females and the impact of declining reproductive hormones. The chapter explores reasons for delayed ADHD diagnosis in females and then examines the consequences of a late diagnosis. Stigma is discussed, emphasizing cultural and social barriers like negative self-perception and limited access to services. Current treatment options are reviewed in depth. The chapter concludes by identifying gaps in the literature and their clinical significance.

The final chapter synthesizes the themes, insights, and limitations from the second chapter. It begins by interpreting key findings from the literature review and their relevance to the research question, followed by recommendations for future research. Ethical and cultural considerations for therapeutic practice with older females with ADHD are then addressed. In response to identified gaps, an applied intervention, a psychoeducational group for CP females with ADHD, is introduced, outlining its structure, objectives, and anticipated outcomes. Next is a personal reflection on learning, challenges, and plans for ongoing professional development, revisiting the author's positionality and reflexivity. The capstone project concludes with an overall discussion of what was gleaned regarding the influence of the CP on ADHD for older females, the impact on symptom severity, diagnostic timing, and treatment efficacy.

Chapter 2: Literature Review

While research on ADHD in children, especially young males has been extensive, there remains a significant gap in the literature concerning other populations. There is a notable lack of information on how females present their symptoms of ADHD, with even fewer focused on climacteric females (Behrman & Crockett, 2024; Brzezińska et al., 2021; Littman et al., 2021). Historically, as mentioned previously, the female population has been overlooked, misdiagnosed, underdiagnosed and undertreated by physicians, other HCPs, and the broader medical system (Lai et al., 2022; Martin, 2024; Mellström, 2023; Merone et al., 2022; Shai et al., 2021; Vincenti et al., 2023).

The literature review is structured around symptomology differences, hormonal influences, and diagnostic and treatment factors as these themes directly address how the CP impacts ADHD symptom severity, diagnostic timing, and treatment efficacy. The aim of the current chapter is to review and examine recent literature on ADHD in older females, to focus understanding of how the CP phase in females impacts symptom presentation. This chapter is organized into several sections, the first is symptomology differences, beginning with a comparison between age groups, older versus younger individuals, followed by differences between the sexes, and concludes with a focus on climacteric females. The second section is an exploration of how reproductive hormones influence the symptoms of ADHD. The third section explores diagnosis and treatment, specifically why ADHD is diagnosed later in life for females, the consequences of delayed diagnosis, and a review of treatment options and efficacy for CP females. This is followed by a discussion of the existing gaps and limitations in current literature, and the chapter concludes with a summary of the key findings from the reviewed literature.

ADHD Symptomology

Age Factors

Across the lifespan, ADHD symptomatology demonstrates significant shifts in presentation, complicating diagnosis, and treatment. Childhood ADHD is characterized by overt hyperactivity and

impulsivity, whereas adulthood brings a decline in these external behaviors, replaced by internalized manifestations such as restlessness, emotional dysregulation, and EF deficits (Callahan & Plamondon, 2019; Custodio et al., 2024; Dobrosavljevic et al., 2023). This transition is consistently reported across studies, though the persistence of functional impairment despite reduced symptom severity is a common theme (French et al., 2023; Michielsen et al., 2018).

Inattention emerges as the most stable and impairing feature in adulthood, with research agreeing that it generally remains unchanged in severity over time (Custodio et al., 2024; Faraone et al., 2021; Niina et al., 2021). While hyperactivity and impulsivity diminish, inattentive symptoms contribute to workplace challenges such as disorganization and forgetfulness (Özkan & Haznedaroğlu, 2023; Rivas-Vazques et al., 2023). This contrasts with childhood presentations, where inattention is more externalized and observable (Caye et al., 2016; Chung et al., 2019).

Another point of convergence is the role of EF deficits and emotional lability, which become more pronounced in adulthood despite not being formally recognized in *DSM-5-TR* criteria (APA, 2022; Lundervold et al., 2020). Emotional instability affects up to 70% of adults with ADHD, compared to 25%–45% of children, underscoring its clinical significance (Faraone et al., 2021; Reimherr et al., 2020). These symptoms often mimic anxiety or age-related cognitive decline, leading to frequent misdiagnosis (Katzman et al., 2017; Weibel et al., 2020).

Key contrasts across studies include the interpretation of symptom persistence: while some research emphasizes the decline of hyperactivity and impulsivity, others highlight their transformation into cognitive restlessness and risk-taking behaviors (Michielsen et al., 2018; Niina et al., 2021). Similarly, while all studies agree on the stability of inattention, its functional impact varies by context: academic challenges in childhood versus occupational difficulties in adulthood.

From this, it can be surmised that ADHD is not a static condition, but rather has an evolving symptom profile, from externalized behaviors to internalized cognitive and emotional challenges, which

necessitates age-sensitive diagnostic criteria and interventions. The literature consistently points to underdiagnosis in adults, particularly women, due to outdated screening tools and symptom misattribution, reinforcing the need for revised diagnostic frameworks and targeted support strategies.

ADHD in Older Adults. The literature consistently demonstrates that ADHD symptoms persist into older adulthood, often exerting as much impact as in earlier stages (Faraone et al., 2021; Rivas-Vazquez et al., 2023). However, systemic factors such as ageism, identified as the third leading cause of global discrimination, compound diagnostic and treatment challenges for adults over age 50 (Dobrosavljevic et al., 2023; Merodio et al., 2024). Ageist attitudes among HCPs frequently result in symptom minimization and condescending interactions, contributing to delayed or missed diagnoses, particularly for individuals with lifelong subthreshold symptoms (Liu et al., 2023; Michielsen et al., 2018). This aligns with findings that adults over 40 are rarely included in ADHD clinical trials, and those over 65 are systematically excluded due to concerns about medical complexity, creating significant research gaps (Deng, 2022; Merodio et al., 2024).

Despite growing awareness and a notable increase in individuals over 50 seeking diagnosis and treatment for the first time in recent decades (Dobrosavljevic et al., 2023; Ojo et al., 2020), consensus remains elusive regarding the applicability of formal ADHD diagnosis late in life (Agnew-Blais & Michelini, 2023; Klefsjo et al., 2021). Studies converge on the complexity of differential diagnosis in older adults, as ADHD symptoms often overlap with age-related cognitive decline, mild cognitive impairment, and comorbid conditions such as depression, anxiety, and bipolar disorder (Choi et al., 2022; Özkan & Haznedaroğlu, 2023). Polypharmacy further complicates this picture, as multiple medications can obscure or intensify ADHD symptoms, while shared features with neurocognitive disorders, such as forgetfulness and poor concentration, heighten diagnostic uncertainty (Dobrosavljevic et al., 2023; Rivas-Vazquez et al., 2023).

A key contrast across studies lies in the framing of ADHD's functional impact: while some research emphasizes symptom persistence and its influence on quality of life, others highlight systemic neglect and exclusion from research as primary drivers of poor outcomes (Caye et al., 2016; Kooij et al., 2019). Integrated findings reveal that older adults, particularly females, face compounded vulnerabilities, ageism, hormonal changes during the CP, and psychosocial stressors such as divorce or retirement, leading to heightened risks for interpersonal conflict, financial instability, and suicidality (Michielsen et al., 2018; Özkan & Haznedaroğlu, 2023).

Overall ADHD in older adults remains underrecognized and undertreated due to systemic ageism, research gaps, and diagnostic complexity. Symptoms persist but manifest differently than in youth, often intertwined with comorbidities and life-stage stressors. These findings underscore the urgent need for age-inclusive research, nuanced diagnostic criteria, and tailored interventions that account for CP-related hormonal changes and the unique psychosocial context of later life.

Biological Sex Factors

The literature consistently highlights a historical bias toward male-centric ADHD models, which has shaped diagnostic criteria and screening tools, leaving female presentations underrecognized (Cheng et al., 2022; Lai et al., 2022; Martin, 2024). This bias is compounded by the interchangeable use of sex and gender in research, creating ambiguity and limiting clarity in clinical interpretation (Camara et al., 2021; Clayton & Tannenbaum, 2016). While males often exhibit the externalizing behaviors of hyperactivity and impulsivity, as emphasized in *DSM-5-TR* criteria (APA, 2022), females tend to present with more internalizing symptoms, such as disorganization, emotional dysregulation, and relational difficulties (Fratlicelli et al., 2022; Klefsjo et al., 2021). For females, these more subtle patterns frequently delay diagnosis and contribute to misinterpretation of symptoms as laziness or emotional instability, reinforcing cultural stereotypes and diagnostic overshadowing (Antoniou et al., 2021; Attoe & Climie, 2023).

Across studies, a key point of convergence is the higher prevalence of comorbid conditions among females with ADHD, such as anxiety, depression, and borderline personality traits, which often overshadow ADHD symptoms and complicate accurate identification (Fratlicelli et al., 2022; Guo, 2024; Solberg et al., 2018). While some research suggests no significant sex-based differences in adult ADHD symptom severity, other findings indicate that females may exhibit more pronounced verbal hyperactivity in social contexts, challenging traditional assumptions about gendered symptom expression (Abdelnour et al., 2022; Vildalen et al., 2019). This contrast underscores the inadequacy of current diagnostic frameworks that prioritize external behaviors, which are more visible in males, over emotional and cognitive symptoms more common in females.

As such, the sex-based differences in ADHD presentation significantly influence diagnostic timing and treatment efficacy. Females experience longer evaluation processes, later diagnoses, and greater psychosocial consequences, including low self-esteem and chronic underachievement. These disparities become even more pronounced during the CP, when hormonal fluctuations amplify emotional and cognitive symptoms, adding complexity to diagnosis and care. Collectively, the findings call for gender-sensitive diagnostic frameworks and interventions that account for these nuanced differences across the female lifespan.

The CP and Its Impact

The CP marks a significant biological and psychosocial transition for females, encompassing perimenopause, menopause, and postmenopause, during which ovarian function declines and reproductive hormones fluctuate (Hickey et al., 2022; WHO, 2024). While some experience this phase as liberating, free from menstruation and pregnancy concern, others face challenges shaped by gender norms, sociocultural expectations, and stigma, often accompanied by feelings of shame and confusion (Behrman & Crockett, 2024; Hickey et al., 2022). Across studies, hormonal changes during the CP are consistently linked to mood instability, cognitive shifts, and vasomotor symptoms, yet these effects

remain underreported by females and undertreated by HCPs (Barber & Charles, 2023; Menopause Foundation of Canada, 2022).

A point of convergence among researchers is the recognition that CP-related symptoms extend beyond physical changes, influencing emotional, mental, and social well-being (Conde et al., 2021; Greendale et al., 2020). However, findings diverge on the extent to which sociocultural factors amplify these challenges, some studies emphasize biological mechanisms, while others highlight gendered expectations and age-related stigma as primary drivers of distress (Behrman & Crockett, 2024; Vincenti et al., 2023). Despite these differences, all agree that females in the CP represent an underserved population, marginalized by systemic ageism and sexism, and routinely excluded from research and clinical attention (Merodio et al., 2024; WHO, 2024).

In summary, the CP introduces complex hormonal and sociocultural dynamics that can obscure symptoms, delay diagnosis, and complicate treatment. These factors are particularly relevant to ADHD, as fluctuating and declining reproductive hormones during this phase may exacerbate emotional and cognitive symptoms, influencing both symptom severity and treatment responsiveness. Understanding these intersections is critical for developing age- and gender-sensitive diagnostic frameworks and interventions.

The Reproductive Hormone Connection

Literature consistently underscores the critical role of reproductive hormones, particularly estrogen, in regulating cognitive and emotional functioning through their influence on neurotransmitters such as dopamine (Camara et al., 2021; Eng et al., 2024; van der Weyden & Peters, 2024). Estrogen supports executive processes like memory, attention, and decision-making, and its decline during the CP is associated with cognitive symptoms such as brain fog, distractibility, and memory lapses (Baig & Kahya, 2025; Conde et al., 2021; Metcalf et al., 2023). These symptoms closely

resemble ADHD-related challenges, raising questions about whether hormonal fluctuations exacerbate existing ADHD or contribute to late-life diagnoses (Eng, 2024; Epperson et al., 2015).

Across studies, a point of convergence is the observation that estrogen decline correlates with reduced dopamine activity, which may intensify ADHD symptoms or mimic them in females without prior diagnoses (Burger et al., 2024; MacDonald et al., 2024). Some research suggests females with ADHD may have fewer estrogen receptors and altered dopaminergic function, increasing vulnerability to hormonal changes (van der Weyden & Peters, 2024). However, findings diverge on whether these changes represent true adult-onset ADHD or previously subthreshold symptoms amplified by hormonal shifts (Camara et al., 2021). While several studies document new executive function difficulties during the CP, even in neurotypical females, other studies argue these impairments reflect normal aging rather than ADHD pathology (Kumar et al., 2023; Metcalf et al., 2023).

Thus, hormonal fluctuations during the CP introduce a complex interplay between neuroendocrine changes and cognitive functioning. Estrogen decline may worsen ADHD symptoms or contribute to diagnostic uncertainty, as overlapping features blur distinctions between ADHD, age-related cognitive decline, and mood disorders. Despite emerging evidence, research remains inconclusive, and treatment strategies such as HRT are debated, leaving clinical implications uncertain. These findings highlight the need for integrative, gender-sensitive diagnostic frameworks and targeted interventions that account for hormonal influences on ADHD symptom severity and treatment responsiveness.

Diagnostic Timing of ADHD in Females

Current literature consistently demonstrates that ADHD is most often diagnosed in childhood, primarily due to the visibility of hyperactive and impulsive symptoms commonly observed in males (Kooij et al., 2019; Rivas-Vazquez et al., 2023; Young et al., 2020). In contrast, females, who more frequently present with inattentive or less disruptive symptoms, are often overlooked, resulting in

delayed or missed diagnoses that can persist for decades (Dobrosavljevic et al., 2023; Rivas-Vazquez et al., 2023). Studies converge on an average diagnostic delay of up to 25 years, significantly increasing the risk of comorbid psychiatric disorders and functional impairments (Callahan & Plamondon, 2019; French et al., 2023). Early and accurate diagnosis is therefore critical, as timely treatment can substantially reduce impairments and improve quality of life (Buitelaar et al., 2022; Jaeschke et al., 2021).

Missed Diagnoses and Gender Bias

Across studies, gender bias in diagnostic frameworks emerges as a central factor in the underdiagnosis of females with ADHD. Historically, diagnostic criteria were modeled on hyperactive male presentations, emphasizing externalizing behaviors such as impulsivity and hyperactivity (APA, 2022; Williamson & Johnston, 2015). This male-centric standard contrasts sharply with the more common female presentation of inattentiveness and less disruptive symptoms, which are easily overlooked in childhood and often misinterpreted as personality traits rather than clinical indicators (Babinski & Libsack, 2025; Hutt-Vater et al., 2024; Taylor et al., 2022).

A point of convergence across research is that most females diagnosed in adulthood report longstanding childhood symptoms, underscoring missed opportunities for early intervention (Faraone & Biederman, 2016; Holthe & Langvik, 2017). The systemic reliance on age-based cutoffs, such as the *DSM-5-TR*'s requirement for symptom onset before age 12, further compounds these delays, as many females fall outside this criterion despite persistent impairment (Cheng et al., 2022; Fraticelli et al., 2022). This diagnostic gap helps explain the shift from a 3:1 male-to-female ratio in childhood diagnoses to nearly 1:1 in adulthood, reflecting late recognition rather than true prevalence differences.

The male sex bias embedded in current diagnostic criteria perpetuates systemic underrecognition of ADHD in females, delaying treatment and increasing vulnerability to comorbidities. These disparities highlight the need for revised diagnostic frameworks that account for sex-specific symptom patterns and developmental trajectories, ensuring earlier and more accurate identification.

Subthreshold Symptoms and Late Diagnosis

Across studies, subthreshold ADHD symptoms in females emerge as a key factor contributing to delayed diagnosis. In childhood, these milder presentations, labeled as inattentive and daydreaming, often fail to meet the current full diagnostic criteria, leading to underrecognition and misinterpretation as personality traits rather than clinical indicators (Kooij et al., 2019; Martin, 2024; Solanto, 2019; Taylor et al., 2022). Research converges on the finding that these symptoms frequently intensify over time, eventually meeting diagnostic thresholds in adulthood, which explains why many women receive their first ADHD diagnosis later in life (Faraone & Biederman, 2016; Kooij et al., 2019). A consistent finding across research is that females diagnosed as adults often report longstanding childhood struggles, such as needing to exert significantly more effort than peers or relying on highly structured environments and external supports to maintain performance (Babinski & Libsack, 2025; Hutt-Vater et al., 2024). While effective in childhood, the research concludes that these strategies tend to be less effective as females mature due to increased life complexity in adulthood (Babinski & Libsack, 2025; Hutt-Vater et al., 2024). In sum, these subthreshold symptoms illustrate the nuanced trajectory of ADHD in females, initially overlooked or misattributed due to their subtlety, later emerging as clinically significant during adulthood. This progression underscores the need for diagnostic frameworks that account for developmental variability and sex-specific symptom patterns, enabling earlier identification and reducing the long-term impact of untreated ADHD.

Masking and Compensatory Strategies

Across studies, masking and compensatory strategies emerge as common adaptive behaviors among high-functioning females with ADHD, beginning in childhood and persisting into adulthood (Hinshaw et al., 2022; Lai et al., 2022). These strategies, such as mimicking peers, hyper-focusing, and using discreet physical movements, help individuals conform to social norms and maintain functionality in academic and social settings (Kelly et al., 2024; Martin, 2024). Compensatory behaviors, including

structuring environments, avoiding overstimulation, and channeling energy into socially acceptable outlets like sports, further support coping (Canela et al., 2017; Rivas-Vazquez et al., 2023).

While these approaches can be effective short-term, research converges on their long-term costs: masking is mentally exhausting, often leading to burnout, emotional dysregulation, and diminished well-being (Kelly et al., 2024; Khindeg et al., 2025). A key contrast across studies lies in the timing of breakdown, with some studies reporting a gradual erosion of coping efficacy, while others emphasizing sharp declines during major life transitions such as marriage, divorce, or the CP, when stress intensifies and external supports diminish (Cheng et al., 2022; Khindeg et al., 2025). These periods often mark the point at which ADHD symptoms become more visible and distressing, prompting clinical evaluation and late diagnosis. The masking and compensatory strategies used by females with ADHD illustrate the complexity of ADHD in females, with adaptive behaviors delaying recognition and diagnosis while imposing significant psychological costs. Their eventual failure during high-stress transitions, particularly the CP, underscores the need for early identification and interventions that prioritize authenticity and sustainable coping rather than concealment.

Diagnostic Overshadowing and Comorbidity

Across studies, diagnostic overshadowing emerges as a significant barrier to accurate ADHD identification in females. Symptoms such as emotional dysregulation, impulsivity, low motivation, and disorganization often overlap with internalizing disorders like anxiety, depression, or borderline personality disorder, leading clinicians to misattribute distress to these conditions rather than ADHD (Baig & Kahya, 2025; Cilia Vincenti et al., 2023). This misdiagnosis results in inappropriate treatments, such as antidepressants or mood stabilizers, that fail to address core ADHD symptoms, perpetuating functional impairments and emotional strain (Martin, 2024; Morgan, 2024).

A point of convergence across studies is the exacerbation of both ADHD and comorbid symptoms during hormonal transitions, particularly CP, when fluctuating estrogen levels intensify

cognitive and emotional challenges (Babinski & Libsack, 2025; Holthe & Langvik, 2017). These hormonal changes often render previously prescribed medications ineffective, complicating management and increasing vulnerability to burnout and psychiatric distress (Martin, 2024; Morgan, 2024). While all research agrees on the prevalence of comorbidity and its masking effect, findings diverge on whether these patterns reflect systemic diagnostic bias or inherent symptom complexity, underscoring the need for further research and nuanced clinical approaches.

Both diagnostic overshadowing and comorbidity illustrate how symptom interpretation based on biological sex, and hormonal influences converge to delay ADHD recognition in females. These dynamics not only obscure accurate diagnosis but also compromise treatment efficacy, particularly during the CP. Addressing these challenges requires clinician training, sex-sensitive diagnostic frameworks, and integrated care models that account for hormonal and psychiatric interactions.

Cultural Confirmation Bias

Across studies, cultural confirmation bias emerges as a systemic barrier to ADHD recognition in females. Popular media portrayals of ADHD as a predominantly male disorder diminish public awareness of its prevalence in females and discourage help-seeking behaviors (Cheng et al., 2022; Khindeg et al., 2025; Martin, 2024). This bias is reinforced by societal expectations for females to be quiet, organized, and socially adept, which obscures inattentive or disorganized presentations and perpetuates misinterpretation of symptoms as personality flaws rather than clinical indicators (Abdelnour et al., 2022; Antoniou et al., 2021). Referral agents, such as parents, teachers, and physicians, often attribute ADHD-related behaviors in females to laziness or defiance, reducing the likelihood of timely referrals and leaving needs unmet (Babinski & Libsack, 2025; Young et al., 2020).

A point of convergence across research is the role of sex-biased norms in diagnostic delays. However, there are also contrasts in research regarding how these norms interact with cultural narratives. Some studies emphasize media-driven stereotypes, whereas others highlight interpersonal

dynamics and institutional biases as primary drivers of underrecognition (Khindey et al., 2025; Özkan & Haznedaroğlu, 2023). Collectively, these findings reveal that cultural and social expectations compound systemic diagnostic gaps, particularly for females with inattentive or internalizing symptoms.

Thus, cultural confirmation bias not only delays ADHD diagnosis in females but also amplifies stigma and misinterpretation, creating barriers to care that persist into adulthood. These missed opportunities become even more consequential during the CP, when hormonal changes intensify cognitive and emotional challenges, exacerbating the functional impacts of late diagnosis. Addressing these disparities requires dismantling sex-biased stereotypes through public education, clinician training, and culturally sensitive diagnostic frameworks.

Impacts of Late ADHD Diagnosis in CP Females

Receiving an ADHD diagnosis later in life can be both validating and challenging, with significant implications for quality of life. When diagnosis occurs during the CP, hormonal changes may amplify ADHD-related impairments, creating a compounded effect. Research indicates that late diagnosis during CP is associated with worsening cognitive, emotional, and behavioral symptoms (Huynh et al., 2024; Katzman et al., 2017; Özkan & Haznedaroğlu, 2023). Both ADHD and CP carry social stigma, and their co-occurrence intensifies psychosocial burden (Barber & Charles, 2023; Holden & Kobayashi-Wood, 2025).

Functional Impacts. Across studies, late ADHD diagnosis consistently correlates with diminished self-awareness, emotional regulation, and confidence. While some research emphasizes lifelong patterns of underachievement and misunderstanding (Abdelnour et al., 2022; French et al., 2023), others highlight the emotional complexity of receiving a diagnosis later in life, relief mixed with frustration and impatience (Khindey et al., 2025; Morgan, 2024). The contrast lies in whether late diagnosis is viewed primarily as a corrective turning point or as a source of compounded distress due to years of missed support.

Comorbidities. Evidence consistently shows that psychiatric comorbidities are highly prevalent among adults with ADHD, with rates exceeding 80%, making them the rule rather than the exception (Huynh et al., 2024; Kooij et al., 2019; Özkan & Haznedaroğlu, 2023). Substance use disorder is the most common comorbidity, followed by mood, anxiety, and personality disorders (Choi et al., 2022; Katzman et al., 2017; Solberg et al., 2018; Weibel et al., 2020; Yoshimasu et al., 2018). While all studies agree on the prevalence and complexity of comorbidities, interpretations diverge: some frame these patterns as consequences of systemic diagnostic delays and inadequate treatment (Babinski & Libsack, 2025), whereas others attribute them to inherent neurobiological vulnerability (Solberg et al., 2018; Yoshimasu et al., 2018). This distinction underscores the need for integrated care models that address both ADHD and co-occurring conditions.

Further complicating management, individuals with undiagnosed ADHD often resort to self-medication, commonly with stimulants such as caffeine or nicotine, which can escalate into problematic substance use or addiction over time (Babinski & Libsack, 2025; Behrman & Crockett, 2024; Holthe & Langvik, 2017; Huynh et al., 2024). Collectively, these findings highlight the dual challenge of treating ADHD alongside comorbidities and the critical importance of early diagnosis to prevent cascading health risks.

Social and Interpersonal Functioning. ADHD significantly impairs interpersonal relationships by disrupting core social skills such as reading cues, managing emotions, and resolving conflicts. These deficits often lead to strained connections, isolation, and increased vulnerability to negative social outcomes. Research consistently shows that females with ADHD experience higher rates of conflictual, short-lived relationships and divorce compared to their neurotypical peers (Black, 2023; Cilia Vincenti et al., 2023; Holden & Kobayashi-Wood, 2025; Holthe & Langvik, 2017; Huynh et al., 2024; Khindey et al., 2025; McDonnell, 2022).

While some studies emphasize masking behaviors as a failed coping mechanism, where efforts to fit in socially eventually lead to fatigue and isolation (Brzezińska et al., 2021; Cilia Vincenti et al., 2023). Others highlight systemic factors such as stigma and misinterpretation of symptoms as laziness or defiance (Young et al., 2020). This contrast underscores whether interpersonal challenges are primarily self-driven, such as masking fatigue, or socially reinforced, such as cultural bias.

Additionally, females with ADHD face heightened risks of bullying and intimate partner violence, further compounding relational instability and psychosocial burden (Black, 2023; Cilia Vincenti et al., 2023; Huynh et al., 2024; Young et al., 2020). Collectively, these findings reveal that both individual coping strategies and societal expectations interact to shape adverse social outcomes, highlighting the need for interventions that address relational skills and dismantle stigma.

Occupational Challenges. Late or missed ADHD diagnoses often obscure the root of workplace difficulties, which are frequently misattributed to personal flaws such as laziness or lack of intelligence. While compensatory behaviors and supportive environments can mask symptoms for years, hormonal changes during the CP frequently exacerbate ADHD-related impairments, making routine tasks overwhelming and reducing job stability. Research consistently links undiagnosed ADHD to persistent occupational challenges, including reduced motivation, inconsistent performance, and heightened job dissatisfaction (Gottardello & Steffan, 2024; Holden & Kobayashi-Wood, 2025; Holthe & Langvik, 2017).

CP-related hormonal shifts intensify symptoms such as inattention and emotional dysregulation, contributing to frequent career changes and unemployment (Ahlberg et al., 2023; Black, 2023; Gottardello & Steffan, 2024). While some studies attribute these difficulties primarily to individual coping failures during hormonal transitions, others emphasize structural barriers, such as lack of workplace accommodations and biological sex-related expectations (Black, 2023). This divergence highlights the interplay between personal vulnerabilities and systemic factors in shaping older females'

occupational outcomes, underscoring the need for both individualized support and organizational policy changes.

Treatment Planning. Late ADHD diagnosis during the CP significantly complicates treatment planning due to the dual need to address neurodevelopmental symptoms and hormonal changes (Deng, 2022; Kooij et al., 2019). Individual factors, such as age, personality, coping strategies, stress tolerance, and life experiences, further increase complexity, requiring highly personalized approaches. Research consistently agrees on the necessity of tailored care yet diverges regarding emphasis. Some studies highlight the pharmacological challenges which emerge during the CP hormonal transitions (Huynh et al., 2024). Other studies stress psychosocial interventions adapted to life stage and coping history (Martin, 2024). This contrast reflects an ongoing debate between biomedical and holistic approaches to care, underscoring the need for integrated models that combine both strategies.

Collectively, the literature reveals that late ADHD diagnosis in females, particularly during CP, creates a compounded burden across functional, psychological, social, and occupational domains. While studies converge on the detrimental impact of delayed recognition, they differ whether these outcomes stem primarily from systemic diagnostic bias or intrinsic symptom complexity. The co-occurrence of ADHD and CP amplifies cognitive and emotional challenges, complicates treatment, and heightens vulnerability to stigma and comorbidities. Addressing these disparities requires a multipronged approach: gender-sensitive diagnostic frameworks, clinician training to detect masking and subthreshold symptoms, integrated care models that account for hormonal influences, and culturally informed interventions to dismantle stereotypes. Ultimately, early identification remains the most effective strategy to mitigate cascading impacts and improve quality of life for females challenged with ADHD.

Stigma

Stigma, defined as the devaluation of individuals based on socially undesirable characteristics, manifests through stereotyping, prejudice, and discrimination (Nguyen & Hinshaw, 2020; Schoeman &

Voges, 2022). Across studies, consensus exists that stigma creates barriers to clinical access and negatively impacts self-perception and identity (Barber & Charles, 2023; Ginapp et al., 2023; Holden & Kobayashi-Wood, 2025). However, while some research emphasizes stigma's psychological toll, internalized shame and isolation, others highlight its structural dimensions, such as systemic biases in healthcare and workplace accommodation (Fredrikson et al., 2014; Martin-Key et al., 2023). This contrast underscores stigma as both an interpersonal and institutional phenomenon, compounding challenges for females with ADHD entering the CP.

Intersection of ADHD and CP: Compounded Stigma

ADHD has long been stigmatized, often framed by skepticism about overdiagnosis and overtreatment (Bisset et al., 2022; Nguyen & Hinshaw, 2020). Similarly, CP remains taboo, with over half of Canadians reporting discomfort discussing menopause (Menopause Foundation of Canada, 2022). At their intersection, stigma is amplified by ageism and sexism, leaving females feeling inadequate and invisible (Cilia Vincenti et al., 2023; Hickey et al., 2022). While some studies stress cultural narratives that reinforce silence around CP, others focus on gendered expectations that penalize ADHD-related behaviors in women. This divergence highlights how layered stigmas interact, creating unique psychosocial burdens beyond symptom severity.

Social vs. Structural Stigma

Social stigma emerges through public attitudes, such as harsher judgment of females for ADHD-related behaviors, and internalized shame, which fosters isolation and reduced quality of life (Martin-Key et al., 2023). Many women with late-diagnosed ADHD report asking, "What is wrong with me?" while they struggle with worsening symptoms and fear of judgment (Khindey et al., 2025, p. 60). In contrast, structural stigma legitimizes marginalization through institutional practices, including ageist and sexist biases in research and healthcare. Dismissive responses from HCPs, such as "You're too old to have ADHD" or "It's just menopause" further discourage help-seeking (Martin-Key et al., 2023, p. 7).

While social stigma operates at the interpersonal level, structural stigma perpetuates systemic inequities, limiting access to diagnosis, treatment, and workplace accommodations (Fredrikson et al., 2014; Gottardello & Steffan, 2024). This comparison illustrates how stigma functions across multiple layers, reinforcing invisibility and inadequate care for older females with ADHD.

Overall, the literature demonstrates that stigma surrounding ADHD and CP imposes significant barriers to timely diagnosis, effective treatment, and overall quality of life for older females. While research consistently identifies stigma's dual nature, social and structural, its emphasis varies on internalized shame and psychosocial isolation, as opposed to highlighting systemic biases which are dismissive of symptom impacts. These attitudes contribute to misdiagnosis, delayed care, and limited access to workplace and educational accommodations. For clinicians and counselors, stigma at this intersection compromises assessment accuracy, delays referrals, and reduces therapeutic engagement. Addressing these challenges requires proactive psychoeducation, advocacy, and the creation of validating spaces that normalize ADHD and CP experiences. Interventions should adopt an intersectional lens, considering age, gender, and cultural factors, while prioritizing strategies to reduce self-stigma, strengthen coping skills, and implement structural reforms that dismantle barriers and promote equitable care.

Treatment Options

The CP, a pivotal stage in female reproductive aging, impacts ADHD treatment efficacy by introducing hormonal variability, complicating symptom management, and amplifying disparities in care access. Following screening and assessment, treating ADHD in females, particularly during CP, requires a comprehensive and individualized approach. Across studies, there is consensus that multimodal strategies combining pharmacological and psychosocial interventions represent best practice for managing ADHD across the lifespan (Asherton et al., 2022; Galvez-Contreras et al., 2022; Kooij et al., 2019). However, research diverges on emphasis, with some prioritizing medication as first-line

treatment, while others advocating for integrated psychosocial approaches to address emotional regulation and functional challenges (Amiri et al., 2025; Gutman et al., 2020).

Persistent disparities in treatment access and outcomes are rooted in historical gaps in neurodiversity research and male-centric diagnostic frameworks (Amiri et al., 2025; Kok et al., 2020). The inattentive and disorganized presentation common in females often leads to delayed diagnoses and fewer referrals compared to males (Martin, 2024). These delays become critical during CP, when hormonal fluctuations amplify cognitive and emotional symptoms, complicating treatment planning and increasing symptom severity (Fratlicelli et al., 2022; Rujoiu, 2023).

Biological complexity, age, sex, and hormonal variability, introduces unpredictability in treatment response. While pharmacotherapy demonstrates strong efficacy for core ADHD symptoms, evidence for older females remains limited and inconsistent, signaling a need for age- and sex-sensitive protocols (Buitelaar et al., 2022; Littman et al., 2021). CP-related hormonal changes can obscure ADHD symptoms and alter medication responsiveness, requiring individualized dosing and careful monitoring (Amiri et al., 2025; Deng, 2022).

Current literature converges on the need for comprehensive care models that address ADHD symptoms and comorbidities while minimizing side effects. Primary care integration is recommended to improve accessibility and reduce systemic barriers for individuals with ADHD, especially older females (Asherton et al., 2022; Dobrosavljevic et al., 2023). However, gaps persist in tailoring interventions to the unique hormonal, cognitive, and psychosocial changes females experienced during CP, underscoring the urgency for targeted research and clinician training.

Pharmacological Treatments

Pharmacotherapy remains the most extensively studied intervention for ADHD across age groups, with strong evidence supporting its effectiveness in reducing core symptoms such as inattention, hyperactivity, and impulsivity (Amiri et al., 2025; Burger et al., 2024; Dobrosavljevic et al.,

2023; Kok et al., 2020; Kooij et al., 2019; Ostinelli et al., 2025). Both stimulant and non-stimulant medications form the cornerstone of ADHD management and are widely recognized for their ability to improve attention and impulse control. Despite this robust evidence base, research addressing age- and sex-specific treatment responses remains limited, particularly for females in the CP. Existing literature suggests that females are less likely than males to receive pharmacological treatment and are more likely to remain untreated, reflecting systemic gaps in diagnosis and care (Amiri et al., 2025; Burger et al., 2024; Ostinelli et al., 2025). These disparities underscore the need for treatment approaches that better account for sex- and age-related factors influencing ADHD presentation and management.

The reviewed literature demonstrates that CP amplifies treatment challenges by altering symptom presentation and medication responsiveness. Hormonal variability during this phase not only obscures ADHD symptoms earlier in life, delaying diagnosis, but also compromises pharmacological predictability later, reducing treatment efficacy. These findings reinforce the need for individualized dosing strategies, clinician awareness of hormonal interactions, and further research into sex- and age-specific treatment approaches to optimize outcomes for females during CP.

Stimulant Pharmacotherapy. Psychostimulants, such as amphetamines (Adderall and Ritalin) remain the most widely prescribed and empirically supported medications for ADHD. Across studies, there is strong consensus that these agents effectively reduce core symptoms, including inattention, impulsivity, and hyperactivity, while also improving emotional regulation and functional outcomes across age groups (Amiri et al., 2025; Jaeschke et al., 2021; Ostinelli et al., 2025). These medications act by modulating neurotransmitter activity, primarily through reducing the reuptake of norepinephrine and dopamine, thereby prolonging their presence in the synaptic cleft and enhancing neural signaling (da Silva et al., 2023; Galvez-Contreras et al., 2022).

Despite robust evidence for short-term efficacy of psychostimulants, research diverges on sex-specific outcomes. Males often exhibit greater improvements in core ADHD symptoms, whereas females

report more pronounced benefits in emotional regulation and social functioning over time (Amiri et al., 2025; Kok et al., 2020). For females in CP, hormonal fluctuations, particularly declining estrogen, introduce variability in stimulant effectiveness, contributing to inconsistent symptom control and complicating dose optimization (Amiri et al., 2025; Deng, 2022; Littman et al., 2021). Preliminary findings suggest that estrogen decline during CP mirrors luteal-phase hormonal changes, reducing medication responsiveness and amplifying emotional dysregulation, which directly impacts treatment efficacy.

Hormonal variability during the CP not only destabilizes pharmacological response but also intensifies ADHD symptoms, particularly cognitive and emotional impairments. These changes often prompt clinical evaluation for the first time, revealing missed diagnostic opportunities earlier in life. Thus, CP acts as a critical inflection point where untreated ADHD symptoms become more severe, and treatment planning becomes more complex due to overlapping neurodevelopmental and hormonal factors.

While psychostimulants are considered safe and effective, high discontinuation rates persist, driven by side effects, stigma, and concerns about misuse or dependence (Cortese, 2020; Galvez-Contreras et al., 2022). Common short-term side effects include sleep disturbances, appetite suppression, and headaches, while potential long-term risks involve anxiety, restlessness, and neurotoxicity (Cortese, 2020; Kok et al., 2020). For older females, evidence on long-term safety remains insufficient, leaving clinicians without clear guidance for managing ADHD during CP (Deng, 2022; Dobrosavljevic et al., 2023).

Overall, the literature highlights a tension between strong short-term benefits of psychostimulants and unresolved questions about long-term, sex-specific safety and efficacy. CP amplifies this complexity by introducing hormonal variability that undermines medication predictability and exacerbates symptom severity. These findings underscore the urgent need for individualized dosing

strategies, clinician awareness of hormonal interactions, and targeted research to optimize stimulant pharmacotherapy for females during CP.

Non-Stimulant Pharmacotherapy. Non-stimulant medications, such as atomoxetine (Strattera), guanfacine (Intuniv), and clonidine (Kapvay), are widely recognized as alternatives to psychostimulants, particularly when stimulants are poorly tolerated, cause adverse side effects, or pose a risk of misuse. These medications primarily target norepinephrine pathways and are considered safe, though they typically take longer to reach therapeutic levels compared to stimulants (Chutko et al., 2024; da Silva et al., 2023; Kok et al., 2020). Additionally, non-stimulants generally present a safer profile than stimulants, with fewer cardiovascular risks and lower potential for misuse. Common side effects include sedation, fatigue, dry mouth, and decreased appetite, though these are typically less severe than stimulant-related effects (Cortese, 2020; da Silva et al., 2023). Despite these advantages, research on long-term safety and optimal dosing for older females remains sparse, leaving clinicians without clear guidance for tailoring treatment during CP. Beyond core symptom control, non-stimulants offer additional benefits, including reductions in anxiety and depression and support for blood pressure regulation, features that are particularly relevant for older females with comorbid conditions (Amiri et al., 2025; Deng, 2022).

Regarding treatment efficacy, evidence suggests that atomoxetine, the most studied non-stimulant, is well tolerated in older adults and effective in reducing inattentiveness and social anxiety, especially in individuals with comorbid anxiety disorders (Kok et al., 2020; Kooij et al., 2019). Preliminary research indicates that non-stimulants may provide greater benefits for females than males, particularly in managing emotional dysregulation and impulsivity (Amiri et al., 2025; Deng, 2022). For CP females, these benefits are critical, as hormonal fluctuations often exacerbate emotional instability and stress sensitivity. Unlike stimulants, which show variable responsiveness during estrogen decline, non-stimulants appear less affected by hormonal changes, potentially offering more consistent symptom

control during CP. However, this assumption remains underexplored, as no large-scale trials have examined age- and sex-specific efficacy during this life stage.

Non-stimulants may indirectly influence diagnostic timing by addressing symptoms, such as anxiety and irritability, which are often misattributed to mood disorders during CP. Their ability to target emotional dysregulation alongside ADHD symptoms positions them as valuable for late-diagnosed females whose symptom profiles shift during hormonal transitions. This dual benefit could improve treatment adherence and reduce the functional burden associated with delayed recognition.

Overall, the literature portrays non-stimulant pharmacotherapy as a viable, though potentially underutilized option for females navigating ADHD during CP. Atomoxetine's ability to mitigate inattentive symptoms and emotional dysregulation with fewer adverse effects makes it particularly promising for this demographic. However, gaps in age- and sex-specific research limit its integration into clinical practice. CP amplifies the need for such tailored approaches, as hormonal variability complicates stimulant efficacy and heightens the importance of consistent symptom control. Future studies should prioritize examining non-stimulant responsiveness during CP to inform individualized treatment strategies and improve outcomes for older females.

Non-Pharmacological Therapies

A range of non-pharmacological interventions complement pharmacological treatments and play an essential role in managing adult ADHD, particularly for females in the CP. These approaches are often preferred when there are concerns about medication side effects, substance dependence, or comorbid health conditions are present. While research specific to non-pharmacological therapies for females is still in its infancy, early findings suggest these interventions offer valuable support for emotional, social, and functional challenges, which are disproportionately experienced by females with ADHD. For CP females, psychological interventions can provide education and support around the combined impact of ADHD and age-related changes, including cognitive and emotional changes, shifts in

life roles, and interpersonal challenges. Such approaches are associated with improvements in symptom management, stress reduction, and satisfaction in occupational and social domains.

Evidence-based non-pharmacological interventions, including cognitive behavioral therapy (CBT), psychoeducation, mindfulness-based approaches, and ADHD-specific coaching, have demonstrated efficacy in improving emotional regulation, EF, and overall quality of life in adults with ADHD, including older females (Ahmann & Saviet, 2024; Amiri et al., 2025; Deng, 2022; Kameg & Fradkin, 2021; Kooij et al., 2019; Marraccini et al., 2017; Veronesi et al., 2024; Weibel et al., 2020; Young, Moghaddam et al., 2020). Evidence also highlights that these interventions can help mitigate the personal and societal impacts of ADHD, particularly when tailored to address the intersection of ADHD and CP-related changes (Amiri et al., 2025; Gutman et al., 2020; Young, Moghaddam et al., 2022). Despite their effectiveness and preference among many individuals with ADHD, access to non-pharmacological therapies is often limited due to long waiting times and financial barriers (Asherson, 2022; Nasri et al., 2023). The literature consistently underscores the value of non-pharmacological therapies in addressing the multifaceted challenges of ADHD, especially for females navigating the CP. While these interventions show promise in improving emotional and functional outcomes, research remains limited in scope and specificity, signaling a need for further studies on tailored approaches for this demographic.

CBT. CBT is widely recognized in the literature as a short-term intervention aimed at reducing emotional distress by addressing maladaptive thoughts, emotional dysregulation, and behavioral patterns. Adapted CBT for ADHD includes skill-building in organization, time management, and social functioning, and is particularly effective for adults, including females, in managing inattentiveness, impulsivity, and emotional challenges. For females in the CP, CBT shows promise in alleviating both ADHD and CP-related symptoms.

Empirical studies confirm CBT's effectiveness in reducing ADHD symptom severity and improving emotional regulation (Kameg & Fradkin, 2021; Nasri et al., 2023; Scholz et al., 2023; Veronesi et al., 2024; William et al., 2024). ADHD-adapted CBT demonstrates benefits for adults, particularly females, by targeting EF deficits and emotional challenges (Amiri et al., 2025; Chutko et al., 2024; Deng, 2022; Galvez-Contreras et al., 2022; Tourjman et al., 2022; Weibel et al., 2020). Research also highlights its suitability for CP females, improving coping with hormonal and cognitive changes (Amiri et al., 2025; Spector et al., 2024; Ye et al., 2022).

Psychoeducational Interventions. Psychoeducation enhances understanding of ADHD and CP, empowering individuals and families by reducing stigma and fostering empathy. It improves treatment adherence and quality of life by providing practical knowledge about symptom management, hormonal influences, and organizational strategies. Studies show psychoeducation improves attention, reduces hyperactivity-impulsivity, and enhances social and occupational functioning (Amiri et al., 2025; Deng, 2022; Hoxhaj et al., 2018; Skliarova et al., 2024). It is particularly beneficial for CP females, offering information on hormonal changes and coping strategies (Pedersen et al., 2024; Scholz et al., 2023; Wong et al., 2018). Research also supports its role in improving family dynamics and reducing stigma (Kooij et al., 2019; Young, Adamo et al., 2020).

Mindfulness-Based Interventions. Mindfulness-based interventions (MBIs) aim to improve attention, emotional regulation, and stress management through practices such as meditation and nonjudgmental awareness of present experiences. These approaches are particularly relevant for individuals with inattentive ADHD presentations and offer additional benefits for females in the CP, where cognitive and emotional challenges often intensify. Empirical evidence supports MBIs as effective complementary strategies for ADHD, improving emotional regulation, stress resilience, and overall well-being (Hoxhaj et al., 2018; Oliva et al., 2021; Ritchie & Peterson, 2023; Stern et al., 2023). For CP

females, studies report improvements in mood, stress reduction, and quality of life (Oliva et al., 2021; Spector et al., 2024; Wong et al., 2018).

Compared to other interventions, MBIs differ in their emphasis on acceptance and present-moment awareness rather than cognitive restructuring or skill-building. While CBT focuses on modifying thought patterns and ADHD-informed coaching prioritizes goal-setting and EF, MBIs target physiological and psychological stress responses, making them particularly effective for managing CP-related anxiety and emotional volatility. This unique focus positions MBIs as a valuable adjunct to traditional ADHD treatments, reinforcing the need for integrated, individualized models that combine behavioral, educational, and mindfulness-based strategies for females navigating CP.

Across studies, MBIs consistently demonstrate benefits for emotional regulation and stress resilience in ADHD populations (Hoxhaj et al., 2018; Ritchie & Peterson, 2023; Stern et al., 2023). CP-specific research emphasizes mood stabilization and coping with hormonal changes, extending MBIs' role beyond ADHD symptom management (Oliva et al., 2021; Wong et al., 2018). Unlike CBT, which prioritizes cognitive restructuring, MBIs focus on acceptance and stress reduction, offering a more introspective approach. Compared to ADHD-informed coaching, which emphasizes practical strategies and autonomy, MBIs provide emotional balance and resilience, addressing CP-related anxiety and mood fluctuations. This contrast highlights MBIs as a complementary intervention that fills a unique gap in ADHD care during CP.

ADHD-Informed Coaching. ADHD-informed coaching (AIC) focuses on strengthening EF skills through practical, goal-oriented strategies. It combines elements of psychoeducation and CBT to address academic, vocational, and interpersonal challenges, making it particularly valuable for adults with ADHD. For females in the CP, AIC offers unique benefits by supporting identity reconstruction, self-acceptance, and autonomy, especially for those diagnosed later in life. These women often face compounded challenges related to hormonal changes, cognitive shifts, and internalized stigma, which

coaching helps to address through empowerment and social connection (Ahmann & Saviet, 2024; Gutman et al., 2020; Sander-Williams, 2024; Scholz et al., 2023).

Study findings consistently highlight AIC's role in developing compensatory strategies that improve organization, prioritization, and time management (Ahmann & Saviet, 2024; Scholz et al., 2023). Unlike CBT or MBIs, which primarily target emotional regulation and cognitive restructuring, AIC emphasizes practical skill-building and goal achievement, addressing autonomy and stigma-related challenges unique to older females. This distinction positions AIC as a complementary intervention that bridges functional and psychosocial needs during CP.

Across these interventions, for individuals with ADHD the literature consistently emphasizes the importance of non-pharmacological therapies. For females with ADHD, particularly during the CP, these strategies are crucial in addressing emotional regulation, EF, and identity-related challenges. While evidence supports CBT, psychoeducation, MBIs, and coaching as beneficial, research remains limited in tailoring these approaches to the unique hormonal, cognitive, and psychosocial changes experienced during CP.

In summary, ADHD in older females, particularly those in the CP, is addressed in the literature through a range of empirically supported interventions, encompassing both pharmacological and non-pharmacological approaches. Research highlights the complexity of treatment due to physiological, cognitive, and psychological changes associated with aging and hormonal transitions. Studies emphasize the influence of factors such as age, biological sex, hormone fluctuations, and individual differences on treatment outcomes. While evidence supports diverse strategies for symptom management and quality-of-life improvement, gaps remain in tailoring interventions to the unique needs of this population, underscoring the need for further research on age- and sex-specific approaches.

CP and ADHD: Literature Gaps

The capstone research question examines how the final reproductive phase in females impacts ADHD symptom severity, diagnosis timing, and treatment efficacy, emphasizing the need to critically assess existing evidence and its limitations. Identifying gaps within current research is central to scholarly inquiry because it highlights areas lacking empirical support and informs opportunities for future study. While existing literature considered for this project initially appeared relevant, closer analysis revealed substantial limitations, particularly in age- and sex-specific considerations, inconsistent methodologies for assessing hormonal fluctuations, and minimal investigation into treatment responses during the CP.

Addressing these gaps is essential for advancing understanding of ADHD in older females, as unresolved questions persist regarding symptom variability, diagnostic delays, and effective interventions. These limitations are not only theoretical but have direct implications for clinical practice. For example, the absence of evidence-based guidance on managing ADHD during reproductive aging complicates the development of tailored interventions. This is particularly relevant to the applied component of this capstone: a CBT-adapted psychoeducational group designed for older women entering the CP. Such an intervention requires nuanced understanding of hormonal influences, cognitive changes, and psychosocial factors unique to this population, areas where current research falls short.

This section therefore focuses on identifying what is missing rather than reiterating prior findings. It reviews key contributions and limitations across themes such as hormonal influences, diagnostic timing, and treatment efficacy, drawing attention to methodological weaknesses and underrepresented populations. These gaps underscore the importance of clarifying the interplay between reproductive aging and ADHD management, while also guiding practical applications like the psychoeducational therapy group described in Chapter 3.

Age-Related Gaps in ADHD Research

Current literature reveals significant gaps in understanding ADHD among older adults. Most research focuses on school-aged children, leaving individuals aged 55 and above underrepresented (Dobrosavljevic et al., 2023). A critical question remains whether late-diagnosed ADHD in adulthood reflects a valid clinical entity or a continuation of lifelong symptoms. Additionally, distinguishing lifelong ADHD from symptoms that emerge later without childhood indicators, often referred to as adult-onset ADHD, has received little empirical attention (Callahan & Plamondon, 2019). Studies targeting older adults remain scarce, partly due to recruitment challenges and the complexity of aging health profiles, resulting in incomplete knowledge of ADHD symptomatology in later life.

Evidence gaps extend beyond representation. Most existing research relies on cross-sectional designs, limiting insight into how ADHD symptoms progress over time (Creswell & Creswell, 2018). Furthermore, diversity and intersectionality are largely absent from current studies, with minimal consideration of cultural, socioeconomic, and gender factors that influence diagnosis and treatment access (Willett & Etowa, 2023). This lack of inclusivity restricts the generalizability of findings and perpetuates inequities in care.

Finally, clinical guidance for older adults remains limited. While some studies suggest ADHD symptoms persist into later life, few provide evidence-based recommendations tailored to cognitive changes such as reduced working memory and diminished task-switching ability (Callahan & Plamondon, 2019). These gaps underscore the need for longitudinal, diverse, and clinically focused research to inform screening, diagnosis, and intervention strategies for aging populations.

Biological Sex Related Gaps in Research

ADHD research has historically focused on male symptomatology, creating a diagnostic framework that prioritizes externalized behaviors such as hyperactivity and impulsivity. This bias has contributed to the underdiagnosis and misdiagnosis of females, whose symptoms often manifest as inattentiveness, emotional dysregulation, and other internalized behaviors (Faheem et al., 2022;

Fratlicelli et al., 2022). These subtle presentations frequently lead to delayed identification and missed opportunities for early intervention, resulting in significant functional impairments across social, emotional, and vocational domains.

Methodological limitations further compound these disparities. Much of the existing literature consists of narrative reviews or studies with broad age categorizations, limiting insights into developmental trajectories and age-specific symptom patterns (Creswell & Creswell, 2018). Intersectional factors such as race, culture, and socioeconomic status are rarely addressed, despite their influence on diagnostic access and treatment outcomes (Willett & Etowa, 2023). Additionally, most studies fail to incorporate hormonal considerations, leaving gaps in understanding how reproductive transitions interact with ADHD symptom expression in females.

Clinical recommendations tailored to sex differences remain minimal. While some research acknowledges the need for gender-sensitive screening and treatment approaches, few studies provide actionable strategies for adapting interventions to female-specific needs or addressing systemic barriers to care (Fratlicelli et al., 2022). These gaps underscore the urgent need for inclusive, methodologically rigorous research that examines ADHD in females across the lifespan and integrates biological, cultural, and psychosocial factors into diagnostic and treatment frameworks.

Gaps in the Research of Female Hormones and ADHD

Research exploring the relationship between ADHD and hormonal fluctuations in females remains limited, despite growing recognition of its clinical relevance. Historically, studies have focused on males and androgens, leaving estrogen-related influences largely overlooked. Emerging evidence suggests that reproductive hormone changes may affect ADHD symptom severity, particularly during the menstrual cycle and pregnancy (Eng et al., 2023; Osianlis et al., 2025). However, virtually no research addresses the CP, a critical phase marked by declining estrogen levels, which may exacerbate ADHD symptoms in older females.

Methodological limitations further restrict understanding. Most studies are cross-sectional or narrative reviews, offering little insight into symptom trajectories across hormonal transitions (Creswell & Creswell, 2018). Additionally, research rarely translates findings into clinical practice, leaving HCPs without guidance on adapting interventions, such as medication timing or coping strategies, to account for hormonal influences (Eng et al., 2023). Individual variability in hormone sensitivity, menstrual patterns, and comorbid conditions is also largely ignored, reducing applicability to real-world cases.

Intersectionality remains another major gap. Current literature seldom considers cultural, racial, and socioeconomic factors that shape hormonal experiences and access to ADHD care (Willett & Etowa, 2023). Moreover, lived experience narratives are absent from most studies, limiting the development of patient-centered interventions. These omissions underscore the urgent need for longitudinal, inclusive research that examines hormonal influences on ADHD in older females and informs evidence-based, individualized treatment strategies.

Assessment, Diagnosis, and Treatment Related Gaps

Diagnostic frameworks and treatment models for ADHD remain heavily influenced by historical biases that prioritize hyperactive and impulsive symptoms, traits more commonly observed in males. This emphasis has contributed to the underdiagnosis and misdiagnosis of females, whose symptoms often present as inattentiveness and emotional dysregulation (Attoe & Climie, 2023; Young et al., 2020). These diagnostic disparities are compounded by referral bias and limited awareness of sex-specific symptom profiles, resulting in delayed identification and inadequate support for females across the lifespan.

Methodological limitations further restrict progress in this area. Much of the existing literature relies on expert consensus or small-scale systematic reviews, which lack statistical rigor and generalizability (Creswell & Creswell, 2018). Intersectional factors such as race, culture, and socioeconomic status are rarely addressed, despite their influence on diagnostic access and treatment

outcomes (Willett & Etowa, 2023). Additionally, research seldom integrates hormonal considerations into assessment and treatment planning, leaving clinicians without guidance on adapting interventions for females experiencing reproductive transitions, including the CP.

Clinical recommendations for older females are particularly scarce. While some studies acknowledge the need for individualized interventions, few provide evidence-based strategies that account for cognitive changes associated with aging, such as reduced working memory and task-switching ability (Young et al., 2020). These gaps underscore the need for comprehensive, lifespan-oriented research that incorporates sex differences, hormonal influences, and intersectionality to inform equitable and effective ADHD care.

Treatment Option Related Gaps in Research

Research into ADHD treatment options for females, particularly older females, remains in its early stages. While pharmacological and psychosocial interventions show promise, the evidence base is limited and lacks diversity. Systematic reviews indicate that young females are prescribed ADHD medications at lower rates than males, though this disparity narrows with age (Kok et al., 2020). However, these findings are drawn from a small number of studies, primarily focused on Western populations, which restricts generalizability and overlooks cultural and socioeconomic factors influencing treatment access and outcomes.

Female-specific pharmacotherapy research is particularly sparse. Few studies examine sex-based differences in medication absorption, metabolism, and side effects, leaving clinicians without clear guidance for tailoring pharmacological interventions to older females (Kok et al., 2020). Similarly, non-pharmacological interventions, such as gender-sensitive psychosocial strategies, have shown positive outcomes in reducing stress and improving daily functioning (Gutman et al., 2020). Yet, these studies often involve small sample sizes, rely on self-reported diagnoses, and lack long-term follow-up, limiting confidence in their effectiveness.

Intersectionality and hormonal considerations are almost entirely absent from treatment research. Current literature fails to address how cultural, racial, and socioeconomic factors intersect with biological sex and aging, nor does it explore how hormonal changes during the CP influence treatment response. These gaps highlight the urgent need for inclusive, longitudinal studies that evaluate both pharmacological and psychosocial interventions for older females with ADHD, ensuring care is equitable, evidence-based, and responsive to lived experiences.

Summary of Research Gaps

The research gaps outlined in this chapter highlight critical limitations in current ADHD literature, particularly regarding older females navigating the CP. These gaps, spanning hormonal influences, diagnostic timing, and treatment efficacy, directly inform the purpose of this capstone: to advance understanding of ADHD within this underrepresented population and translate that knowledge into practical, evidence-informed interventions. The proposed CBT-adapted psychoeducational group in Chapter 3 responds to these gaps by offering a structured, client-centered intervention tailored to the unique cognitive, emotional, and physiological challenges faced by older women with ADHD. In doing so, this capstone not only addresses a pressing clinical need but also contributes to the broader discourse on equity and inclusivity in mental health care.

Chapter Conclusion

This chapter reviewed current literature on ADHD in adults with a specific focus on older females navigating the CP. It examined symptom presentation across age groups and biological sexes, explored the influence of reproductive hormones such as estrogen, and analyzed factors contributing to delayed diagnosis, including symptom masking, comorbidities, and stigma. Treatment approaches, both pharmacological and non-pharmacological, were evaluated for their effectiveness during this transitional phase.

Despite these insights, significant gaps remain. Research continues to lack age- and sex-specific data, consistent methodologies for assessing hormonal changes, and robust evidence on treatment responses for climacteric females. Intersectional factors such as culture, race, and socioeconomic status are rarely addressed, and clinical guidance tailored to older females is minimal. These limitations underscore the need for inclusive, longitudinal studies that inform equitable and individualized care.

By identifying these gaps, this chapter establishes the foundation for Chapter 3, which moves from analysis to application. Building on these findings, the next chapter introduces an applied practice model, a CBT-adapted psychoeducational group designed to support older women with ADHD during the CP. This approach demonstrates how insights from the literature can be translated into practical strategies for improving care, reducing stigma, and guiding future research.

Chapter 3: Discussion and Applied Practices

This final chapter brings the capstone project to a close, addressing the central research question: How does the final reproductive phase of females influence ADHD symptom severity, diagnostic timing, and treatment efficacy? A key outcome of this work is the increased visibility of ADHD experiences in older females, contributing to a deeper understanding of this intersection and expanding current knowledge. The chapter begins by presenting recommendations for future research to address gaps identified in the previous chapter. It then introduces an applied practice: a therapeutic group designed to reduce knowledge gaps and strengthen support for females with ADHD during the CP. Further sections explore positionality and reflectivity, along with self-reflections and professional growth emerging from the process of developing this capstone and engaging with the topic of ADHD in CP itself. Areas for continued professional development are outlined, followed by a discussion of ethical and cultural considerations. Finally, after the conclusion of this chapter, an overall discussion of the capstone project is presented, leading to the references and appendix that complete this work.

Discussion

The findings from the literature review reveal that the CP represents a critical juncture for females with ADHD, amplifying symptom severity, complicating diagnostic processes, and influencing treatment efficacy. While ADHD has historically been conceptualized as a childhood disorder, predominantly affecting males, the evidence suggests that hormonal changes during the CP significantly alter symptom expression and functional outcomes. Declining estrogen levels disrupt dopamine and serotonin regulation, which are essential for attention, EF, and emotional stability. This neurobiological shift likely explains why previously effective coping strategies fail in midlife, leaving women vulnerable to increased inattention, disorganization, and emotional dysregulation.

These physiological changes intersect with systemic and diagnostic biases. Overlapping menopausal symptoms, such as fatigue and mood fluctuations, often mask ADHD indicators,

contributing to delayed or missed diagnoses. Gendered diagnostic frameworks, which prioritize externalized behaviors like hyperactivity, further marginalize females whose symptoms are more internalized. The consequence is not merely clinical, it extends to vocational instability, strained relationships, and heightened risk for comorbid conditions, including anxiety, depression, and substance use. These outcomes underscore the urgent need for lifespan-informed, sex-sensitive assessment practices that differentiate ADHD from normative aging and menopausal changes.

Treatment efficacy during the CP remains poorly understood. While pharmacological and psychotherapeutic interventions are considered effective for ADHD generally, research offers little guidance on tailoring these approaches for older females experiencing hormonal transitions. My interpretation is that multimodal strategies, combining medication management with CBT-based psychoeducation, are essential to address both neurobiological and psychosocial dimensions of ADHD in this population. Such interventions should incorporate coping strategies for executive dysfunction, emotional regulation, and stigma reduction, while validating lived experiences often overlooked in research.

In answering the research question—How does the final reproductive phase in females impact ADHD symptom severity, diagnostic timing, and treatment efficacy?—the evidence suggests that hormonal decline intensifies symptoms, diagnostic delays stem from symptom overlap and systemic bias, and treatment requires individualized, flexible approaches. These insights inform the applied practice proposed in this final chapter: a CBT-adapted psychoeducational group designed to support older females during the CP. This model operationalizes the findings by promoting early identification, reducing stigma, and equipping clients with practical tools to navigate cognitive and emotional challenges unique to this life stage.

Future Research Directions

Research on ADHD in older females, especially during the CP, remains limited, leading to diagnostic disparities and restricted clinical understanding. The overlap between menopausal symptoms and ADHD, combined with DSM criteria rooted in male pediatric presentations, often results in misdiagnosis or delayed recognition. These recommendations directly address the gaps identified in Chapter 2, including insufficient age- and sex-specific data, lack of hormonal considerations, and limited evidence on non-pharmacological interventions.

Future studies should develop age- and sex-sensitive screening tools and revise diagnostic frameworks to better reflect the experiences of CP women. Treatment research should examine how hormonal changes affect ADHD medication efficacy and side effects, including the potential role of HRT. Non-pharmacological approaches such as CBT, psychoeducation, and mindfulness also require further validation to support integrative, personalized care. Additionally, longitudinal studies are needed to clarify the relationship between ADHD and cognitive aging, particularly to distinguish it from mild cognitive impairment and dementia in postmenopausal women. To address systemic gaps, future research must include females across the lifespan and integrate intersectional factors like race, culture, and socioeconomic status. Robust, developmentally informed research is vital to enhance diagnosis, treatment, and equitable care for CP females with ADHD.

Ethical and Cultural Considerations

Implementing the ADHD-CP psychoeducational group requires adherence to the BCACC (2025) *Standards of Clinical Practice* and the BCACC (2023) *Code of Ethical Conduct* to ensure responsible, equitable care. Ethical practice begins with informed consent and transparency (BCACC, 2025, Standard 1). Counsellors must clearly communicate the purpose, benefits, and limitations of the group, emphasizing that it is educational rather than psychotherapeutic and does not replace individualized clinical care. This transparency respects client autonomy and prevents misconceptions about the scope of the intervention.

Competence (BCACC, 2025, Standard 2) is critical in decision-making. Facilitators must maintain current knowledge of ADHD and climacteric health, apply evidence-informed strategies, and recognize when referral to specialized care is necessary. For example, if a participant discloses severe emotional distress or unmanaged comorbid conditions, the counsellor must ethically prioritize client safety by recommending individual therapy or medical consultation rather than attempting to address these concerns within the group setting. Avoiding bias and stigma (BCACC, 2025, Standard 3) is another key responsibility. Counsellors should refrain from dismissing ADHD symptoms as “normal aging” or perpetuating stereotypes about menopause and cognitive decline. Instead, they should validate participants’ experiences and use inclusive, nonpathologizing language that normalizes neurodiversity and hormonal transitions.

Cultural considerations are equally essential. Standards 4 and 5 (BCACC, 2025) require integrating diversity, equity, inclusion, and cultural humility into all aspects of the intervention. This means acknowledging systemic barriers that affect access to ADHD care, using language that is respectful and inclusive, and adapting examples and strategies to reflect diverse cultural norms and family dynamics. Counsellors must also practice Indigenous cultural safety, recognize historical and intergenerational trauma, and ensure that group content does not inadvertently reinforce colonial narratives. Intersectional factors, such as race, ethnicity, socioeconomic status, and sexual orientation, should inform facilitation style and resource selection to ensure relevance and accessibility.

Applied to the ADHD-CP group, these ethical and cultural principles guide practical decisions such as group composition and recruitment, ensuring outreach strategies do not exclude marginalized populations. Content delivery should incorporate examples and materials that reflect diverse lived experiences and avoid Eurocentric assumptions. Facilitation must create a psychologically safe space where participants feel respected and empowered to share without fear of judgment. Finally, clear boundaries must be reinforced, emphasizing that the group is educational, not therapeutic, and

providing pathways for additional support when needed. By embedding these standards into program design and counsellor decision-making, the ADHD-CP group promotes responsible caring (BCACC, 2023, Principle III), maximizing benefits, minimizing harm, and fostering equity for climacteric females with ADHD, a population often overlooked in traditional care models.

Applied Practice: Psychoeducational Group for Climacteric Females With ADHD

This section presents a CBT-informed psychoeducational group program designed to support older females with ADHD during the CP (see the Appendix for the program outline). Drawing on insights from the literature review, this applied practice responds directly to gaps identified in Chapter 2, specifically the lack of age- and sex-sensitive interventions, limited non-pharmacological options, and insufficient attention to hormonal influences on symptom severity and treatment efficacy. By offering an accessible, strengths-based program that integrates education and peer support, the group addresses these unmet needs in a practical, community-based format (Berger, 2024; de Jong et al., 2023).

Although medication can reduce symptom intensity, research highlights the value of psychoeducational and CBT-based strategies for managing cognitive, emotional, and social challenges. This group combines structured information-sharing with opportunities for lived experience exchange, fostering understanding, coping strategies, and emotional support (Baig & Kayha, 2025; Deng, 2022; Hunter, 2021). Yalom and Leszcz's (2020) therapeutic principles guide the group process, emphasizing universality, hope, altruism, and interpersonal learning to normalize experiences and strengthen resilience. Participants benefit from a supportive environment where they can explore ADHD and menopause-related challenges, share strategies, and build meaningful connections.

The program consists of six weekly sessions for small groups of six to eight participants, using discussion-based formats, skill-building activities, and multimedia resources to accommodate diverse learning styles. Core topics include symptom awareness, EF, emotional regulation, and strategies for

navigating menopause-related changes. Rather than prescribing treatment, the group aims to empower participants through education, normalization, and collaborative learning, equipping them with knowledge and confidence to make informed choices about their wellbeing.

The ADHD-CP Group Program

The proposed ADHD-CP group is a structured, six-session psychoeducational program designed to provide information, foster understanding, and encourage practical application of strategies for older females navigating ADHD during the CP. Each session lasts approximately 2 hours and is delivered weekly in a community-based setting to enhance accessibility and comfort. Sessions follow a consistent format that includes a brief check-in to promote continuity and connection, an introductory activity to create a calm and focused environment, and core content delivered through visual presentations, short videos, handouts, and facilitated discussions. Interactive reflection activities help participants relate the material to their daily lives, and breaks are incorporated to maintain engagement and allow informal peer support. Optional homework activities are offered for those who wish to extend learning beyond the group setting.

The psychoeducational content focuses on increasing awareness of ADHD symptoms during midlife, understanding hormonal influences on cognitive and emotional functioning, and exploring practical, evidence-informed strategies for managing challenges. The program aims to normalize experiences, reduce stigma, and empower participants through education rather than diagnosing, prescribing, or delivering individualized therapy.

Clear boundaries define the scope and limits of this intervention. The group is not a substitute for clinical care and does not provide formal assessment, individualized treatment planning, or medication management. It is not psychotherapeutic; while discussion and reflection are encouraged, the group does not engage in therapeutic processing of trauma or deep emotional work. Its primary goal

is educational and supportive, equipping participants with knowledge and tools to make informed decisions about their wellbeing and seek appropriate professional care when needed.

Positionality and Reflexivity

Positionality refers to the acknowledgment of how my personal identity, social location, and lived experiences shape the capstone research process (Attoe & Climie, 2023). No researcher is entirely neutral; as our perspectives influence what we study, how we interpret findings, and the conclusions we draw. My positionality as a White, Eurocentric, cisgender menopausal female with ADHD has inevitably informed my worldview and assumptions about neurodiversity, biological sex, and aging. These factors shaped my interest in exploring ADHD in midlife females and influenced the lens through which I reviewed literature and interpreted data. For instance, my awareness of systemic gaps in ADHD diagnosis for females heightened my sensitivity to the disparities in research. My acknowledgment of these influences was critical to maintaining transparency and credibility in the capstone project.

Reflexivity builds on positionality by actively interrogating how these personal factors impact my research decisions and the outcomes. It involved a continuous process of self-questioning: How might my experiences bias my interpretation? Where could assumptions influence inclusion criteria or thematic analysis? While bias cannot be fully eradicated, deliberate strategies were implemented to minimize its impact. These included developing a rigorous methodology with clearly defined inclusion and exclusion criteria, employing systematic data collection and analysis procedures, and documenting decision-making steps (Creswell & Creswell, 2018). Reflexivity also requires me to acknowledge the dual role of researcher and individual with lived experience. My personal journey with ADHD informed the design of the psychoeducational group model, emphasizing strengths-based approaches and validating midlife challenges. Rather than viewing this as a limitation, I leveraged reflexivity to transform potential bias into insight, ensuring interventions were grounded in both evidence and empathy.

Self-Reflection and Growth

This capstone was not only an academic exercise but also a deeply personal journey. Defining a focused research question allowed me to engage critically with ADHD literature while reflecting on my own late-life diagnosis. The review illuminated systemic gaps in the recognition and care for older females, reinforcing the urgency of this work. My experience of living over 5 decades with untreated ADHD underscored the profound consequences of delayed diagnosis, academic struggles, career challenges, and internalized stigma. Learning about hormonal influences, such as estrogen's role in neurotransmitter regulation, reframed these struggles as biologically mediated rather than personal failings, fostering self-compassion. This process strengthened my resolve to advocate for gender-sensitive diagnostic practices and informed my professional identity. It also highlighted the importance of integrating personal insight with scholarly rigor, ensuring that lived experience enriches rather than overshadows evidence-based practice.

Continued Professional Development

Looking ahead, I am committed to advancing my expertise in ADHD assessment and intervention, particularly for females navigating midlife hormonal transitions. This includes pursuing specialized training on neurobiological mechanisms, such as the interaction between estrogen and dopamine, and their implications for symptom severity and medication efficacy. I plan to integrate cultural humility and trauma-informed care into my practice, addressing intersectional gaps identified in the literature. Professional development will involve attending workshops, engaging in mentorship, and staying abreast of emerging research on ADHD and menopause. These efforts will enable me to implement sex-sensitive screening tools, differentiate ADHD from age-related cognitive changes, and deliver tailored interventions that empower clients through education and collaborative care. Ultimately, this trajectory positions me to advocate for early identification, reduce stigma, and contribute to closing the research-practice gap for this underserved population.

Final Conclusions

This capstone project underscores the significant gap in ADHD research concerning older females, particularly those navigating the CP, a population historically overlooked in both clinical and academic contexts. While awareness of adult ADHD is increasing, the unique experiences of CP females remain underrecognized, limiting understanding, advocacy, and access to tailored support. Hormonal transitions during the CP can intensify ADHD symptoms and complicate diagnosis, often leading to misinterpretation or dismissal due to overlapping menopausal symptoms and outdated diagnostic criteria rooted in male pediatric presentations.

The lack of empirical research has contributed to persistent gaps in HCPs' knowledge, emphasizing the need for age- and sex-sensitive screening tools and revised diagnostic frameworks that reflect the lived experiences of older women. To address these challenges, this project proposes a psychoeducational therapy group based on a tailored CBT framework for older women with ADHD. Designed to be accessible and strength-based, this intervention offers HCPs a practical option to support the well-being of this underserved population.

The process of developing this capstone also provided a personal opportunity to reflect on my own experience as an older female with previously untreated ADHD and as a HCP. This dual perspective has deepened my understanding and informed my therapeutic approach when supporting older women facing the combined challenges of ADHD and climacteric symptoms. Ultimately, this project aims to raise awareness among HCPs, encouraging more accurate referrals and the implementation of individualized, evidence-based treatments. Most importantly, it advocates for CP females with ADHD to have their stories heard and their experiences validated within the healthcare system. And finally, this work contributes to the field by addressing the overlooked intersection of ADHD and female reproductive aging, bringing together fragmented evidence into actionable strategies for screening, diagnosis, and treatment. It further contributes to counselling psychology by integrating these insights into an applied

psychoeducational group framework, equipping practitioners with evidence-informed tools to better support older females during the CP.

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Appendix

The ADHD-CP Psychoeducational Group Program Session Outlines

Session A1: Introduction to ADHD & the Female Experience

Objective: The primary aim of this session is to establish rapport with the group and clarify the overall objectives and expectations. Additionally, the session seeks to introduce and discuss the interaction between ADHD and females.

Materials: whiteboard, audio visual equipment (laptop and projector), paper, and pens

Activity: Group Welcome: The initial session serves to introduce participants to the program and facilitators, provide an overview of the program structure, establish ground rules, and address confidentiality. The environment is designed to be safe and nonjudgmental, encouraging authentic participation to the extent that individuals feel comfortable, including employing strategies such as fidgeting or standing for sustained focus.

Guided Relaxation Exercise: This segment involves a discussion on the significance of mindfulness, grounding, and relaxation techniques. Facilitators will briefly explain the forthcoming exercise—which may include grounding, mindfulness, deep breathing, guided imagery, or guided relaxation—and will subsequently lead the exercise while participants actively engage.

Content: The Female ADHD Experience. The topic will be introduced and discussed with participants. Facilitators explain ADHD and the DSM-5-TR diagnostic criteria. A small group activity will prompt participants to brainstorm signs and symptoms of ADHD, with a particular focus on distinctions observed in females, followed by larger group discussion on topic. A video presentation regarding ADHD from the female perspective shown.

Homework: Lastly, the session will conclude with distribution of a homework assignment and handout, directing participants to observe when ADHD symptoms occur, assess impact, and note observations made by family or friends.

Closing Circle: Review key insights from group discussions, and facilitators address any outstanding questions or clarification requests related to ADHD. Participants share one aspect of the topic of ADHD and the female experience that they found particularly interesting or informative during check-out. Before departing, attendees will receive reminders regarding the upcoming session date and details of the homework exercise.

Session A2: *The Climacteric Phase (CP)*

Objective: Examine the experience of the climacteric period.

Materials: whiteboard, audio visual equipment (laptop and projector), paper, and pens

Group Check-In: Clients introduce themselves by name, indicate their current emotional state, and anything that they had questions from the material from the previous session on ADHD. Review homework activities.

Guided Relaxation Exercise: Quick reminder of the importance of mindfulness and relaxation. Brief explanation of the exercise (grounding, mindfulness, deep breathing, guided imagery, guided relaxation). Facilitators lead relaxation exercise while participants engage in the activity.

Content: Climacteric Stages. The following topic explores the three stages of the CP, along with reproductive hormones, and impacts on functioning. Small group activity to brainstorm signs and symptoms of CP, and then larger group discussion. Afterwards, a short video will be shown, explaining the CP and reproductive hormones.

Homework: Recognize any personal symptoms experienced, and personal impacts, additionally, if family or friends noticed any signs the participant was unaware of.

Closing Circle: Review highlights from group discussion, facilitators to address outstanding questions or clarification requests related to the CP or reproductive hormones. Ask participants to share one aspect of the topic of CP and hormones that they found particularly interesting or informative during check-out. Before departing, attendees will receive reminders regarding the upcoming session date and details of the homework exercise.

Session A3: Interaction of ADHD and the CP

Objective: Examine the connection between ADHD and CP experience.

Materials: whiteboard, audio visual equipment (laptop and projector), paper, and pens

Group Check-In: Clients introduce themselves by name, indicate their current emotional state, and anything that they had questions about from the material from the previous session on CP. Review homework activity.

Guided Relaxation Exercise: Quick reminder of the importance of mindfulness and relaxation. An explanation of this session's activity (grounding, mindfulness, deep breathing, guided imagery, guided relaxation). Facilitators will then lead relaxation exercise while participants engage in activity.

Content: ADHD and CP. The topic is exploring the impact of CP on the ADHD experience. Presentation of the underlying causes of symptom changes, and the impact of reproductive hormones. Small group activity to brainstorm changes in signs and symptoms as CP begins, following up with discussion of information. Afterwards, a short video is shown, explaining the impact of CP on ADHD symptomatology.

Homework: Homework exercise is to recognize what changes occurred for them as they began the CP, how their lives have been impacted, and additionally, if family or friends noticed changes in their presentation.

Closing Circle: Review key insights from group discussions, and facilitators address any outstanding questions or clarification requests related to ADHD and the CP. Participants share one aspect of the topic that they found particularly interesting or informative during check-out. Before departing, attendees receive reminders regarding the upcoming session date and details of homework exercise.

Session A4: Treatment Options

Objective: Examine the options available for treatment.

Materials: whiteboard, audio visual equipment (laptop and projector), paper, and pens

Group Check-In: Clients introduce themselves by name, indicate their current emotional state, and anything that they had questions about from the material from the previous session on the interaction of CP and ADHD. Review homework activities.

Guided Relaxation Exercise: Quick reminder of the importance of mindfulness and relaxation. Brief explanation of session exercise (grounding, mindfulness, deep breathing, guided imagery, guided relaxation). Facilitators will then lead a relaxation exercise while participants engage in activity.

Content: Treatment Options for ADHD and CP. This session examines a range of treatment options, including pharmacological and psychological interventions, associated side effects, and avenues for accessing treatments. Participants engage in small group discussions to share their experiences with various treatments, sharing positive and negative outcomes, and any side effects encountered. A large group discussion of findings and experiences follows. The session will also include a brief video presentation outlining the available treatment options and ongoing research into future therapies.

Homework: For homework, participants are asked to provide an outline of the treatments they have tried, noting what was beneficial or unhelpful about each.

Closing Circle: Review key insights from group discussions, and facilitators to address any outstanding questions or clarification of requests related to treatment options. Participants share one aspect of the topic they found interesting or informative during check-out. Before departing, attendees receive reminders regarding the upcoming session date and details of homework exercise.

Session A5: ADHD Adapted CBT

Objective: CBT skills, adapted for ADHD.

Materials: whiteboard, audio visual equipment (laptop and projector), paper, and pens

Group Check-In: Clients state their name, current mood, and any questions from the previous session's treatment options. Review homework.

Guided Relaxation Exercise: A brief overview of mindfulness and relaxation if needed, with a quick outline of activity (grounding, deep breathing, and guided imagery). Facilitators will lead the exercise as participants follow along.

Content: Adapted CBT Basics: Covers CBT principles; distorted thinking, and cognitive restructuring.

Outline interventions for ADHD and CP. Includes behavioral strategies for changing unhelpful patterns and managing emotional dysregulation. Features a small group activity to practice restructuring cognitive distortions and regulating emotions, followed by a larger group discussion and video demonstration.

Homework: Homework involves identifying thought distortions, challenging them, recognizing linked behavior patterns, and planning alternative actions.

Closing Circle: Review key insights from group discussions, and facilitators address any outstanding questions or clarification requests related to adapted CBT. Participants share one aspect of the topic they found interesting or informative during check-out. Before departing, attendees receive reminders regarding the upcoming session date and details of homework exercise.

Session A6: Lifestyle Changes & Concluding Session

Objective: Review potential lifestyle adjustments to enhance results. Wrap up the group session.

Materials: whiteboard, audio visual equipment (laptop and projector), paper, and pens

Group Check-In: Clients state their name, current mood, and any questions from the previous session's adapted CBT basics. Review homework.

Guided Relaxation Exercise: A brief overview of mindfulness and relaxation if needed, with a quick outline of activity (grounding, deep breathing, and guided imagery). Facilitators will lead the exercise as participants follow along.

Content: Lifestyle Changes. Overview of basic lifestyle changes for improving ADHD and CP symptoms, with a focus on healthy nutrition, exercise, sleep, and mental wellness. Includes small group brainstorming, large group discussion, optional short videos, and a homework activity to identify first steps for personal change.

Final Closing Circle: Facilitators will review key points from the group discussion and address any remaining questions or concerns regarding available treatments. A concise summary of material from all six sessions will be provided. Participants are requested to complete evaluation and suggestion forms. During the completion ceremony, each participant will share their insights and describe what they have learned and intend to integrate into their lives. Optionally, participants may offer constructive feedback and supportive comments to peers during the final check-out and farewells.