# FACTORS THAT INFLUENCE MENOPAUSE HORMONE THERAPY PRESCRIBING IN PRIMARY CARE PROVIDERS

by

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## Abstract

The number of menopausal women the world over is increasing. Many women will experience debilitating, severe menopausal symptoms and increased incidence of chronic disease. Despite substantive evidence that Menopause Hormone Therapy (MHT) offers safe, effective relief from menopausal symptoms, reducing the long term sequalae from progressive hormone loss, access to treatment remains limited. All women will experience the menopausal transition; however, management of menopausal symptoms is still viewed as a specialty area of practice. Primary care providers, inclusive of Nurse Practitioners (NP)s play a crucial role in the assessment, diagnosis, and treatment of menopause, yet their involvement and prescribing patterns are not fully understood. Exploring the prescribing patterns of Healthcare Providers (HCP)s can help identify barriers and opportunities to improve access to this valuable therapy, ensuring more women can benefit from appropriate menopausal care.

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# Glossary

**Health Care Provider (HCP):**

A broad term for any trained medical professional who provides health services, including doctors, nurses, pharmacists, and other licensed health practitioners. The IR includes HCPs from specialty disciplines also including obstetrics, gynecology, internal medicine and others.

**Hormone Replacement Therapy (HRT):**

Treatment that involves taking hormones, such as estrogen and progesterone, to alleviate menopausal symptoms and to address hormone deficiencies.

**Menopause Hormone Therapy (MHT):**

A form of hormone therapy used specifically to treat menopausal symptoms, typically involving estrogen alone or combined with progesterone.

**Primary Care Provider (PCP):**

A healthcare professional, such as a family doctor or nurse practitioner, who provides first-contact and ongoing care for general health concerns and coordinates specialist care when needed.

**Gender terminology**

This integrative review primarily focuses on individuals born with ovaries. To maintain consistency with the terminology used in the referenced literature, the term *women* will be used throughout. However, it is acknowledged that this term does not encompass all people who experience menopause. Further research is needed to better understand how diverse gender identities experience this life transition, and I hope that the information presented here will be relevant and helpful to anyone going through menopause, regardless of gender identity.

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## Chapter One: Introduction

Menopause is a seminal phase in a woman's life, marked by significant physiological and psychological changes. Menopausal symptoms may be distressing for women, possibly impairing quality of life and workplace productivity (Menopause Foundation Canada, 2022; Safwan et al., 2024; World Health Organisation, 2024). Despite the availability of well-researched, effective treatments including Menopause Hormone Therapy (MHT), prescribing practices remain inconsistent and suboptimal (Kiran et al., 2022; McCarty & Thomas, 2021). Multiple factors influence prescribing patterns of primary care providers (PCPs), including education, perceptions, and attitudes towards MHT, as well as systemic barriers rooted in historical controversies like the Women's Health Initiative (WHI) trials (Burger et al., 2012; Nekhlyudov et al., 2009). Menopause Hormone therapy (MHT) has long been a subject of considerable and contentious debate in women's health. Observational studies have indicated that MHT alleviates common menopausal symptoms, such as hot flashes and night sweats, while conferring important, protective effects against chronic conditions including osteoporosis, coronary artery disease, dementia, and all-cause mortality (Bevry et al., 2024; Flores et al., 2021). Globally, the underutilization of MHT has detrimental economic, psychosocial, and occupational impacts, leading to increased healthcare costs and reduced workforce productivity (Faubion et al., 2023; Menopause Foundation Canada, 2022; Safwan et al., 2024).

This Integrative Review (IR) was undertaken to address the question *"What factors influence Menopause Hormone Therapy (MHT) prescribing in Primary Care Providers?"* The multifaceted factors that influence MHT prescribing behaviors among primary care providers are examined, with insights drawn from various international studies to identify gaps, as well as prescribing barriers, and opportunities for improving menopausal care.

## Chapter Two: Background and Context

This chapter introduces the physiology of menopause and the historical context of Hormone Replacement Therapy (HRT) which helped to formulate the research question *"What factors influence Menopause Hormone Therapy (MHT) prescribing in Primary Care Providers?"*

### *The Physiology of Menopause*

Menopause is a seminal point in the continuum of life for women, signalling the cessation of reproductive capacity. Most women will experience biologic menopause between the ages of 45-55 due ovarian senescence and the cessation of ovulation. (Qutob et al., 2024; World Health Organisation, 2024). Declining ovarian function results in loss of the hormones progesterone, estrogen and to a lesser degree, testosterone (Davis et al., 2019; Vigneswaran & Hamoda, 2022). Hormone loss, particularly hypoestrogenic states results in multisystem changes causing a variety of symptoms that can affect physical, emotional and metabolic health. Menopausal symptoms are highly individual and can range from mildly bothersome to debilitating (Davis et al., 2021; Flores et al., 2021). The symptom picture is vast, with commonly experienced issues including Vasomotor Symptoms (VMS) such as night sweats or hot flashes, genitourinary symptoms such as vaginal dryness and vaginal tissue atrophy, increased urinary frequency and urgency, bone density loss, mood swings, irritability and anxiety, memory and concentration loss, loss of libido, increased cardiovascular risk, insulin resistance, insomnia and sleep issues among many other symptoms (Duralde et al., 2023; Flores et al., 2021; Kagan et al., 2021). Many women experience symptoms leading up to, during and after the menopause transition and research demonstrates that as many as 60-86% of women encounter symptoms so troublesome that they will seek medical care (Constantine et al., 2016; Guthrie et al., 2003; Williams et al., 2007). Following episodes of care many women report feeling misunderstood and frustrated that their concerns were not taken seriously or dealt with. Safe, effective, well researched, and Health Canada approved treatments are

available. Many women are never offered treatment due in large part to knowledge gaps both from the provider and patient (Duralde et al., 2023).

### *Historical Context*

The Women's Health Initiative (WHI) trials were initiated in the 1990s to consider the effects of hormone therapy on postmenopausal women's health. The hormone therapy arm of the studies investigated the risks and benefits of estrogen only therapy and combined estrogen-progestin therapy. Key findings were published early and included and increased risk of breast cancer, heart disease stoke and blood clots in the estrogen-progestin phase of the trials. The estrogen only arm demonstrated a small reduced in breast cancer risk but also published an increased risk of stroke and blood clots (Writing Group for the Women's Health Initiative Investigators, 2002). The results were widely publicised in the news media, immediately prompting HRT deprescribing and the trend towards restricted access to MHT began. Alongside restricted access, the practice of lowest effective dose for the shortest duration became standardized also (Burger et al., 2012; Power et al., 2009).

Prior to the WHI trials, hormone therapy was widely prescribed for long-term prevention of chronic diseases such as osteoporosis and cardiovascular disease, based on observational studies suggesting overall health benefits for postmenopausal women. In the post WHI trials era, qualitative research demonstrates that most Healthcare Providers (HCP)s are hesitant to prescribe Menopause Hormone Therapy (MHT) to menopausal women, including for symptom relief as well as for preventive indications (Aninye et al., 2021; Low et al., 2024). Contrastingly, many HCPs remain unconvinced by the WHI trial's findings, particularly the decision to halt the study prematurely (National Institute for Care and Excellence [NICE], 2015; Nekhlyudov et al., 2009; Power et al., 2009; Yeganeh et al., 2017). Prescribing practices underwent a dramatic decline post WHI trials publication, and continue to remain low (Aninye et al., 2021; Hillman et al., 2020).

Despite the fact that the WHI trials were contradictory to epidemiological studies, that reassuring data was later published and that surveyed prescribers remained skeptical of the findings, MHT remains a relatively controversial choice for women and providers alike (Power et al., 2009). The WHI trials had widespread, negative impacts women's health during the menopausal transition and continues to perpetuate great uncertainty regarding treatment options for women and providers. This IR aims to understanding the factors that influence MHT prescribing with the aim to improve access to safe, validated and effective treatments for women experiencing reduced quality of life during the menopausal transition.

***Menopause in the Workplace***

Menopause is estimated to cost 1.8 billion dollars each year in lost productivity and efficacy in the workplace in the US alone (Faubion et al., 2023; Safwan et al., 2024). A UK survey of 4014 women found that menopausal symptoms significantly reduced workplace capacity either due to debilitating symptoms or loss of motivation and loss of confidence. One in 10 women in this survey left their jobs due to menopausal symptoms (The Fawcett Society, 2022). A cross sectional study of 4440 women in the US highlighted similar adverse effects of menopause in the workplace including missed days, reduced hours, and leaving the workplace (termination or resignation). The estimated cost of menopause related reduced productivity is between 1.8 – 2.2 billion US dollars annually (Kagan et al., 2021; Safwan et al., 2024). When direct and indirect medical costs are considered the annual cost of menopause in the US may be as high as 26 billion dollars (Faubion et al., 2023).

A UK study on menopause in the workplace estimates that 10% of women have left the workplace due to menopausal symptoms (Barber & Charles, 2023; The Fawcett Society, 2022). Estimates of the direct and indirect health care costs associated with untreated (VMS) are estimated to be in excess of 400 million annually in the United

States (US) (Kling et al., 2019). Recent Canadian research also underscores the economic and psychosocial impacts of menopause in the workplace. A 2023 report estimates that menopausal symptoms contribute to over $3.5 billion annually in productivity losses and increased healthcare costs. Studies also indicate that workplace environments with limited support and flexibility exacerbate women's challenges, often leading to absenteeism, early retirement, and decreased job satisfaction (Menopause Foundation Canada, 2023). A 2022 report by the Menopause Foundation of Canada notes that up to 20% of working women experience severe menopausal symptoms that interfere with their job performance. The report further emphasizes that many women delay seeking treatment due to stigma and lack of workplace support, leading to increased absenteeism and reduced productivity (Menopause Foundation Canada, 2022).

Women aged 45-55 report higher rates of exhaustion, anxiety, and sleep disturbances, with some reporting leaves of absence or early retirement due to menopausal symptoms. These issues affect all working women between the ages of 40-60 and workplace environments lacking flexible policies or supportive health initiatives may exacerbate the challenges faced by menopausal women, often leading to feelings of isolation and frustration (Menopause Foundation Canada, 2022, 2023). Recently, societal interest in the use of MHT has increased, however many women continue to experience significant delays in diagnosis and 40% or fewer of women seeking assistance with menopausal symptoms will be offered MHT (Barber & Charles, 2023). Further to this only 4.7% of women in the US were using MHT in 2020, as compared to 26.9% in 1999 (Yang & Toriola, 2024).

## Chapter Three: Methods

This chapter discusses the methods that were used to perform this IR, addressing the research question *"What factors influence Menopause Hormone Therapy (MHT) prescribing in Primary Care Providers?"* This section presents methodological decisions that shaped data analysis, the formulation of relevant themes and thematic conclusions.

### *Design*

Whittemore and Knafl's (2005) framework was used to complete key components of the review. Including problem identification, literature search, data evaluation, data analysis and presentation, each component is discussed in more detail below.

### *Problem Identification*

The research question was formulated using the PIO framework (Considine et al., 2017). The population (P) is HCPs working in primary care, the intervention (I) is MHT and the outcome (O) is influencing factors which will be discussed as either facilitators or barriers to prescribing. Given the nature of the question and the lack of a comparison (C) group, the PICO design was modified to PIO to fulfill the IR aims.

### *Literature Search*

Three databases were utilized for the literature search: the Cumulative Index to Nursing and Allied Health Literature (CINAHL) on EBSCO platform, MEDLINE via Ovid and Google Scholar. Google Scholar was used to correlate the search results from CINAHL and MEDLINE, and one new publication arose. These databases were selected to capture nursing, medicine and related literature which is specific to health systems. Searching yielded 95, 42 and 1 articles in MEDLINE, CINAHL and Google Scholar respectively. Two additional articles were extracted from citation searching. After removal of duplicates a total of 115 articles remained. The title and abstract screening utilized inclusion and exclusion criteria and 71 articles were excluded, and 44 remained for further eligibility assessment. Upon full text review and following application of

inclusion and exclusion criteria the final yield was 11 articles for inclusion in this integrative review.

The inclusion criteria age of publications was open in initial search strategies in order to allow for greater capture of prescriber and MHT related data. During title and abstract screening and full text review, articles published before 2005 were excluded as this coincided with stoppage of the WHI trials. One study that was published in 2006 was excluded as the participant surveys took place between 2002-2003 which around the time the initial WHI findings were published. Of the 45 studies that were assessed for eligibility 33 were excluded and 15 of these were conducted before 2005. Three studies focused on the wrong outcomes and two were focused on the HRT user experience. One study used the wrong comparator which was focused on the factors that influenced bioidentical hormone prescribing and one was the wrong study design.

***Data Evaluation***

Data extraction and synthesis were performed using the Joanna Briggs Institute (JBI) Mixed Methods Data Extraction form (Joanna Briggs Institute [JBI], 2024) which was modified to capture key themes across the study set. Relevant inclusions assisted in identifying which specialty and sub specialty providers were mostly providing menopause assessments and treatments. Further additions/modifications sought to identify the most common barriers and facilitators to treatment. The modified extraction set also attempted to identify which symptoms were primarily of concern to the clinicians as well as which treatments clinicians were most commonly using or recommending. While these last two elements were not of direct consequence to the research question, data extraction around these themes further endorsed and validated findings related to the facilitators and barriers to treatment.

Critical appraisal of the studies was performed using the Critical Appraisal Skills Programme [CASP] Qualitative Studies Checklist (Critical Appraisal Skills Programme

[CASP], 2024b), and the CASP checklist for Cross-sectional studies (Critical Appraisal Skills Programme [CASP], 2024a). The CASP checklists are validated, widely recognised tools for assessing the quality of research. The CASP tool is widely used by clinicians researchers and students to determine how robust and trustworthy research findings may be in relation to a particular clinical question (Critical Appraisal Skills Programme [CASP], 2024b, 2024a).

## Chapter Four: Findings

This chapter will outline the study methodologies, facilitators and barriers to prescribing through elicitation of the major themes and critical appraisal of the studies is also undertaken.

All of the eleven articles were primary evidence, in the form of quantitative and qualitative studies. All of the articles conducted surveys of the participants knowledge of menopause including diagnostic criteria, menopause symptoms and symptom severity or impact (Barber & Charles, 2023; Davis et al., 2021; Deng et al., 2022; DePree et al., 2023; Harrison et al., 2021; Kling et al., 2019; Low et al., 2024; Morris et al., 2021; Qutob et al., 2024; Stute et al., 2022; Yeganeh et al., 2017). Three of the articles were from the United States (US) (DePree et al., 2023; Kling et al., 2019; Morris et al., 2021), two studies were conducted in Australia (Davis et al., 2021; Yeganeh et al., 2017) and the remaining five originated from Europe and the US (combined geography) (Stute et al., 2022), The United Kingdom (UK) (Barber & Charles, 2023), Saudi Arabia (Qutob et al., 2024), Malaysia (Low et al., 2024), Jamaica (Harrison et al., 2021) and China (Deng et al., 2022). All of the studies were published between 2009 and 2024. It was hoped that data would emerge specific to Nurse Practitioner (NP)s and/or MHT prescribing practices in Canada specifically, however all of the research was conducted outside of Canada and none of the studies included NPs.

All of the studies included physicians as prescribers. Two articles included both non physicians and physicians, the non physicians were pharmacists, which were non prescribers (Davis et al., 2021) and Advanced Practice Registered Nurses (APRN)s. It was not clear if the APRNs were prescribers (Morris et al., 2021). Pharmacists were therefore the only identified discipline across the studies that were not prescribers, but the Davis et al., study also surveyed gynecologists and General Practitioners (GP)s which is why it was included. Barber and Charles (2023) looked at facilitators and barriers to

treatment from the perspective of menopausal women, as well as GPs and gynaecologists. Morris et al., included specialty providers only, which were obstetrician-gynecologists, gynecologists and internal medicine specialists. The only other study not to include primary care providers was Deng et al., (2021) which surveyed prescribing practices among obstetrician-gynecologists, gynecologists, reproductive endocrinologists and obstetricians. While only two of the studies did not include primary care providers (Deng et al., 2022; Morris et al., 2021), none of the studies examined primary care exclusively. Interestingly, two studies included HCPs under the category "other" where the provider discipline was not defined (Kling et al., 2019; Morris et al., 2021), comprising 1.4% and 2.8% respectively.

All but one study (Barber & Charles, 2023)included specific demographics about the HCPs including age, gender, specialty, length of time in practice and practice setting. Most of the studies examined data that was specific to the types of MHT that were prescribed, excepting Barber and Charles (2023). Just over half of the studies included non hormonal therapies (Davis et al., 2021; DePree et al., 2023; Kling et al., 2019; Morris et al., 2021; Qutob et al., 2024; Yeganeh et al., 2017) and four of the studies discussed lifestyle modifications to treat menopausal symptoms (Davis et al., 2021; DePree et al., 2023; Kling et al., 2019; Qutob et al., 2024). Finally, Deng et al., and Stute et al., included menopausal therapies under the category "other" for which data wasn't described or discussed. Morris et al., and Qutob et al., discussed the use of compounded or bioidentical products, but these were not further specified or described. Practice settings were diverse and included private practice, community practice, hospitals, teaching hospitals, not-for-profit outpatient clinics and military clinics.

***Study Methodologies***

The included studies encompass a wide range of research aimed to explore important aspects of MHT prescribing in primary care. The studies encompass diverse

methodologies, some of which are explicitly named and described and others remain vague in their study design. The majority of the studies are primary research and are quantitative studies. All of the included studies took a cross sectional approach.

***Table 1. Study type and methodology***

| Record | Title and authors | Study type |
|---|---|---|
| 1 | Barriers to Accessing Effective Treatment and Support for Menopausal Symptoms: A Qualitative Study Capturing the Behaviours, Beliefs and Experiences of Key Stakeholders (Barber & Charles, 2023) | Grounded theory approach<br>Purposive sampling<br>Qualitative |
| 2 | Health-care providers' views of menopause and its management: a qualitative study (Davis et al., 2021) | Cross sectional<br>thematic analysis<br>Qualitative |
| 3 | Menopausal hormone therapy: what are the problems in the perception of Chinese physicians? (Deng et al., 2022) | Nationwide survey<br>Cross sectional<br>descriptive study<br>Quantitative |
| 4 | Practice patterns and perspectives regarding treatment for symptoms of menopause: qualitative interviews with US health care providers (DePree et al., 2023) | Non interventional<br>Cross sectional,<br>observational study<br>Qualitative |
| 5 | Mind the gap: primary care physicians and gynecologists' knowledge about menopause and their attitudes to hormone therapy use in Jamaica (Harrison et al., 2021) | Cross sectional<br>descriptive study<br>Quantitative |
| 6 | Menopause Management Knowledge in Postgraduate Family Medicine, Internal Medicine, and Obstetrics and Gynecology Residents: A Cross sectional Survey (Kling et al., 2019) | Cross sectional<br>anonymous survey<br>Convenience sampling<br>Quantitative |
| 7 | Prevalence of offering menopause hormone therapy among primary care doctors and its associate factors: A cross-sectional study (Low et al., 2024) | Cross sectional study<br>Universal sampling<br>Quantitative |
| 8 | Healthcare provider knowledge, attitudes, and preferences in management of genitourinary syndrome of menopause in the Mid-South (Morris et al., 2021) | Cross sectional<br>descriptive study<br>Quantitative |
| 9 | Attitude, Practices, and Barriers to Menopausal Hormone Therapy Among Physicians in Saudi Arabia (Qutob et al., 2024) | Cross sectional study<br>convenience sampling<br>Quantitative |
| 10 | Evaluation of the impact, treatment patterns, and patient and physician perceptions of vasomotor symptoms associate with menopause in Europe and the United States (Stute et al., 2022) | Electronic survey<br>prospective chart review<br>Quantitative |
| 11 | Knowledge and attitudes of health professionals regarding menopausal hormone therapies (Yeganeh et al., 2017) | Cross sectional survey<br>Online questionnaire<br>Quantitative |

Across the studies included in this IR, several factors influence the prescribing of menopausal hormone therapy (MHT). These factors have been categorized into prescribing facilitators and prescribing barriers, revealing a complex interplay of provider education and training, personal and professional characteristics and beliefs.

## Barriers to prescribing MHT

### *Lack of Education*

The most significant barrier to MHT prescribing was lack of education, stemming from insufficient undergraduate and ongoing training, as well as a scarcity of accessible, up-to-date guidelines (Barber & Charles, 2023; Davis et al., 2021; Harrison et al., 2021; Kling et al., 2019; Low et al., 2024; Qutob et al., 2024; Yeganeh et al., 2017). From the provider lens many practitioners highlighted the lack of availability of menopause prescribing guidelines and/ or recency of those guidelines as a barrier to prescribing. Additionally, being a member of a menopause society is presumed to have increased access to recent guidelines, which was established as a facilitator to treatment (Barber & Charles, 2023; Davis et al., 2021; Deng et al., 2022; Harrison et al., 2021; Kling et al., 2019; Low et al., 2024; Morris et al., 2021; Yeganeh et al., 2017). Length of time in practice was a barrier to treatment with providers who had practiced for five years or less being more hesitant to prescribe systemic MHT (Davis et al., 2021; Deng et al., 2022; Harrison et al., 2021; Kling et al., 2019).

### *Symptom severity*

Quantifiable symptoms or severity of menopausal symptoms emerged as an important barrier to MHT prescribing. There was however, no standardised measurement for assessing the degree to which symptoms became debilitating. Similarly, an interesting relationship emerged between symptom severity and comfort in prescribing MHT, as in the more severe the symptoms the more comfortable prescribers were with MHT as a

treatment option (Barber & Charles, 2023; Davis et al., 2021; DePree et al., 2023; Stute et al., 2022; Yeganeh et al., 2017).

### *MHT perceived or actual risks*

Perceived or actual risks of treatment were significant barriers to prescribing, with many authors noting that perceived risks were always not aligned with current evidence. All of the studies delineated between patient and provider perceived and actual risks of treatment (Barber & Charles, 2023; Davis et al., 2021; Deng et al., 2022; DePree et al., 2023; Low et al., 2024; Qutob et al., 2024; Safwan et al., 2024; Stute et al., 2022; Yeganeh et al., 2017). Additionally and unsurprisingly, the presence of contraindications or comorbidities were barriers to MHT prescribing (Davis et al., 2021; DePree et al., 2023; Harrison et al., 2021; Kling et al., 2019; Stute et al., 2022; Yeganeh et al., 2017). However, not all studies commented on the accuracy of providers being able to identify contraindications or comorbidities among their patient population.

### *MHT access & prescriber comfort*

Less common barriers to MHT prescribing included lack of access to treatments either due to product cost or lack of insurance coverage (DePree et al., 2023; Low et al., 2024; Stute et al., 2022). Being a male provider was a barrier to prescribing MHT and one study specifically linked this to comfort in initiating discussions around menopausal symptoms (Morris et al., 2021). Comfort in answering questions about menopausal symptoms was also strongly correlated with length of time in practice (Morris et al., 2021). Barber and Charles (2023) indicated that PCPs experienced embarrassment in initiation of discussion around GSM issues such as vaginal atrophy and dyspareunia. The implications of provider embarrassment in the discussion of menopausal symptoms will result in missed or delayed GSM diagnosis in women, the consequences of which may be irreversible (S. Johnston et al., 2021). Embarrassment related to GSM has broader

implications, including impaired patient-provider communication and the persistent societal taboo surrounding menopause, which continues to hinder open discussion and effective symptom management (Power et al., 2009; Rozenberg & Vandromme, 2019).

***Inclusion of Non-Prescribers***

Length of consultation time and provider discipline was identified as a barrier in Davis et al., (2021) as the study included pharmacists among other prescribing providers. The Morris et al., (2021) study included APRNs and it was not entirely clear within the study if they were able to prescribe MHT. Stute et al., (2022) included a provider category of "other" which was not further explained and therefore also remains unknown if this category were able to prescribe MHT. The Barber and Charles study (2023) also included data from 20 menopausal or perimenopausal patients who were not HCPs. The implications of including patients and providers in the same study highlighted the shared misinformation and erroneous beliefs around treatment options, risks and benefits from both the consumer and HCP perspective.

***Provider beliefs and preferences***

Physician preferences and beliefs factored into MHT access for patients and included medication/pill burden and a provider preference for offering non hormonal or lifestyle options (Barber & Charles, 2023; Stute et al., 2022). The Stute et al., (2022) study extrapolated interesting and unique data, comparing the levels of symptom control achieved for relief from VMS as reported by the both patient and the provider. Considerable differences were reported in almost all categories measured, suggesting that the notion of menopausal symptom control and satisfaction with symptom control may vary widely between provider and patient (Stute et al., 2022).

## Facilitators to prescribing MHT

### *Education and training*

Providers who had undertaken additional menopause education and training emerged as the most prominent facilitator to prescribing MHT. Alongside this was consistent recognition that undergraduate and ongoing specialty training in menopause are limited. Providers with additional training, longer practice experience, or personal familiarity with MHT (e.g., personal or family use) are more confident in prescribing. Eight of 11 studies commented on the paucity of menopause training in undergraduate education programmes (Barber & Charles, 2023; Davis et al., 2021; Deng et al., 2022; Harrison et al., 2021; Kling et al., 2019; Low et al., 2024; Morris et al., 2021; Yeganeh et al., 2017). Providers that described themselves as comfortable with MHT prescribing had either undergone additional training (Davis et al., 2021; Qutob et al., 2024; Yeganeh et al., 2017), had practiced for more than 10 years (Harrison et al., 2021), or were female (Morris et al., 2021) or using MHT themselves (Deng et al., 2022; DePree et al., 2023; Morris et al., 2021).

### *Practitioner gender and personal experience with MHT*

Female practitioners and those with more than ten years in practice tended to prescribe more comfortably, possibly due to personal experience and increased exposure to menopause care (Davis et al., 2021; Deng et al., 2022; DePree et al., 2023; Harrison et al., 2021; Low et al., 2024; Morris et al., 2021; Safwan et al., 2024). Although interestingly, Yeganeh et al., (2017) found no correlation between gender of prescriber and self described level of knowledge of menopause symptoms and menopause prescribing (Yeganeh et al., 2017). Length of time in practice was an important facilitator of prescriber knowledge and comfort, with longer time in practice translating to increased prescriber comfort. An unexpected prescribing facilitator was being a female provider with personal or family/friend use of MHT (Low et al., 2024). Low et al., (2024) and

Morris et al., (2021) recognised this and included personal or familial use of MHT in the survey of provider demographic questionnaire (Low et al., 2024; Morris et al., 2021).

***Product knowledge and availability***

Awareness of and access to various hormonal therapies, guidelines, and updates were shown to significantly enhance prescribing confidence, especially for systemic therapies. Product knowledge and product availability emerged as distinct and important predictors of MHT prescribing. Product knowledge and availability were also relationally important to provider education and training and access to prescribing guidelines and practice updates and the release of new hormonal therapies (Barber & Charles, 2023; Deng et al., 2022; DePree et al., 2023; Harrison et al., 2021; Morris et al., 2021; Qutob et al., 2024, 2024). Provider comfort was almost universally lower for prescribing systemic therapies, many providers were more comfortable prescribing topical or local therapies or non hormonal therapies (Kling et al., 2019; Yeganeh et al., 2017).

***Practice Specialty***

Specialists such as obstetrician-gynecologists and members of menopause societies were shown to have increased comfort in prescribing MHT, suggesting that specialty training and ongoing education currently supports better menopause care. Being a specialty provider conferred greater comfort in prescribing, particularly among the obstetrician-gynecologist & gynecologist specialties and was an important facilitator to MHT treatments being offered (Barber & Charles, 2023; Davis et al., 2021; Deng et al., 2022; DePree et al., 2023; Harrison et al., 2021; Kling et al., 2019; Morris et al., 2021; Qutob et al., 2024; Stute et al., 2022; Yeganeh et al., 2017). Finally, Yeganeh et al., (2017) highlighted that being a provider and a member of a menopause society (likely recipients of more menopause education and practice updates) as an important facilitator to MHT prescribing (Yeganeh et al., 2017).

***Critical Analysis of the studies***

All eleven of the studies added valuable information and provide a collective, current exploration of HCPs perspectives around menopausal symptom management and MHT prescribing. While these studies used rigorous quantitative and qualitative methods, such as in-depth interviews, thematic analyses, and validated surveys, some are limited by small sample sizes, restricted regional diversity, and cross-sectional designs that reduce generalizability and causal inference. Many of the studies relied on self-reported data, which may introduce biases. Despite these limitations, the studies communally identified critical barriers—including inadequate training, misconceptions about hormone therapy risks, and systemic or cultural factors—that hinder optimal care. They underscore the need for larger, longitudinal, and patient-inclusive research to offer and improve targeted interventions, expand provider education, and reduce societal stigma, ultimately aiming to universally enhance menopause care. Critical Analysis was conducted using the Critical Appraisal Skills Programme (CASP) checklist for Qualitative Research (Critical Appraisal Skills Programme [CASP], 2024b).

With respect to *Validity and Rigour*, several studies employed validated tools or used meticulous qualitative methods. Davis et al. (2021) used Braun & Clarkes' thematic analysis guidelines (Braun & Clarke, 2006) and Barber & Charles (2023) employed in-depth interviews with thematic analysis. Validity and rigour were improved by the diversity of participants across all of the studies, which included healthcare providers from primary care and specialty areas, patients and stakeholders which deepens the breadth of the findings.

Study limitations included a lack of detailed accounts of sampling strategies, response rates, or validation procedures (Kling et al., 2019; Morris et al., 2021; Qutob et al., 2024), which raises questions about generalizability and biases. Small sample sizes in some studies (Morris et al., 2021; Qutob et al., 2024) may limit the depth of inquiry and

transferability. Finally, the reliance on self-reported data in several studies (Barber & Charles, 2023; Kling et al., 2019; Low et al., 2024; Morris et al., 2021; Qutob et al., 2024) introduces the possibility of social desirability bias, a concern noted by CASP (2024) when assessing data credibility.

With respect to study *Relevance and Context,* all of the studies address issues that are relevant to menopause management, and encompass healthcare provider attitudes, patient barriers, and systemic factors, aligning with CASP's (2024) focus on the importance of research relevance. Several studies (Davis et al., 2021; Low et al., 2024; Morris et al., 2021) overtly link their findings to clinical practice improvements, policy implications, or educational needs, fulfilling CASP's (2024) criterion of addressing a meaningful problem.

Regarding *Ethical Approval,* three of the studies failed to mention whether ethical approval was gained (Barber & Charles, 2023; DePree et al., 2023; Kling et al., 2019). Barber and Charles (2023) however, did state that that their study design was reviewed by a UK independent research ethics committee. All of the studies described how *Data Analysis and Interpretation* was conducted. Studies that were exclusively qualitative in nature employed thematic analysis and provide enough methodological detail to support credibility (Barber & Charles, 2023; Davis et al., 2021). The studies that also employed quantitative components (Low et al., 2024; Qutob et al., 2024) utilized appropriate statistical methods including multivariate logistic regression, but the absence of detailed descriptions of data analysis strategies was problematic. Additionally, the potential for biases which includes response bias and selection bias is recognised, which aligns with CASP's (2024a, b) emphasis on dissecting and disseminating how data were collected and interpreted.

## Chapter Five: Discussion

Using the themes identified in the findings chapter, this chapter will synthesize the concepts related to important barriers and facilitators to MHT prescribing in primary care. Improving access to MHT for women at the provider level is imperative, requiring ongoing and increased awareness and a willingness to undertake menopause education.

Many of the themes identified in the IR were both positively and negatively correlated with comfort in and willingness to prescribe MHT. Proportional relationships existed between education and training levels around menopause and comfort in MHT prescribing. Lack of education and training was the most commonly identified barrier to prescribing MHT and increased menopause education was a clear facilitator to MHT prescribing. Becoming a member of a Menopause Society was presented by Yeganeh et al. (2017) as a way to mitigate either lack of access or capacity to undertake additional training in menopause. Most, if not all providers would have access to this type of membership through menopause societies and gynecological associations.

Length of time in practice was also seen to be a function of comfort in prescribing MHT. Greater length of time in practice as a provider facilitates MHT prescribing and shorter practice time was identified as a barrier to MHT prescribing. This may be due to a variety of factors which are not well understood, but likely bears a direct relationship to undergraduate education and training in menopause for which the research has highlighted a distinct paucity (Davis & Magraith, 2023; Liss et al., 2024; Macpherson & Quinton, 2022). The legacy of the WHI trials was expected to be a significant barrier to prescribing at the outset of the IR as it is likely to be relational to length of time in practice. However only one study conducted in Jamaica suggested the controversy around the trials still influenced MHT prescribing (Harrison et al., 2021), making it a less consequential theme than was originally expected.

The theme of provider preferences and beliefs was not well explored within the IR and it likely plays a much larger role than has been described here. The Barber and

Charles (2023) paper contained unexpected findings related to provider beliefs, and these beliefs may readily influence prescribing patterns. The belief that menopause does not require treatment and is not seen as a clinical priority was expressed by the primary care provider group, but not either of gynecologist or patient groups (Barber & Charles, 2023). These were unanticipated findings, given the recency of this study and are likely to perpetuate reduced access to safe and effective menopausal treatments for women. Given the gender research gap and the historical socio-political and patriarchal structures that predominate medicine, more research is needed to understand the extent of these views and the degree to which they impact diagnosis and treatment of menopausal symptoms and MHT prescribing.

The Barber and Charles study (2023) was distinguished by its differentiation between barriers to diagnosis and barriers to treatment. It posits that diagnosis and treatment are sequential steps, with diagnosis typically occurring prior to treatment; therefore, barriers encountered during diagnosis could also impede MHT treatment. True differences between the barriers to diagnosis of menopausal symptoms and barriers to treatment were not areas the IR was able to capture and are deserving of future research. Similarly, the categorization and measurement of symptom severity was not well captured in the IR, although symptom severity emerged as a significant theme in MHT prescribing. Increased symptom severity correlated with increased willingness to prescribe MHT, whereas reduced or limited symptom severity led to reduced MHT prescribing. The problem lies here in the idea of quantifiable suffering for women experiencing menopausal symptoms (Whiteley et al., 2013). Within many of the studies it is not clear by which measure symptoms were classified as impactful, with the word *severe* featuring strongly within the context of willingness to treat or reason not to treat. The Menopause Quality of Life questionnaire (MENQOL) has been validated for use among many menopausal populations including breast cancer survivors (Radtke et al., 2011; Sydora et

al., 2019). Other validated tools for assessing the impact of symptoms exist including the Menopause Rating Scale (MRS) which asks users to rate their symptom severity (Heinemann et al., 2004). To minimise discrepancies between provider and patient perception of symptom severity it is recommended that symptom screening and quality of life occur simultaneously (Heinemann et al., 2004; Radtke et al., 2011). Not all menopausal sequelae are immediately perceptible or obvious; subtle symptoms such as bone loss, increased cardiovascular risk, and insulin resistance can develop insidiously (Flores et al., 2021; National Institute for Care and Excellence [NICE], 2015; Santoro et al., 2011). It is important to note that only overt menopausal symptoms were discussed in the studies with respect to symptom severity and willingness to prescribe MHT. Classification of the severity of hypoestrogenic states and their relationship to chronic of disease is mostly absent in the current literature and an area that warrants future research.

Further compounding the idea of symptom severity as either a facilitator or barrier to MHT prescribing, Stute et al., (2022) demonstrated that significant discrepancies exist between patient and physician categorization of menopausal of symptoms. Major discrepancies were apparent between satisfaction of symptom control among patients and physicians alike (Stute et al., 2022). The idea that menopausal *symptom control* and *satisfaction* with symptom control varied widely between provider and patient is important to extrapolate for future research. This suggests the need for greater education and communication between provider and patient regarding how symptoms are experienced and classified (Duralde et al., 2023; Flores et al., 2021). Enhanced communication may facilitate broader discussions and shared decision-making related to treatment options and dosing, symptom management and expectations, as well as the characterization and classification of menopausal symptoms (Duralde et al., 2023).

This IR contributes to the existing knowledge in this area in some key areas. Current menopause research focuses heavily on the patient experience with respect to

symptom relief and medication responses. Menopause awareness is clearly *having a moment* in global and social media right now, with many celebrities openly discussing their menopause journey and their struggles with the menopausal transition (Hurwitz, 2025). Despite this rise in awareness, many, if not most women still experience difficulties accessing accurate information on the wide array of menopausal symptoms, the long-term consequences of hypoestrogenic states and the treatments that are available to manage menopause. Findings from this IR suggest that menopause remains a challenging topic for healthcare providers to address with patients—let alone to accurately diagnose and manage its symptoms. Many barriers still exist in both provider willingness and comfort in MHT prescribing in primary care. Lack of access to MHT results in undertreatment of severe and debilitating menopausal symptoms leading to long term health sequalae and intolerable disruptions to personal, social and professional life for many women.

***Limitations***

This IR has several limitations. Despite using a range of search terms across three databases, some relevant studies may have been overlooked. Additionally, restricting the search to English-language publications may have contributed to the omission of pertinent research. The IR aimed to assess factors that influence MHT prescribing in primary care, the studies included many specialty providers and not just PCPs. Specialty providers including gynecologists and obstetrician-gynecologists have additional training in menopause which lends itself to a different awareness and comfort with MHT prescribing. The inclusion of international studies presents certain limitations, which may include variability in healthcare systems and clinical practices, and the cultural perceptions of menopause across many countries may limit the generalizability of findings to specific regional contexts. Additionally, differences in terminology, outcome measures, and study design can introduce methodological disparateness, complicating

synthesis and interpretation of findings. While international perspectives have enriched the IR, they may also reduce the contextual relevance for healthcare systems such as those in North America. Importantly, none of the included studies were inclusive of Nurse Practitioners or specific to the Canadian population of providers or patients. This limits the generalisability of the findings as well as the implications for practice.

***Implications and recommendations for practice***

The most prominent theme to emerge from the IR was that of education and training. Increased menopause education and training for providers will improve access to MHT and relief of the burden of bothersome symptoms and chronic disease. Conversely, continued lack of education in medical and NP programs will perpetuate existing barriers to treatment including difficulty discussing and diagnosing menopausal symptoms.

The long-term strategy to improve menopause management in Canada involves integrating comprehensive education on menopause and its treatments into healthcare provider training programs. Currently, several Canadian medical colleges and professional organizations, such as the Society of Obstetricians and Gynaecologists of Canada (SOGC), have issued important guidelines underpinning the need for ongoing education in menopause care to prevent irreversible physical and psychological harms (J. Johnston, 2011; Shea et al., 2021; Wolfman et al., 2021). In the short term, increasing provider engagement with menopause-specific societies—such as The Menopause Society (formerly the North American Menopause Society [NAMS]) or the Canadian Menopause Society—can enhance access to current research, webinars, and consensus guidelines (Canadian Menopause Society, 2025; The Menopause Society, 2025).

A 2009 Cochrane review spanning many clinical fields, including neonatology, cardiology and mental health, demonstrates that membership in professional societies correlates with higher adherence to best practices and improved patient care (Forsetlund et al., 2009). In Canada, some provinces have begun offering Continuing Medical

Education (CME) modules focused on menopause management through platforms like the College of Family Physicians of Canada (Gustafson & Dy, 2025).

Efforts to standardize symptom identification and severity assessment are also underway. Tools such as the Menopause Rating Scale (MRS) (Heinemann et al., 2004) and the Greene Climacteric Scale (Greene, 1976) have been validated internationally and are increasingly adopted in Canadian research and practice to harmonize symptom evaluation, reducing discrepancies between patient and provider perceptions. Promising new tools such as the Guide for the Assessment of Menopausal Symptoms (GAMS) scale (Vallee et al., 2025), published early this year encompass a broader symptom set and includes severity ratings, reflecting encouraging developments in menopause care.

This IR suggests that provider beliefs about menopause are influenced by factors such as gender, years of experience, and practice setting. Many care providers still harbor misconceptions about hormone therapy risks, often stemming from outdated training or limited access to current guidelines (Deng et al., 2022; Low et al., 2024). Exploring these attitudes through qualitative research can inform targeted educational interventions to address misconceptions. Enhancing shared decision-making (SDM) around menopausal treatments aligns with Canadian health priorities emphasizing patient-centered care. Balancing the nuanced risks and benefits of menopausal hormone therapy (MHT) remains a challenge. However, evidence indicates that greater access to education—both for providers and women—can improve understanding and appropriate use of MHT (Barber & Charles, 2023; Yeganeh et al., 2017).

***Existing Initiatives and Future Opportunities in Canada***

Some Canadian provinces have begun implementing standardized menopause pathways within primary care settings. For example, Ontario's Women's Health Care Pathway (Health Quality Ontario, 2025) is currently seeking feedback on the development of quality standards and a patient guide for perimenopause or menopause,

which is hoped to lead to provider training modules and symptom assessment tools aimed at improving menopause care. The Canadian Menopause Society collaborated with Dr. Susan Goldstein in the development of the *MQ6* tool for providers and patients to engage in SDM around MHT options (Goldstein, 2023).

Looking ahead, fostering multidisciplinary collaborations, implementing policy measures to make menopause education mandatory—both during undergraduate training and post-licensure—and integrating digital tools can help accelerate the much-needed improvements in Canadian menopause care within primary care settings.

## Chapter Six: Conclusion

This review set out to answer the question *"What factors influence Menopause Hormone Therapy prescribing in Primary Care Providers?"* The existing literature underscores that the under prescription of Menopause Hormone Therapy is a complex issue influenced by individual provider perceptions, universal barriers, and societal stigmas. Despite the proven efficacy and safety of MHT for managing menopausal symptoms, many women remain underserved due to gaps in provider knowledge, concerns about risks, and universal issues such as limited training and resource or product availability. Addressing these barriers requires concerted efforts to enhance provider education, dispel misconceptions, and foster supportive healthcare environments. As societal awareness and scientific evidence regarding MHT's efficacy continue to grow, it is crucial for healthcare systems and policymakers to prioritize strategies that improve access to evidence-based menopausal care. Doing so will enhance women's quality of life during the menopausal years and beyond, reduce the burden of chronic disease and have broad socio-economic benefits across diverse populations.

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## Appendix A

### Integrated Search Strategy and Concept Map Table

| Main Concept | Subject Terms | Focus or determination | Relationship |
|---|---|---|---|
| Hormone Replacement Therapy (HRT) | "hormone replacement therapy", "hormone therapy" | Core terms; basic concept | OR with related hormones |
| Hormone Types | estrogen*, oestrogen*, progesterone*, progestin*, testosterone*, estrodiol*, estriol*, estrone* | Specific hormones and studied hormones common to HRT regimens | OR to encompass all hormones |
| Population or Conditions | "menopause", "perimenopause", "postmenopause" | Focus on menopausal stages rather than gender affirming care | AND with hormones or attitudes |
| MeSH terms | "Hormone Replacement Therapy", "Estrogen Replacement Therapy" | Controlled vocabulary for precise searches | OR with keywords |
| Attitudes and Perceptions | attitude*, perception*, belief*, opinion*, practice*, view*, factor*, approach* | Focus on perceptions, attitudes & beliefs | AND with menopause or HRT terms |
| Prescribing and Practice | prescrib*, prescription* | Prescriber behavior | AND with attitudes & perceptions |
| Population Focus | menopaus*, perimenopaus*, postmenopaus*, menopause | Stages of menopausal transition | OR across stages |
| Search Strategy Logic | **Boolean operators:**<br>- **OR**: combine similar concepts (e.g., hormones, menopause)<br>- **AND**: intersect themes (e.g., attitudes AND menopause)<br>- **Proximity**: refine searches to nearby terms | To narrow or broaden search results | Used to refine literature retrieval |

# Appendix B

## Search Results using CINAHL (via EBSCO)



EBSCOhost

| # | Query | Limiters/Expanders | Last Run Via | Results |
|---|---|---|---|---|
| S1 | "physiologic hormone replacement therapy: | Expanders - Apply equivalent subjects<br>Search modes - Proximity | Interface - EBSCOhost Research Databases<br>Search Screen - Basic Search<br>Database - CINAHL Complete | Display |
| S2 | bioidentical hormone replacement therapy | Expanders - Apply equivalent subjects<br>Search modes - Proximity | Interface - EBSCOhost Research Databases<br>Search Screen - Basic Search<br>Database - CINAHL Complete | Display |
| S3 | (MH "Hormone Replacement Therapy") | Expanders - Apply equivalent subjects<br>Search modes - Proximity | Interface - EBSCOhost Research Databases<br>Search Screen - Advanced Search<br>Database - CINAHL Complete | Display |
| S4 | estrogen* or progesterone* or oestrogen* or progestin* or testosterone* or estrodiol* or estriol* or estrone* | Expanders - Apply equivalent subjects<br>Search modes - Proximity | Interface - EBSCOhost Research Databases<br>Search Screen - Advanced Search<br>Database - CINAHL Complete | Display |
| S5 | "hormone replacement therapy" or "hormone therapy" | Expanders - Apply equivalent subjects<br>Search modes - Proximity | Interface - EBSCOhost Research Databases<br>Search Screen - Advanced Search<br>Database - CINAHL Complete | Display |
| S6 | S3 OR S4 OR S5 | Expanders - Apply equivalent subjects<br>Search modes - Proximity | Interface - EBSCOhost Research Databases<br>Search Screen - Advanced Search<br>Database - CINAHL Complete | Display |
| S7 | (MH "Menopause") | Expanders - Apply equivalent subjects<br>Search modes - Proximity | Interface - EBSCOhost Research Databases<br>Search Screen - Advanced | Display |

| | | | | |
|---|---|---|---|---|
| | | | Search<br>Database - CINAHL Complete | |
| S8 | menopaus* or perimenopaus* or postmenopaus* or post-menopaus* | Expanders - Apply equivalent subjects<br>Search modes - Proximity | Interface - EBSCOhost Research Databases<br>Search Screen - Advanced Search<br>Database - CINAHL Complete | Display |
| S9 | S7 AND S8 | Expanders - Apply equivalent subjects<br>Search modes - Proximity | Interface - EBSCOhost Research Databases<br>Search Screen - Advanced Search<br>Database - CINAHL Complete | Display |
| S10 | TI (attitude* or perception* or perceive* or opinion* or belief* or practice* or view* or factor* or influence*) | Expanders - Apply equivalent subjects<br>Search modes - Proximity | Interface - EBSCOhost Research Databases<br>Search Screen - Advanced Search<br>Database - CINAHL Complete | Display |
| S11 | S9 AND S10 | Expanders - Apply equivalent subjects<br>Search modes - Proximity | Interface - EBSCOhost Research Databases<br>Search Screen - Advanced Search<br>Database - CINAHL Complete | Display |
| S12 | prescrib* or prescription* | Expanders - Apply equivalent subjects<br>Search modes - Proximity | Interface - EBSCOhost Research Databases<br>Search Screen - Advanced Search<br>Database - CINAHL Complete | Display |
| S13 | S11 AND S12 | Expanders - Apply equivalent subjects<br>Search modes - Proximity | Interface - EBSCOhost Research Databases<br>Search Screen - Advanced Search<br>Database - CINAHL Complete | Display |

# Appendix C
## Search Results using MEDLINE (via EBSCO)



EBSCOhost

| # | Query | Limiters/Expanders | Last Run Via | Results |
|---|---|---|---|---|
| S14 | S11 AND S13 | Expanders - Apply equivalent subjects<br>Search modes - Proximity | Interface - EBSCOhost Research Databases<br>Search Screen - Advanced Search<br>Database - MEDLINE with Full Text | Display |
| S13 | prescrib* or prescription* | Expanders - Apply equivalent subjects<br>Search modes - Proximity | Interface - EBSCOhost Research Databases<br>Search Screen - Advanced Search<br>Database - MEDLINE with Full Text | Display |
| S12 | prescrib* or prescription* | Expanders - Apply equivalent subjects<br>Search modes - Proximity | Interface - EBSCOhost Research Databases<br>Search Screen - Advanced Search<br>Database - MEDLINE with Full Text | Display |
| S11 | S7 AND S10 | Expanders - Apply equivalent subjects<br>Search modes - Proximity | Interface - EBSCOhost Research Databases<br>Search Screen - Advanced Search<br>Database - MEDLINE with Full Text | Display |
| S10 | TI (attitude* or perception* or belief* or opinion* or practice* or view* or factor* or approach*) | Expanders - Apply equivalent subjects<br>Search modes - Proximity | Interface - EBSCOhost Research Databases<br>Search Screen - Advanced Search<br>Database - MEDLINE with Full Text | Display |
| S9 | S7 AND S8 | Expanders - Apply equivalent subjects<br>Search modes - Proximity | Interface - EBSCOhost Research Databases<br>Search Screen - Advanced | Display |

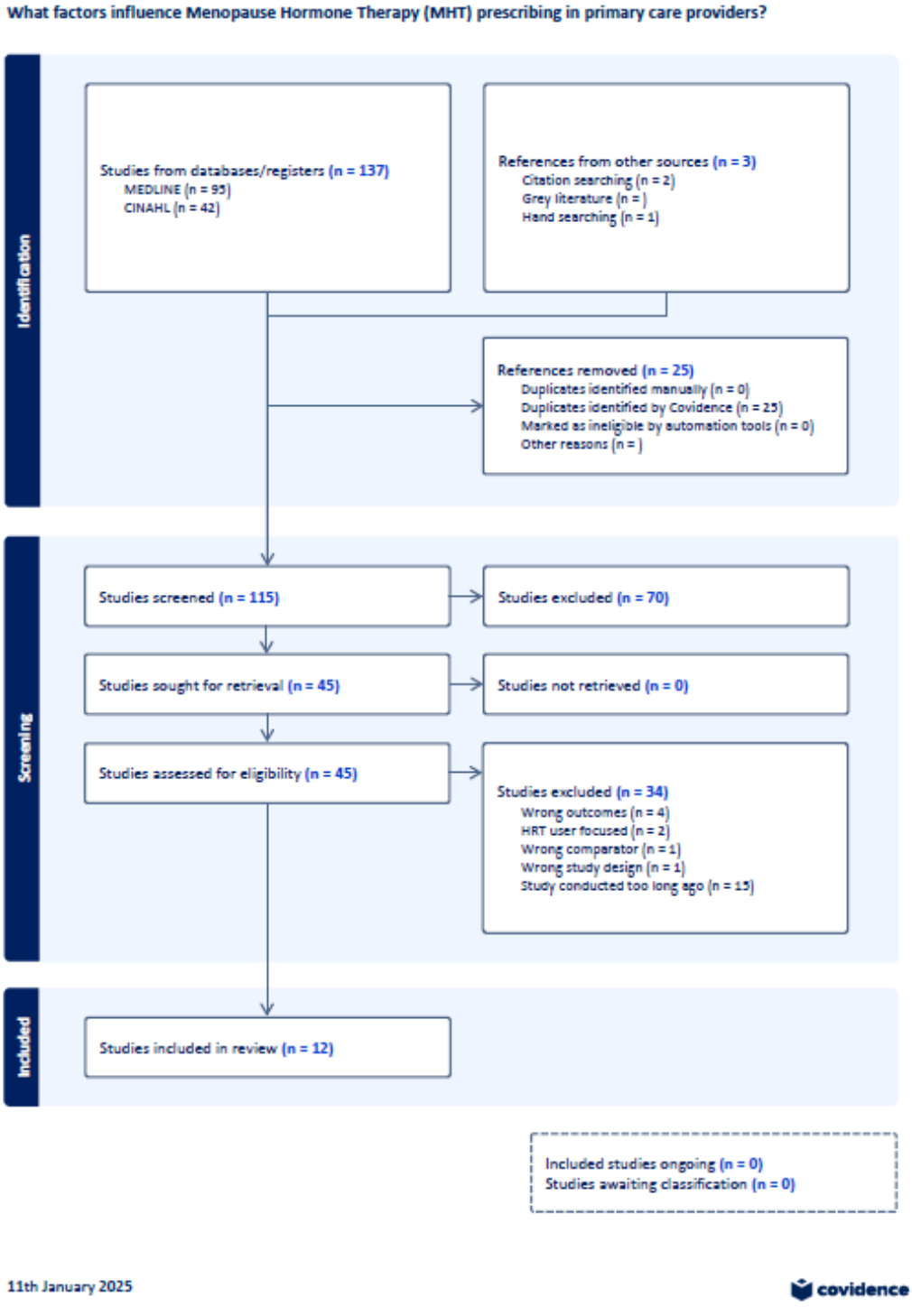
| | | | | |
|---|---|---|---|---|
| | | | Search<br>Database - MEDLINE with Full Text | |
| S8 | attitude* or perception* or belief* or opinion* or practice* or view* or factor* or approach* | Expanders - Apply equivalent subjects<br>Search modes - Proximity | Interface - EBSCOhost Research Databases<br>Search Screen - Advanced Search<br>Database - MEDLINE with Full Text | Display |
| S7 | S5 AND S6 | Expanders - Apply equivalent subjects<br>Search modes - Proximity | Interface - EBSCOhost Research Databases<br>Search Screen - Advanced Search<br>Database - MEDLINE with Full Text | Display |
| S6 | menopaus* or perimenopaus* or postmenopaus* or post-menopaus* | Expanders - Apply equivalent subjects<br>Search modes - Proximity | Interface - EBSCOhost Research Databases<br>Search Screen - Advanced Search<br>Database - MEDLINE with Full Text | Display |
| S5 | (MH "Menopause") | Expanders - Apply equivalent subjects<br>Search modes - Proximity | Interface - EBSCOhost Research Databases<br>Search Screen - Advanced Search<br>Database - MEDLINE with Full Text | Display |
| S4 | S1 OR S2 OR S3 | Expanders - Apply equivalent subjects<br>Search modes - Proximity | Interface - EBSCOhost Research Databases<br>Search Screen - Advanced Search<br>Database - MEDLINE with Full Text | Display |
| S3 | "hormone replacement therapy" or "hormone therapy" | Expanders - Apply equivalent subjects<br>Search modes - Proximity | Interface - EBSCOhost Research Databases<br>Search Screen - Advanced Search<br>Database - MEDLINE with Full Text | Display |





| | | | | |
|---|---|---|---|---|
| S2 | estrogen* or oestrogen* or progesterone* or testosterone* or progestin* or estrodiol* or oestrodiol* or estriol* or estrone* | Expanders - Apply equivalent subjects<br>Search modes - Proximity | Interface - EBSCOhost Research Databases<br>Search Screen - Advanced Search<br>Database - MEDLINE with Full Text | Display |
| S1 | (MH "Hormone Replacement Therapy") OR (MH "Estrogen Replacement Therapy") | Expanders - Apply equivalent subjects<br>Search modes - Proximity | Interface - EBSCOhost Research Databases<br>Search Screen - Advanced Search<br>Database - MEDLINE with Full Text | Display |

# Appendix D
# Prisma Flow Diagram



# Appendix E

## Critical Appraisal Summaries

CASP Checklist

| | |
|---|---|
| Reviewer Name: | Emma Knapp |
| Paper Title: | Barriers to Accessing Effective Treatment and Support for Menopausal Symptoms: A Qualitative Study Capturing the Behaviours, Beliefs and Experiences of Key Stakeholders |
| Author: | Barber and Charles (2023) |
| Appraisal Date: | Feb 3, 2025 |

| Section A Are the results valid? | |
|---|---|
| Was there a clear statement of the aims of the research? | Yes<br>The study clearly aims to explore the barriers faced by women, healthcare professionals, and gynaecologists in accessing and providing effective treatment for menopause symptoms. The objectives include understanding the behaviours, beliefs, and experiences influencing access and treatment uptake. |
| | |
| Is a qualitative methodology appropriate? | Yes<br>Given the study's goal to explore perceptions, beliefs, experiences, and barriers, a qualitative approach with in-depth interviews is appropriate to gain rich, detailed insights |
| | |
| Was the research design appropriate to address the aims of the research? | Yes<br>Semi-structured interviews and thematic analysis are suitable for exploring personal experiences and perspectives. The use of grounded theory influence supports developing a nuanced understanding of barriers |
| | |
| Was the recruitment strategy appropriate to the aims of the research? | Yes<br>Participants (women, GPs, gynaecologists) were recruited purposively from representative panels, with clear inclusion criteria (age, menopausal status, symptoms). The geographic diversity enhances generalizability within the UK context |
| | |
| Was the data collected in a way that addressed the research issue? | Yes<br>Semi-structured interviews allowed for in-depth exploration of key topics, including symptoms, attitudes, knowledge, and beliefs about HRT, media influence, and healthcare barriers. Interviews were conducted by trained researchers to ensure quality |

| | |
|---|---|
| Has the relationship between researcher and participants been adequately considered? | Only in part<br>The article mentions that interviews were conducted by trained interviewers, with female interviewers for women to facilitate openness. However, details on reflexivity or how researcher bias was managed are limited |
| | |
| Section B: What are the results? | |
| Have ethical issues been taken into consideration? | Not fully, ethical approval was not gained. Study design was reviewed by the Reading Independent Research Ethics Committee in the UK. The study was conducted according to the guidelines of the Declaration of Helsinki. |
| | |
| Was the data analysis sufficiently rigorous? | Yes<br>A grounded theory-influenced approach was used with independent coding by two trained researchers, and themes were identified systematically. The parallel process of data collection and analysis supports robustness. |
| | |
| Is there a clear statement of findings? | Yes<br>Findings are presented with themes such as lack of knowledge, stigma, healthcare professional attitudes, and referral pathways, supported by participant quotes |
| | |
| Section C: Will the results help locally? | |
| How valuable is the research? | Very valuable.<br>The study provides valuable insights into real-world barriers faced by women and healthcare providers, which can inform strategies to improve access and education around menopause and HRT. |

Adapted using:
Critical Appraisal Skills Programme (2024b). CASP (Qualitative study checklist) Checklist. [online] Available at: https://casp-uk.net/casp-tools-checklists/cross-sectional-studies-checklist/ Accessed Feb 3, 2025

CASP Checklist

| | |
|---|---|
| Reviewer Name: | Emma Knapp |
| Paper Title: | Health-care providers' views of menopause and its management: a qualitative study |
| Author: | Davis et al., 2021 |
| Appraisal Date: | Feb 3, 2025 |

| Section A Are the results valid? | |
|---|---|
| Did the study address a clearly focused issue? | Yes<br>The study clearly states its aim: to explore Australian healthcare providers' knowledge of menopause, their views on menopause-related healthcare, and their confidence in managing menopause. |
| | |
| Did the authors use an appropriate method to answer their question? | Yes<br>Given the aim to explore perceptions, attitudes, and knowledge, a qualitative approach with thematic analysis is appropriate |
| | |
| Was the research design appropriate to address the aims of the research? | Yes<br>The use of semi-structured interviews and reflexive thematic analysis aligns well with exploring healthcare providers' views and experiences |
| | |
| Was the recruitment strategy appropriate to the aims of the research? | Partially<br>The study used purposive sampling to achieve diversity and employed multiple recruitment methods, including professional networks and cold calling. However, the authors acknowledge recruitment challenges and a pragmatic decision to cease at 10 participants per group, which might limit representativeness |
| | |
| Was the data collected in a way that addressed the research issue? | Yes<br>Data collection via semi-structured interviews allows for in-depth exploration of participants' views, and the use of a standard interview guide supports consistency |
| | |
| Has the relationship between researcher and participants been adequately considered? | Only in part<br>The paper mentions that the same researcher conducted all interviews, but it does not elaborate on reflexivity or how the researcher's perspectives might influence data collection or interpretation. |
| | |

| | |
|---|---|
| Section B: What are the results? | |
| Have ethical issues been taken into consideration? | Yes<br>The study was approved by the Monash University Human Research Ethics Committee, and informed consent was obtained. |
| | |
| Was the data analysis sufficiently rigorous? | Yes<br>Thematic analysis was conducted methodically with two researchers independently coding transcripts, followed by consensus discussion. The use of an Excel spreadsheet for coding and adherence to COREQ guidelines suggest careful analysis |
| | |
| Is there a clear statement of findings? | Yes<br>Findings are presented in relation to centrail themes such as knowledge of menopause, perceptions of CAMs and MHT, and barriers to care, supported by quotes |
| | |
| Section C: Will the results help locally? | |
| How valuable is the research? | Moderately valuable<br>The study provides insights into healthcare providers' perceptions, highlighting gaps in knowledge and areas for improvement in clinical practice and training. Its limitations include small sample size and recruitment challenges, which may affect transferability |
| | |

Adapted using:
Critical Appraisal Skills Programme (2024a). CASP (For Descriptive/Cross-sectional and studies checklist) Checklist. [online] Available at: https://casp-uk.net/casp-tools-checklists/cross-sectional-studies-checklist/ Accessed: Feb 3, 2025

Critical Appraisal Skills Programme (2024b). CASP (Qualitative study checklist) Checklist. [online] Available at: https://casp-uk.net/casp-tools-checklists/cross-sectional-studies-checklist/ Accessed Feb 3, 2025

CASP Checklist

| | |
|---|---|
| Reviewer Name: | Emma Knapp |
| Paper Title: | Menopausal hormone therapy: what are the problems in the perception of Chinese physicians? |
| Author: | Deng et al., (2022) |
| Appraisal Date: | January 6, 2025 |

| Section A Are the results valid? | |
|---|---|
| Was there a clear statement of the aims of the research? | Yes<br>The aim is explicitly stated: *"This study aimed to investigate Chinese physicians' perception and attitudes toward menopausal hormone therapy (MHT)."* The objectives are clear, focusing on understanding knowledge, attitudes, and perceptions |
| | |
| Is a qualitative methodology appropriate? | Yes<br>The article describes a nationwide online survey with questionnaires, which is appropriate for assessing knowledge and attitudes. Evaluating the clarity of aims and the appropriateness of methodology is suitable for qualitative research. |
| | |
| Was the research design appropriate to address the aims of the research? | Yes<br>The survey method is suitable for capturing perceptions and attitudes across a broad sample. It allows for qualitative analysis of knowledge and attitudes, which matches the study goals. Since the study aims are primarily about perceptions and attitudes, a mixed or cross sectional approach could have been more comprehensive |
| | |
| Was the recruitment strategy appropriate to the aims of the research? | Participants were recruited via WeChat groups of the Gynecological Endocrinology Committee, targeting registered physicians. The high response rate (77.6%) suggests effective engagement. However, the sample may be biased toward physicians active in these groups, possibly excluding those less engaged online or in different regions/hospitals |
| | |
| Was the data collected in a way that addressed the research issue? | Yes<br>Data collection via an anonymous online questionnaire is suitable for assessing knowledge and attitudes. The questionnaire was tested beforehand, which supports data validity. It covers demographic info, knowledge, and attitudes, aligned with aims |
| | |

| | |
|---|---|
| Has the relationship between researcher and participants been adequately considered? | In part<br>The study mentions anonymity, reducing social desirability bias. |
| | |
| Section B: What are the results? | |
| Have ethical issues been taken into consideration? | The study was reviewed and approved by an ethics review committee, indicating ethical oversight. |
| | |
| Was the data analysis sufficiently rigorous? | Yes<br>Data were analyzed using descriptive statistics and chi-square tests for categorical variables, appropriate for survey data. The analysis appears suitable for the aims but does not delve into qualitative interpretation. |
| | |
| Is there a clear statement of findings? | Yes<br>Findings about physicians' knowledge, misconceptions, and attitudes are clearly presented, e.g., percentages of physicians aware of indications, risks, and their willingness to use or recommend MHT |
| | |
| Section C: Will the results help locally? | |
| How valuable is the research? | High<br>The large sample size and focus on Chinese physicians provide valuable insights into perceptions of MHT, which can inform training and policy. |
| | |

Adapted using:
Critical Appraisal Skills Programme (2024a). CASP (For Descriptive/Cross-sectional and studies checklist) Checklist. [online] Available at: https://casp-uk.net/casp-tools-checklists/cross-sectional-studies-checklist/ Accessed: Feb 3, 2025

Critical Appraisal Skills Programme (2024b). CASP (Qualitative study checklist) Checklist. [online] Available at: https://casp-uk.net/casp-tools-checklists/cross-sectional-studies-checklist/ Accessed Feb 3, 2025

CASP Checklist

| | |
|---|---|
| Reviewer Name: | Emma Knapp |
| Paper Title: | Practice patterns and perspectives regarding treatment for symptoms of menopause: qualitative interviews with US health care providers |
| Author: | DePree et al., 2023 |
| Appraisal Date: | Feb 3, 2025 |

| Section A Are the results valid? | |
|---|---|
| Was there a clear statement of the aims of the research? | Yes<br>The study aimed to document health care providers' views regarding treatments for menopausal symptoms and their discussions with patients about these symptoms and treatment decisions. |
| | |
| Is a qualitative methodology appropriate? | Yes<br>The research seeks to understand health care providers' perspectives, which are best explored through qualitative interviews to gather rich, detailed insights. |
| | |
| Was the research design appropriate to address the aims of the research? | Yes<br>Semi-structured interviews are appropriate for exploring providers' views, practices, and perceptions, aligning well with the study's objectives. |
| | |
| Was the recruitment strategy appropriate to the aims of the research? | In part<br>20 HCPs were recruited (10 gynecologists, 10 primary care providers) using convenience sampling from directories and prior contacts. While this approach is common in qualitative research, it may limit generalizability and introduce selection bias. The inclusion criteria (treating ≥3 menopausal patients weekly)is appropriate to ensure participants have relevant experience. |
| | |
| Was the data collected in a way that addressed the research issue? | Yes<br>Data collection involved interviews focused on providers' views and practices regarding menopausal symptom treatment. They collected demographic data and thematic data based on key concepts from interviews. |
| | |
| Has the relationship between researcher and participants been adequately considered? | Not discussed<br>The article does not specify reflexivity or whether researchers considered their influence on data collection or interpretation. This is a common area for qualitative rigor but is not clearly addressed here. |
| | |

| | |
|---|---|
| Section B: What are the results? | |
| Have ethical issues been taken into consideration? | Not stated<br>There is no mention of ethical approval or consent procedures. |
| | |
| Was the data analysis sufficiently rigorous? | Partially<br>The article mentions that "key concepts/themes from interviews were identified," but it lacks detailed description of the analysis process (e.g., coding procedures, number of coders, use of software, validation methods such as member checking or triangulation). This limits assessment of rigor. |
| | |
| Is there a clear statement of findings? | Yes<br>Findings include themes such as perceptions of treatment effectiveness, barriers to therapy initiation, and prescribing patterns. |
| | |
| Section C: Will the results help locally? | |
| How valuable is the research? | Moderate to high<br>Provides insights into provider perspectives on menopause management, which can inform future interventions, guidelines, or policy. However, limitations like small, convenience sample and limited methodological detail temper the strength of conclusions. |
| | |

Adapted using:
Critical Appraisal Skills Programme (2024b). CASP (Qualitative study checklist) Checklist. [online] Available at: https://casp-uk.net/casp-tools-checklists/cross-sectional-studies-checklist/ Accessed Feb 3, 2025

CASP Checklist

| | |
|---|---|
| Reviewer Name: | Emma Knapp |
| Paper Title: | Mind the gap: primary care physicians and gynecologists' knowledge about menopause and their attitudes to hormone therapy use in Jamaica |
| Author: | Harrison et al., 2021 |
| Appraisal Date: | Feb 3, 2025 |

| Section A Are the results valid? | |
|---|---|
| Was there a clear statement of the aims of the research? | Yes<br>The study explicitly aims to evaluate physicians' knowledge, attitudes, and practices regarding menopause and hormone therapy in Jamaica |
| | |
| Is a qualitative methodology appropriate? | Yes<br>A cross-sectional survey using validated questionnaires appears appropriate to assess knowledge and attitudes among physicians |
| | |
| Was the research design appropriate to address the aims of the research? | Yes<br>A cross-sectional survey using validated questionnaires appears appropriate to assess knowledge and attitudes among physicians |
| | |
| Was the recruitment strategy appropriate to the aims of the research? | Yes<br>Data collection via a validated, pretested questionnaire with a high reliability score supports data quality. Distribution at outpatient clinics captures active physicians |
| | |
| Was the data collected in a way that addressed the research issue? | Partially<br>The study does not detail how bias or influence was managed, but the use of anonymous questionnaires reduces social desirability bias. |
| | |
| Has the relationship between researcher and participants been adequately considered? | Partially<br>The excerpt does not detail how bias or influence was managed, but the use of anonymous questionnaires reduces social desirability bias |
| | |
| Section B: What are the results? | |

| | |
|---|---|
| Have ethical issues been taken into consideration? | Yes<br>Ethical approval was obtained from the Mona Campus Research Ethical Committee |
| | |
| Was the data analysis sufficiently rigorous? | Partially<br>The description mentions univariate and bivariate analyses, including Pearson's Chi-Square tests, appropriate for categorical data. However, details on how confounding factors were addressed are lacking |
| | |
| Is there a clear statement of findings? | Yes<br>The study explicitly states its key findings, supported by statistical data and clear descriptions, which aligns with good reporting standards. The findings directly relate to the research questions about physicians' knowledge, attitudes, and practices regarding menopause and hormone therapy |
| | |
| Section C: Will the results help locally? | |
| How valuable is the research? | Moderately: This research provides valuable insights into a neglected area of healthcare in Jamaica, with implications for improving physician education, patient management, and health outcomes for menopausal women. Its novelty and focus on local context make it a meaningful contribution to the literature on menopause management in the Caribbean. Findings may not be generalisable to North America |
| | |

Adapted using:

Critical Appraisal Skills Programme (2024a). CASP (For Descriptive/Cross-sectional and studies checklist) Checklist. [online] Available at: https://casp-uk.net/casp-tools-checklists/cross-sectional-studies-checklist/ Accessed: Feb 3, 2025

Critical Appraisal Skills Programme (2024b). CASP (Qualitative study checklist) Checklist. [online] Available at: https://casp-uk.net/casp-tools-checklists/cross-sectional-studies-checklist/ Accessed Feb 3, 2025

CASP Checklist

| | |
|---|---|
| Reviewer Name: | Emma Knapp |
| Paper Title: | Menopause Management Knowledge in Postgraduate Family Medicine, Internal Medicine, and Obstetrics and Gynecology Residents: A Cross-Sectional Survey |
| Author: | Kling et al., 2019 |
| Appraisal Date: | Feb 3, 2025 |

| Section A Are the results valid? | |
|---|---|
| Was there a clear statement of the aims of the research? | Yes<br>The study aimed to evaluate the knowledge and training of postgraduate residents in menopause management across family medicine, internal medicine, and obstetrics/gynecology programs in the U.S. This is explicitly stated in the abstract and introduction |
| | |
| Is a qualitative methodology appropriate? | Partially<br>While the study claims to be a survey-based cross-sectional study, it is not strictly qualitative; it appears primarily quantitative, using a survey to assess knowledge and perceptions. The use of an adapted questionnaire to assess knowledge is appropriate for the research question, but the checklist for qualitative research may not fully apply here as the study is more quantitative. |
| | |
| Was the research design appropriate to address the aims of the research? | Yes, with limitations<br>A cross-sectional survey design is suitable for gauging knowledge and training gaps across a population at a specific point in time. However, it cannot establish causality or deep insights into attitudes, which are more suited to qualitative methods. |
| | |
| Was the recruitment strategy appropriate to the aims of the research? | Partially<br>The survey was distributed via professional networks across 20 residency programs, with a good participation rate (26%). It was a convenience sample, which can introduce bias and limit generalizability. The authors acknowledge the sampling method and potential limitations. |
| | |
| Was the data collected in a way that addressed the research issue? | Yes<br>The survey included questions on knowledge of hormone therapy, training received, and demographic info, which directly relates to the research aims. |
| | |

| | |
|---|---|
| Has the relationship between researcher and participants been adequately considered? | Not discussed<br>This is a common limitation in survey-based research where anonymity is maintained, and reflexivity is less emphasized compared to qualitative interviews or ethnographies |
| | |
| Section B: What are the results? | |
| Have ethical issues been taken into consideration? | Not explicitly stated<br>The article does not mention ethics approval or informed consent procedures, which is a limitation |
| | |
| Was the data analysis sufficiently rigorous? | Partially<br>The article mentions descriptive statistics (percentages, response rates). However, it does not specify detailed analytical methods or statistical testing, which limits assessment of rigor. Since it's a survey-based study, detailed statistical analysis would strengthen findings. |
| | |
| Is there a clear statement of findings? | Yes<br>The results highlight key gaps in knowledge and training, such as the percentage of residents unfamiliar with certain aspects of menopause management and their comfort levels. |
| | |
| Section C: Will the results help locally? | |
| How valuable is the research? | Yes<br>The results highlight important educational gaps, relevant for curriculum development and improving menopause management in primary care. |
| | |

Adapted using:
Critical Appraisal Skills Programme (2024a). CASP (For Descriptive/Cross-sectional and studies checklist) Checklist. [online] Available at: https://casp-uk.net/casp-tools-checklists/cross-sectional-studies-checklist/ Accessed: Feb 3, 2025

Critical Appraisal Skills Programme (2024b). CASP (Qualitative study checklist) Checklist. [online] Available at: https://casp-uk.net/casp-tools-checklists/cross-sectional-studies-checklist/ Accessed Feb 3, 2025

CASP Checklist

| | |
|---|---|
| Reviewer Name: | Emma Knapp |
| Paper Title: | Prevalence of offering menopause hormone therapy among primary care doctors and its associate factors: A cross-sectional study |
| Author: | Low et al., 2024 |
| Appraisal Date: | Feb 3, 2025 |

| Section A Are the results valid? | |
|---|---|
| Was there a clear statement of the aims of the research? | Yes. The study aims to determine the prevalence of offering menopause hormone therapy (MHT) among primary care doctors and its associated factors, which is a clear and focused research question. |
| | |
| Is a qualitative methodology appropriate? | Yes. A cross-sectional survey design is appropriate for estimating prevalence and examining associations between factors and practices among primary care doctors |
| | |
| Was the research design appropriate to address the aims of the research? | Yes. A cross-sectional survey design is appropriate for estimating prevalence and examining associations between factors and practices among primary care doctors |
| | |
| Was the recruitment strategy appropriate to the aims of the research? | Yes. The study employed universal sampling of all eligible primary care doctors in selected regions, with inclusion and exclusion criteria clearly specified. The approach seems systematic and comprehensive. |
| | |
| Was the data collected in a way that addressed the research issue? | Yes. Data were collected via an online self-administered questionnaire, which is suitable for gathering information on practices, attitudes, knowledge, and barriers from healthcare providers. |
| | |
| Has the relationship between researcher and participants been adequately considered? | Not relevant here. The study involved anonymous self-reported questionnaires, minimizing bias related to researcher-participant interaction |
| | |
| Section B: What are the results? | |
| Have ethical issues been taken into consideration? | Yes. Ethical approval was obtained from the relevant ethics committee, and informed consent was incorporated into the questionnaire |
| | |
| Was the data analysis sufficiently rigorous? | Yes. The study used appropriate statistical methods, including multivariate logistic regression, to identify factors associated with offering MHT, which supports the validity of the findings |

| | |
|---|---|
| Is there a clear statement of findings? | There is a clear statement of findings, including quantitative data that describe the prevalence of MHT offering, associated factors, and barriers. The results are presented in a structured and detailed manner, making the findings transparent and interpretable |
| | |
| Section C: Will the results help locally? | |
| How valuable is the research? | Moderately valuable. This study appears methodologically sound for a cross-sectional survey, with clear objectives, appropriate sampling, valid data collection methods, and rigorous analysis. It provides credible insights into the practices and factors influencing MHT offering among primary care doctors in Malaysia |
| | |

Adapted using:
Critical Appraisal Skills Programme (2024a). CASP (For Descriptive/Cross-sectional and studies checklist) Checklist. [online] Available at: https://casp-uk.net/casp-tools-checklists/cross-sectional-studies-checklist/ Accessed: Feb 3, 2025

Critical Appraisal Skills Programme (2024b). CASP (Qualitative study checklist) Checklist. [online] Available at: https://casp-uk.net/casp-tools-checklists/cross-sectional-studies-checklist/ Accessed Feb 3, 2025

CASP Checklist

| | |
|---|---|
| Reviewer Name: | Emma Knapp |
| Paper Title: | Healthcare provider knowledge, attitudes, and preferences in management of genitourinary syndromes of menopause in the Mid-South |
| Author: | Morris et al., (2020) |
| Appraisal Date: | Feb 3, 2025 |
| Section A Are the results valid? | |
| Was there a clear statement of the aims of the research? | Yes<br>The study clearly states its primary objective: to explore healthcare providers' knowledge, attitudes, and management practices regarding genitourinary syndrome of menopause (GSM) in a Mid-South urban area. The aim is explicitly designed to identify gaps in awareness and practice, which guides the research design. |
| | |
| Is a qualitative methodology appropriate? | Partially<br>The study used an electronic questionnaire with Likert scales, multiple-choice, and open-ended questions. While these are typical of quantitative research, the inclusion of open-ended responses suggests some qualitative data collection. However, the main focus appears to be on quantitative analysis, so a fully qualitative approach may not have been the primary methodology.<br>Assessment: The use of open-ended questions adds qualitative richness, but the overall approach seems more quantitative |
| | |
| Was the research design appropriate to address the aims of the research? | Yes<br>An anonymous online survey with targeted questions on knowledge, attitudes, and practices is appropriate for exploring healthcare providers' perspectives across multiple specialties and training levels. It facilitates gathering diverse data relevant to the study's aims. |
| | |
| Was the recruitment strategy appropriate to the aims of the research? | Partially<br>The survey was distributed via program directors, coordinators, and ListServs, which is suitable for reaching multiple specialties. However, details on response rate, potential sampling bias, and how representative the sample is of the broader provider population are limited. |
| | |
| Was the data collected in a way that addressed the research issue? | Yes<br>The survey questions targeted relevant domains: demographics, clinical knowledge, management practices, and attitudes. The use of Likert scales, ranking, and open-ended |

| | |
|---|---|
| | responses allows for comprehensive relevant data collection |
| | |
| Has the relationship between researcher and participants been adequately considered? | Not explicitly addressed<br>The article does not mention reflexivity or how researcher bias was managed, which is often more relevant in qualitative research. Given the survey format, this may be less critical but still worth noting. |
| | |
| Section B: What are the results? | |
| Have ethical issues been taken into consideration? | Yes<br>University of Tennessee Health Science Center Institutional Review Board approval was obtained, and informed consent was mentioned. |
| | |
| Was the data analysis sufficiently rigorous? | Partially<br>The data analysis involved statistical tests (Chi-squared and Kruskal-Wallis), which are appropriate for quantitative data. Open-ended responses were reviewed and categorized, adding qualitative insight, but the methodology for qualitative analysis is not detailed |
| | |
| Is there a clear statement of findings? | Yes<br>The results are detailed, with specific statistics (percentages, p-values), addressing the research questions about provider knowledge and practices. |
| | |
| Section C: Will the results help locally? | |
| How valuable is the research? | High<br>The findings highlight knowledge gaps and variability in practice, which are directly relevant for designing targeted educational interventions and improving patient care in menopause management. |
| | |

Adapted using:

Critical Appraisal Skills Programme (2024a). CASP (For Descriptive/Cross-sectional and studies checklist) Checklist. [online] Available at: https://casp-uk.net/casp-tools-checklists/cross-sectional-studies-checklist/ Accessed: Feb 3, 2025

Critical Appraisal Skills Programme (2024b). CASP (Qualitative study checklist) Checklist. [online] Available at: https://casp-uk.net/casp-tools-checklists/cross-sectional-studies-checklist/ Accessed Feb 3, 2025

CASP Checklist

| | |
|---|---|
| Reviewer Name: | Emma Knapp |
| Paper Title: | Attitudes, Practices, and Barriers to Menopausal Hormone Therapy Among Physicians in Saudi Arabia |
| Author: | Qutob et al., 2024 |
| Appraisal Date: | Feb 3, 2025 |
| Section A Are the results valid? | |
| Was there a clear statement of the aims of the research? | Yes<br>The study aimed to investigate attitudes, practices, and barriers related to menopausal hormone therapy (HRT) among physicians in Saudi Arabia—a clear, focused research question relevant to clinical practice and healthcare policy |
| | |
| Is a qualitative methodology appropriate? | Partially<br>The study used an online survey targeting physicians across different specialties (gynecology, endocrinology, family medicine, internal medicine, general practice) at various levels (consultants, residents). While the sampling method is not explicitly detailed (e.g., random, convenience, purposive), distributing via social media platforms suggests convenience sampling, which can introduce bias but is practical for reaching busy clinicians. |
| | |
| Was the research design appropriate to address the aims of the research? | Yes<br>The observational, cross-sectional survey design is suitable for exploring physicians' attitudes, practices, and barriers regarding HRT, aligning well with the research objectives |
| | |
| Was the recruitment strategy appropriate to the aims of the research? | Yes<br>The recruitment strategy aligns well with the study's aims because it targets the relevant professional groups efficiently and practically. However, the potential for selection bias should be acknowledged in interpreting the findings. |
| | |
| Was the data collected in a way that addressed the research issue? | Yes<br>An online survey via social media and Google Forms is an appropriate and efficient method for collecting data from physicians. The survey design enabled gathering quantitative data on attitudes, practices, and barriers. |
| | |
| Has the relationship between researcher and participants been adequately considered? | Not explicitly addressed<br>As a survey-based study, the relationship is minimal, and there is no discussion on potential bias or influence of researchers on participants' responses. |
| | |

| | |
|---|---|
| Section B: What are the results? | |
| Have ethical issues been taken into consideration? | Not explicitly stated<br>The provided excerpt does not mention ethics approval or informed consent procedures, which are important for research involving human participants. |
| | |
| Was the data analysis sufficiently rigorous? | Partially<br>The results include descriptive statistics (percentages), which are appropriate for survey data. However, there is no mention of more advanced statistical analyses or measures of reliability and validity of the survey instrument. |
| | |
| Is there a clear statement of findings? | Yes<br>The results are clearly summarized, including physicians' attitudes, sources of information, types of HRT prescribed, and barriers faced. |
| | |
| Section C: Will the results help locally? | |
| How valuable is the research? | High<br>The study provides valuable insights into physicians' perceptions and barriers regarding HRT in Saudi Arabia, which can inform policy and educational interventions. |
| | |

Adapted using:
Critical Appraisal Skills Programme (2024a). CASP (For Descriptive/Cross-sectional and studies checklist) Checklist. [online] Available at: https://casp-uk.net/casp-tools-checklists/cross-sectional-studies-checklist/ Accessed: Feb 3, 2025

Critical Appraisal Skills Programme (2024b). CASP (Qualitative study checklist) Checklist. [online] Available at: https://casp-uk.net/casp-tools-checklists/cross-sectional-studies-checklist/ Accessed Feb 3, 2025

CASP Checklist

| | |
|---|---|
| Reviewer Name: | Emma Knapp |
| Paper Title: | Evaluation of the impact, treatment patterns, and patient and physician perceptions of vasomotor symptoms associated with menopause in Europe and the United States |
| Author: | Stute et al., 2022 |
| Appraisal Date: | Feb 6, 2025 |

| Section A Are the results valid? | |
|---|---|
| Was there a clear statement of the aims of the research? | Yes<br>The study aims to elicit perspectives of physicians and women regarding VMS associated with menopause, focusing on impact, treatment patterns, and perceptions. This is explicitly stated in the abstract and introduction |
| | |
| Is a qualitative methodology appropriate? | In part<br>The study is a mixed-methods survey incorporating patient and physician questionnaires, chart reviews, and validated scales. While quantitative data are prominent, the inclusion of perceptions and attitudes suggests qualitative elements. The core method appears to be survey-based. |
| | |
| Was the research design appropriate to address the aims of the research? | In part<br>The use of surveys and chart reviews allows for gathering perceptions and treatment patterns, but it may not fully capture the depth and context that traditional qualitative methods provide. The design seems more quantitative, although perceptions are explored. |
| | |
| Was the recruitment strategy appropriate to the aims of the research? | Yes<br>Physicians were recruited from publicly available lists, and inclusion criteria required them to see at least 3 VMS patients per month, ensuring relevance. Patients were selected via chart review, with subsequent surveys, which appears appropriate. |
| | |
| Was the data collected in a way that addressed the research issue? | Yes<br>Data from physician surveys, chart reviews, and patient questionnaires are aligned with the objectives of understanding treatment patterns, impacts, and perceptions. The use of validated tools (MENQOL, WPAI) enhances the quality of data collection. |
| | |
| Has the relationship between researcher and participants been adequately considered? | No<br>The study does not explicitly describe reflexivity or how researchers' biases were managed. |
| | |

| | |
|---|---|
| Section B: What are the results? | |
| Have ethical issues been taken into consideration? | In part<br>The study mentions that the survey received ethical exemption, but further details are not provided. |
| | |
| Was the data analysis sufficiently rigorous? | No<br>The study does not detail data analysis procedures, such as thematic analysis for qualitative data or statistical methods for quantitative data. The mention of validated questionnaires suggests quantitative analysis, but details are lacking. |
| | |
| Is there a clear statement of findings? | Yes<br>The abstract summarizes key findings regarding the impact of VMS, treatment patterns, and perceptions. However, detailed qualitative insights or thematic findings are not presented in this extract. |
| | |
| Section C: Will the results help locally? | |
| How valuable is the research? | Moderately<br>The study provides insights into real-world treatment patterns and perceptions across Europe and the US, which can inform clinical practice. Still, for qualitative appraisal, the depth and richness of perceptions are crucial, which are not clearly demonstrated here. |
| | |

Adapted using:
Critical Appraisal Skills Programme (2024a). CASP (For Descriptive/Cross-sectional and studies checklist) Checklist. [online] Available at: https://casp-uk.net/casp-tools-checklists/cross-sectional-studies-checklist/ Accessed: Feb 3, 2025

Critical Appraisal Skills Programme (2024b). CASP (Qualitative study checklist) Checklist. [online] Available at: https://casp-uk.net/casp-tools-checklists/cross-sectional-studies-checklist/ Accessed Feb 3, 2025

CASP Checklist

| | |
|---|---|
| Reviewer Name: | Emma Knapp |
| Paper Title: | Knowledge and attitudes of health professionals regarding menopausal hormone therapies |
| Author: | Yeganeh et al., 2017 |
| Appraisal Date: | Feb 6, 2025 |

| Section A Are the results valid? | |
|---|---|
| Was there a clear statement of the aims of the research? | Yes. The study aimed to evaluate the knowledge and attitudes of Australian health professionals regarding menopausal hormone therapies, with specific interest in differences across specialties and the influence of membership in professional societies. This is clearly stated in the objectives |
| | |
| Is a qualitative methodology appropriate? | Yes<br>The study employed a cross-sectional survey, which is suitable for assessing knowledge, attitudes, and self-reported practices at a specific point in time. Although the CASP checklist is primarily designed for qualitative research, the methodology here (structured questionnaires) is appropriate for the research aims. |
| | |
| Was the research design appropriate to address the aims of the research? | Yes<br>An online survey distributed to relevant professional groups is appropriate for capturing data on knowledge and attitudes of health professionals. |
| | |
| Was the recruitment strategy appropriate to the aims of the research? | Yes<br>The survey targeted members of relevant professional societies and conference attendees, which is suitable for reaching health professionals in the relevant fields. However, the response rate could not be calculated, which limits assessment of potential selection bias. |
| | |
| Was the data collected in a way that addressed the research issue? | Yes<br>The questionnaire was piloted and included both closed and open-ended questions, covering demographic data, self-assessed knowledge, attitudes, and barriers to prescribing MHT. |

| | |
|---|---|
| Has the relationship between researcher and participants been adequately considered? | No<br>The article mentions efforts to pilot the questionnaire and exclude non-medical respondents, but it does not elaborate on strategies to address potential response bias |
| | |
| Section B: What are the results? | |
| Have ethical issues been taken into consideration? | Yes<br>The study was approved by an ethics committee and participation was voluntary with implied consent via survey completion. |
| | |
| Was the data analysis sufficiently rigorous? | Yes<br>The analysis involved descriptive statistics, ANOVA, chi-square tests, and regression analysis, which are appropriate for the data type. The collapsing of Likert scale responses helps in analysis. However, as this is a survey, the evidence level is limited regarding causality. |
| | |
| Is there a clear statement of findings? | Yes, there is a clear statement of findings.<br>The findings include specific data points, such as the proportion of health professionals reporting knowledge in different areas |
| | |
| Section C: Will the results help locally? | |
| How valuable is the research? | High<br>The study provides insights into knowledge gaps, attitudes, and practice patterns among Australian health professionals, which can inform future education and policy. |
| | |

Adapted using:
Critical Appraisal Skills Programme (2024a). CASP (For Descriptive/Cross-sectional and studies checklist) Checklist. [online] Available at: https://casp-uk.net/casp-tools-checklists/cross-sectional-studies-checklist/ Accessed: Feb 3, 2025

Critical Appraisal Skills Programme (2024b). CASP (Qualitative study checklist) Checklist. [online] Available at: https://casp-uk.net/casp-tools-checklists/cross-sectional-studies-checklist/ Accessed Feb 3, 2025

# Appendix F
# Data Extraction Summaries

Reviewer: Emma Knapp Date: 12 January
Author(s) of the publication: Barber and Charles Year: 2023
Journal: Patient Preference and Adherence
Type of study
☒ Qualitative study — qualitative methodology and data was analysed using a grounded theory approach
Methodology: The study used a qualitative methodology with in depth 60 minute interviews either face to face or virtually to explore and understand the perspectives of menopausal women, GPs and gynaecologists with respect to the management of menopausal symptoms. Semi structure interviews were used and grounded theory influenced approach was used to analyse the data.
Number of participants: 20 women, 30 GPs and 10 gynaecologists
Characteristics of participants

| |
|---|
| Gynaecologists and GPs were recruited from opt-in panels of HCPs who had consented to be contacted to participate in research. Thirty GPs and 10 gynaecologists were recruited from different geographic regions of England, Scotland, Wales and Northern Ireland. All gynaecologists were consultant grade and spent at least 70% of their time in direct patient care. |

Phenomena of interest

| |
|---|
| To gain an in depth understanding of the barriers that impact women's access to treatment and uptake of hormone replacement therapy. |

Setting and other context-related information (e.g. cultural, geographical)

| |
|---|
| different geographic regions of England, Scotland, Wales and Northern Ireland |

Outcomes or findings of significance to the review objectives

| |
|---|
| Lack of knowledge about the menopause and the risks and benefits of HRT by women and GPs were the main barriers identified that are preventing women from accessing adequate support for the menopause. All three stakeholder groups recognised the need for highquality educational materials for women, however there was often a disconnect between HCPs and women as to whose responsibility it was to share or access these materials.<br>There is clearly variation in care offered to women for the menopause. It is highly dependent on GPs' attitudes and beliefs about the menopause and whether it is a condition that should be treated. Even amongst gynaecologists, the consensus was that NICE guidelines and the Menopause Practice Standards are not strictly followed and are largely outdated; treatment decisions on the whole were made based on individual patient needs. |

**Practitioner types**
☒ Primary care provider (family doctor, general practitioner)
☒ Gynecologist
☒ Other: 20 women also surveyed
**Menopausal hormonal treatments discussed**
☒ Not discussed
**Treatment delivery methods**
☒ Not discussed
**Practitioner barriers to treatment:**
☒ Lack of education and knowledge about MHT treatment and other options
☒ Comfort prescribing MHT/HRT
☒ Other: Belief that menopause does not require treatment
☒ Lack of confidence in prescribing MHT

**Practitioner facilitators to treatment:**
☒ Education
☒ Product knowledge or availability
☒ Other: Beliefs
☒ Severity of menopausal symptoms
**Primary menopause symptoms discussed/indications:**
☒ Genitourinary symptoms
☒ Low mood
☐ Other: fatigue
Author's conclusion

| |
|---|
| Many women suffer menopausal symptoms that have a considerable impact on their daily lives, emotional well-being, relationships and sense of self-worth. These are women who could have a better experience if the menopause were recognised, and they had access to effective treatment. Barriers to accessing effective treatment include:<br>Women's help seeking behaviour and attitudes towards treatment, specifically HRT |
| Some GPs' beliefs about the menopause, the seriousness of the symptoms and their impact on women's lives, difficulty in asking embarrassing/difficult questions, beliefs and misperceptions of HRT and lack of confidence and time |
| Gynaecologists' beliefs/attitudes towards HRT and when to use it and tempering women's unrealistic expectations of HRT |

## Reviewer's comments

| |
|---|
| Nicely teased out patient experience in barriers to obtaining care vs GP and Gyn barriers.<br>Focusses on the role of beliefs, symptoms severity and current trend and popular opinion. |

Reviewer: Emma Knapp Date: 12 January
Author(s) of the publication: Davis et al., Year: 2021
Journal: Climacteric

Type of study

☒ Qualitative study – Cross sectional, qualitative thematic analysis

Methodology: – thematic analysis using semi-structured telephone interviews

Number of participants:

30

Characteristics of participants

| |
|---|
| 10 gynaecologists, 10 general practitioners, 10 pharmacists |

Phenomena of interest

| |
|---|
| "This study aimed to explore Australian health-care providers' knowledge of menopause and its consequences and their views about menopause-related health care" |

Setting and other context-related information (e.g. cultural, geographical)

| |
|---|
| Australian HCPs<br>Universal healthcare – usually no prescription coverage though<br>Metropolitan and non-metropolitan practice settings |

Outcomes or findings of significance to the review objectives

| |
|---|
| All practitioners were aware of the most common menopausal symptoms<br>Perceived duration of menopausal symptoms was 10 years<br>General awareness of negative implications of menopause – bone loss, CVD risk, depleted mood and cognition |

**Practitioner types**

☒ Primary care provider (family doctor, general practitioner)

☒ Gynecologist

☒ Pharmacist

**Menopausal hormonal treatments discussed**

☒ Non hormonal treatments

☒ Lifestyle modifications

☒ Not discussed

**Treatment delivery methods**

☒ Not discussed

**Practitioner barriers to treatment:**

☒ Lack of education

☒ Perceived or actual risk(s)

☐ Patient ☒ Provider

☒ Perceived or actual symptom severity

☐ Patient ☒ Provider

☒ Comfort prescribing MHT/HRT (pharmacists not being prescribers)

☒ Individual prescriber demographics as a barrier (being younger in practice or male)

☒ Lack of privacy during consultations (pharmacists)

☒ Length of consultation time (pharmacists)

☒ Contraindications to MHT/HRT

**Practitioner facilitators to treatment:**

☒ Education

☒ Absence of contraindications to MHT/HRT

☒ Severity of menopausal symptoms

**Primary menopause symptoms discussed/indications:**

☒ Vasomotor symptoms

☒ Insomnia

☒ Low mood

☒ Early onset osteoporosis or CVD

Author's conclusion

| |
|---|
| Australian HCPs have a good understanding of recognising menopausal symptoms. Differences exist in comfort in initiating discussion with clients around symptoms. The efficacy of MHT is widely accepted however a general reticence remains which wasn't explored. Symptoms severity is a determining factor in treatment initiation and continuation. Providers self described lack of knowledge was a barrier to treatment. Paucity of time was also a barrier to treatment. |

Reviewer's comments

| |
|---|
| While health practitioners recognise the short term and long-term effects of menopause, knowledge and confidence about menopausal care remains lacking, to the detriment of midlife women's health. The upskilling of clinicians providing care for women at midlife with respect to the indications of rand prescribing of MHT, urgently needs to be addressed. |

Reviewer: Emma Knapp Date: 12 January
Author(s) of the publication: Deng et al., Year: 2022
Journal: Climacteric

Type of study

☒ Qualitative study

Methodology: Nationwide survey of physicians registered in an online chat forum – of the Gynecological Endocrinology Committee of China's Maternal and Childe Health Care Association. Participants of this group received an online invitation to participate in the study.
Number of participants: 4672
Characteristics of participants

| |
|---|
| 97.2% female aged (18-25) – (>/= 56 yrs) with between <5 yrs - >20 yrs in practice. Specialties included reproductive endocrinology, gynecologists, ob-gynecologists, obstetrician and others. |

Phenomena of interest

| |
|---|
| To survey physicians attitudes and knowledge towards MHT. |

Setting and other context-related information (e.g. cultural, geographical)

| |
|---|
| China, tertiary and non tertiary hospital settings<br>Previously identified large gap between Chinese physicians and "Euramerica" physicians knowledge and attitudes toward MHT.<br>MHT use rate in China is 1.3-1.4% whereas it's 9-12% in Europe and America |

Outcomes or findings of significance to the review objectives

| |
|---|
| Physicians had good knowledge of menopause symptoms as well as the indications, contraindications and treatment protocols for MHT. Dosing and follow up protocols were also well understood.<br>Most physicians had a big misunderstanding about the risks of MHT, specifically related to endometrial cancer, weight gain and follow up lab work. |

**Practitioner types**

☒ Gynecologist

☒ Obstetrician/gynecologist

☒ Other: reproductive endocrinologists and obstetricians

**Menopausal hormonal treatments discussed**

☒ Estrogen replacement

☒ Progesterone replacement

**Treatment delivery methods**

☒ Oral supplementation

☒ Other: not specified

**Practitioner barriers to treatment:**

☒ Lack of education

☒ Perceived or actual risk(s)

☐ Patient ☒ Provider

☒ Other: need for regular follow up – breast imaging, pelvic imaging, lab work, liver and renal function monitoring, sex hormone monitoring

☒ Individual prescriber demographics as a barrier (being younger in practice or male)

**Practitioner facilitators to treatment:**

☒ Education

☒ Personal use of MHT/HRT

**Primary menopause symptoms discussed/indications:**

☒ Vasomotor symptoms

☒ Genitourinary symptoms

☒Other: mood swings, osteoporosis prevention, CVD prevention

Author's conclusion

| |
|---|
| Use of MHT therapies in China remains low – 1-2%. Global education is needed to promote health to Chinese women at midlife and beyond. Female providers were more likely to use MHT. The risks of MHT as perceived by providers in this study were over exaggerated. More information about the benefits and absolute risks are required to promote the use of MHT and impact women's health. |

Reviewer's comments

| |
|---|
| Major limitation is selection bias. The level of knowledge of other Chinese physicians may be lower than what this survey indicates. |

Results

| |
|---|
| 44.7% of physicians often recommended MHT to their patients, and 33.5% occasionally recommended MHT to their patients, indicating that MHT is acknowledged by most Chinese physicians. This survey shows that among all female physicians or spouses of male physicians 11.4% used MHT. Among the female physicians that were perimenopausal of postmenopausal, 23.3% of them were using MHT. |

Reviewer: Emma Knapp Date: 12 January
Author(s) of the publication: Harrison, et al. Year: 2021
Journal: Menopause: The Journal of the North American Menopause Society
Record Number: 4
Type of study
☒ Qualitative study
Methodology: Cross sectional descriptive study, using a stratified sample of physicians in Jamaica. Univariate and bivariate analysis were conducted. Ethical approval was granted.
Number of participants: 145
Characteristics of participants

| |
|---|
| Study based in Jamaica across all 4 health regions<br>Physicians and OB-Gyn<br>Measured demographics included age, marital status (?), gender, years of practice, level of experience and service area |

Phenomena of interest

| |
|---|
| To evaluate physician's knowledge, attitude, and practices towards menopause and hormone therapy |

Setting and other context-related information (e.g. cultural, geographical)

| |
|---|
| Jamaica – not sure if universal or private health care options. |

Outcomes or findings of significance to the review objectives

| |
|---|
| The study highlights the gaps in knowledge and practices and a need for carefully designed curricula to provided individualized, risk-mitigated training in menopause healthcare. |

**Practitioner types**
☒ Primary care provider (family doctor, general practitioner)
☒ Obstetrician/gynecologist
**Menopausal hormonal treatments discussed**
☒ Not discussed
**Treatment delivery methods**
☒ Not discussed
**Practitioner barriers to treatment:**
☒ Lack of education
☒ Product knowledge or availability
☒ Comfort prescribing MHT/HRT
☒ Other: amount of practice experience
☒ Individual prescriber demographics as a barrier (being younger in practice or male)
☒ Contraindications to MHT/HRT
**Practitioner facilitators to treatment:**
☒ Education
☒ Product knowledge or availability
**Primary menopause symptoms discussed/indications:**
☒ Vasomotor symptoms
☒ Genitourinary symptoms
☒ Low libido
☒ Early onset osteoporosis or CVD
☒ Other: dementia, stroke prevention, CVD prevention, osteoporosis prevention
Author's conclusion

Our study corroborates that lack of HT knowledge and appropriate guidelines influence prescribing practices. There is a direct relationship between years of practice and self-identified knowledge and comfort with prescribing HT for menopause, may speak to the deficiencies in the current local medical curriculum. This is in line with recent reports that less and 25% of medical training programs have formal menopause learning curriculum. Focus on OB-Gyn being the first provider menopausal patients may see.

Reviewer's comments

Self identified lack of knowledge was a major barrier to prescribing. Big inference that consultants physicians were more comfortable than junior doctors.

Results

94 % of physicians reported having good or moderate knowledge about menopause and menopause symptoms, most of whom had 10 years of less practice experience.
Highlights the need for physicians to have adequate and evidence-based knowledge about HT. Knowledge and comfort with prescribing HT remains low despite published, established benefits of HT. Further studies are encouraged to examine the knowledge gap.

Reviewer: Emma Knapp Date: 12 January

Author(s) of the publication: Kling, et al. Year: 2019

Journal: Mayo Clinic Proceedings

Type of study

☒ Qualitative study – cross sectional survey, convenience sampling

Methodology: Cross sectional anonymous email survey was administered to trainees from all post graduate levels in FM, IM an dOB/GYN at 20 residency programs across the US between January 11 and July 4, 2017.

Number of participants: 183

Characteristics of participants

| |
|---|
| 49.7% Internal Medicine, 9.2% Family medicine, 39.3% Ob/gyn and 3% other disciplines |

Phenomena of interest

| |
|---|
| We aimed to evaluate knowledge and competency regarding menopause management in US Family Medicine (FM), Internal Medicine (IM) and OB/GYN residents with the goal of identifying gaps to highlight opportunities for improvement in education |

Setting and other context-related information (e.g. cultural, geographical)

| |
|---|
| |

Outcomes or findings of significance to the review objectives

| |
|---|
| |

**Practitioner types**

☒ Primary care provider (family doctor, general practitioner)

☒ Gynecologist

☒ Obstetrician/gynecologist

☒ Internal medicine

**Menopausal hormonal treatments discussed**

☒ Non hormonal treatments – SSRI, SNRI, Gabapentin, Clonidine, Black cohosh, Soy diet

☒ Lifestyle modifications – Behavioural change, increase exercise, lose weight, phystoestrogen, acupuncture, CBT, hypnosis, mind body (?)

**Treatment delivery methods**

☒ Not discussed

☒ Lack of education

☒ Perceived or actual risk(s)

☐ Patient ☒ Provider

☒ Comfort prescribing MHT/HRT

☒ Individual prescriber demographics as a barrier (being younger in practice or male)

☒ Contraindications to MHT/HRT

**Practitioner facilitators to treatment:**

☒ Education

**Primary menopause symptoms discussed/indications:**

☒ Vasomotor symptoms

☒ Insomnia

☒ Genitourinary symptoms

☒ Low mood

☒ Brain fog

☒ Joint pain

☒ Other: fatigue

Author's conclusion

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| Female responders more likely to diagnose menopausal symptoms than male responders |

Reviewer's comments

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| The residents involved recognised the importance of receiving education and training the area of menopause management. Important educational gaps were identified. Specifically around awareness and identification of menopausal symptoms, the risks and benefits of HT, alternatives to HT for symptom relief, HT in the setting of premature menopause and the selection of appropriate candidates for HT should be included. |

Reviewer: Emma Knapp Date: 12 January
Author(s) of the publication: Low et al., Year: 2024
Journal: PLOS ONE
Type of study
☒ Qualitative study – cross sectional study
Methodology: Online survey links provided for the participants to the self-administered questionnaire. Utilizing universal sampling.
Number of participants: 559
Characteristics of participants

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| Study population comprised of primary care doctors currently practicing in public health clinics in the state of Selangor and the Federal territories of Kuala Lumpur and Putrajaya.<br>12 months or more pf practice experience |

Phenomena of interest

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| Barriers to prescribing MHT. |

Setting and other context-related information (e.g. cultural, geographical)

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Outcomes or findings of significance to the review objectives

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**Practitioner types**
☒ Primary care provider (family doctor, general practitioner)
**Menopausal hormonal treatments discussed**
☒ Not discussed
**Treatment delivery methods**
☒ Not discussed
**Practitioner barriers to treatment:**
☒ Lack of education
☐ Perceived or actual risk(s)
☒ Patient ☐ Provider
☒ Cost/lack of insurance
☒ Other: MHT side effects or patient preference for non hormonal treatments
☒ Length of consultation time
☒ Other: preference for non-hormonal menopause treatments, likelihood of recommending MHT to family and friends, likelihood of self us of MHT. Lack of availability of MHT.
**Practitioner facilitators to treatment:**
☒ Personal use of MHT/HRT
☒ Family or friend use of MHT/HRT

**Primary menopause symptoms discussed/indications:**
☒ Not discussed
Author's conclusion

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| The study revealed a low rate of MHT prescribing among PCDs, with many relying on referrals to specialists for the management of menopausal symptoms. The findings underscore the need for strategies that include fulfilling professional training gaps, improving MHT availability and improving information dissemination for patients. |

Reviewer's comments

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| Stengths and limitations – first study of it's kind conducted in Malaysia<br>Study was conducted in PH clinics, may not reflect true practice |

Results

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| High positive perception of MHT prescribing for managing menopause symptoms, low prescribing rate despite this. Heavy reliance on referral to specialists. |

Reviewer: Emma Knapp Date: 12 January
Author(s) of the publication: Morris et al., Year: 2021
Journal: Menopause: The journal of the North American Menopause Society
Type of study
☒ Qualitative study
Methodology: Electronic questionnaire distributed to Health Care providers involved in the care of women undergoing menopausal transition. Spanning ;physicians, residents and fellows as well as APRNs.
Number of participants: 106
Characteristics of participants

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| 77% female<br>77% white |

Phenomena of interest

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| Explores the clinical management practices of healthcare providers who treat menopausal women in the US in an "urban Mid South area. Specifically examined their knowledge of prescribing and counselling related to the care of women who present with complaints or clinical findings of GSM. |

Setting and other context-related information (e.g. cultural, geographical)

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| 106 HCPs described as demographically diverse, encompassing multiple levels of training. |

Outcomes or findings of significance to the review objectives

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|---|
| Black box warning discussion on vaginal estrogens<br>Comfort discussing GSM issues |

**Practitioner types**

☒ Primary care provider (family doctor, general practitioner)

☒ Obstetrician/gynecologist

☒ Internal medicine

☒ APRN

☒ Other: Attendings, residents and Fellows. Specialty not described

**Menopausal hormonal treatments discussed**

☒ Estrogen replacement

☒ Testosterone replacement

☒ Other hormone replacement (Thyroid), Lubricants, moisturizers, Ospenifrene, DHEA and testosterone

**Treatment delivery methods**

☒ Vaginal applications

- ☒ capsule
- ☒ cream

☒ Other: CEE, Estradiol insert, compounded products, Estradiol ring,

**Practitioner barriers to treatment:**

☒ Lack of education

☒ Product knowledge or availability

☒ Comfort prescribing MHT/HRT

☒ Other: comfort discussing vulvovaginal symptoms, dyspareunia, urinary symptoms as well as boxed label black warning on vaginal estrogen products.

**Practitioner facilitators to treatment:**

☒ Other: being female provider

☒ Personal use of MHT/HRT and treatment preferences

**Primary menopause symptoms discussed/indications:**

☒ Genitourinary symptoms

Author's conclusion

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|---|
| Identifies gaps in HCPs awareness of the boxed warning on low dose vaginal estrogen as well as their comfort level in providing counselling regarding the risks, benefits and alternatives to vaginal estrogen. Female providers more likely to initiate discussion around GSM and prescribe as well as higher levels of self use of MHT. |

Reviewer's comments

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| Focuses on GSM exclusively and vaginal estrogens and other vaginal applications. No systemic delivery of hormones. |

Reviewer: Emma Knapp Date: 12 January
Author(s) of the publication: Qutob et al. Year: 2024
Journal: Cureus
Type of study Qualitative online survey
☒ Qualitative study
Methodology: Online survey conducted June to September 2023. Used convenient sampling approach. The survey link was distributed to the intended research participants in SA using social media platforms. Data was analysed using the Statistical Package for Social Sciences Software (SPSS)
Number of participants: 95
Characteristics of participants

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| 41.1% were aged 25034 yrs and more than half of them were male physicians. Disciplines were gynaecologist, endocrinologists, family medicine docs, internal medicine docs and general practitioners. The majority o f study participants were Saudis'. |

Phenomena of interest

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| To assess the attitudes, practices and obstacles faced by physicians in Saudi Arabia when it comes to menopausal hormone replacement therapy (HRT) |

Setting and other context-related information (e.g. cultural, geographical)

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|---|
| Saudi Arabia<br>30.5% practiced in military, security or national guard hospital<br>24.2% University hospital<br>13.7% Private healthcare centre<br>10.5% Private hospital |

Outcomes or findings of significance to the review objectives

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| Unusual practice around HRT prescribing and personal history of breast cancer!<br>Barriers were comfort around discussing risk benefit profile of HRT. Access to treatments sometimes an issue also. Short duration of therapy preferred even in the setting of premature menopause. |

**Practitioner types**
☒ Primary care provider (family doctor, general practitioner)
☒ Gynecologist
☒ Internal medicine
☒ Other: Endocrinologist
**Menopausal hormonal treatments discussed**
☒ Estrogen replacement
☒ Progesterone replacement
☒ Other hormone replacement (Thyroid)
☒ Non hormonal treatments – venlafaxine or gabapentin
☒ Lifestyle modifications
**Treatment delivery methods**
☒ Oral supplementation
☒ Transdermal applications
- ☒ Patch
- ☒ Gel
- ☐ Other

☒ Pellets

☒ Vaginal applications

☒ Other: compounded bioidentical hormones

**Practitioner barriers to treatment:**

☒ Perceived or actual risk(s)

☒ Patient ☐ Provider

☒ Comfort prescribing MHT/HRT (confidence)

☒ Other: consumer preference for complementary or alternative therapies. Difficulty explaining the HRT risks and benefits and HRT product availability. Lack of suitable HRT products. Medico legal consequences of prescribing HRT.

☒ Length of consultation time

**Practitioner facilitators to treatment:**

☒ Education

**Primary menopause symptoms discussed/indications:**

☒ Vasomotor symptoms

☒ Genitourinary symptoms

Author's conclusion

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|---|
| Some confounding results – most preferred type of "HRY" was the combined OCP. Barriers to prescribing included consumer preferences for complementary therapies, challenges explain the risks and benefits of HRT to women and shortage of suitable HRT products. |

Reviewer's comments

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| Interesting study, recent and reused the Yeganeh questionnaire which is kind of cool.<br>Knowledge is clearly lacking .. only 9.5% of respondents would prescribe HRT until the average age of menopause in the setting of premature menopause<br>Given how common the preference for using the COC was, it's unclear if the term "HRT" as used in the questionnaire actually encompasses OCP use also.<br>Preferred type of systemic HRT for women older than 50 33.7% said prefer no to use. 49.5% said oral which has a higher risk of venous thrombolytic events. |

Reviewer: Emma Knapp Date: 12 January
Author(s) of the publication: Stute et al., Year: 2022
Journal:Maturitas
Type of study
☒ Qualitative study
Methodology: Data from the Adelphi VMS Disease Specific Programme – a point in time survey conducted in 5 European countries and the US in 2020 were used. PCPs and gynecologists seeing more than 3 patients with VMS per week associated with menopause completed a syrvey and chart review, their patients were also invited to complete a survey and questionnaire.
Number of participants: 233
Characteristics of participants

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| 115 PCPs and 118 gynecologists |

Phenomena of interest

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| Elicited the views of physicians and patients with vasomotor symptoms associated with menopause on the impact of VMS and treatment patternes/perceptions |

Setting and other context-related information (e.g. cultural, geographical)

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|---|
| Europe and the US<br>UK, France, Germany, Italy, Spain and the US from Feb-Oct 2020 |

Outcomes or findings of significance to the review objectives

| |
|---|
| |

**Practitioner types**
☒ Primary care provider (family doctor, general practitioner)
☒ Gynecologist
☒ Other: plus 1816 patient charts and 854 patient completed surveys
**Menopausal hormonal treatments discussed**
☒ Estrogen replacement
☒ Progesterone replacement
☒ Non hormonal treatments SSRI and SNRI
**Treatment delivery methods**
☒ Not discussed
☒ Other: Just says HT, Bioidentical HT, SSRI/SNRIs and other
**Practitioner barriers to treatment:**
☒ Perceived or actual risk(s)
☒ Patient ☒ Provider
☒ Perceived or actual symptom severity
☒ Patient ☒ Provider
☒ Cost/lack of insurance
☒ Other: patient refusal of prescription drugs, side effects, patient preference for non medication options treatment not efficacious enough, treatment limited to VMS and not other menopausal symptoms, fear of addition/dependence
☒ Contraindications to MHT/HRT
**Practitioner facilitators to treatment:**
☒ Severity of menopausal symptoms
**Primary menopause symptoms discussed/indications:**
☒ Vasomotor symptoms
☒ Insomnia
☒ Low mood

☒ Other: personal and sexual relationships, perceptions of work productivity, social and leisure activities and health related quality of life.

Author's conclusion

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|---|
| The findings sugges a need for greater patient andphsycian education about menopausal VMS. Physicians need to appreciate the reasons patient who report bothersome VMS may be hesitatn to take VMS treatments and address their questions and concerns. |

Reviewer's comments

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| Included great measures of menopause beyond just the physical.<br>Surveyed participants from 5 European countries and the US.<br>Greater absenteeism, presenteeism and activity impairment on the WPAI with sever VMS |

Results

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| Women with VMS under HCP care may have had more sever VMS symptoms than the general population of women.<br>Women under medical care are presumed to be less adverse to prescription therapies<br>Physician inclusion was likely influenced by .. selection bias |

Reviewer: Emma Knapp Date: 12 January

Author(s) of the publication: Year: 2017

Journal: Yeganeh et al.,

Type of study: Qualitative study
Methodology: Self-administered questionnaires were emailed to members of the Royal Australian and New Zealand College of Obstetricians and Gynaecologists (RANZCOG) The Australian Menopause Society (AMS) and the Endocrine Society of Australia. GP's attending a national health education conference were also incited to participate. The study was conducted between Oct 2015- Feb 2016. 888 HP responded.
Number of participants: 888

Characteristics of participants

Incorported hospital based, solo and private practice settings. Ages ranging from < 40 years to > 60 years, male and female HCPs as well as carrying year of practice since graduation.

Phenomena of interest

To evaluate the knowledge and attitudes of Australian health professionals to menopausal hormone therapy.

Setting and other context-related information (e.g. cultural, geographical

Australian GPs, gynecologists and endocrinologists

Outcomes or findings of significance to the review objectives

Our study agrees with previous reports regarding potential contraindications so MHT prescribing including a history of venous thrombosis, breast cancer, cerebrovascular disease, ischemic heart disease and uterin cancer. Our study indicates variation between specialities and also with menopause society membership.

**Practitioner Types**
X Primary care provider (family doctor, general practitioner)
X Gynecologist
X Other: Endocrinologist

**Menopausal hormonal treatments discussed**

X Estrogen replacement
X Progesterone replacement

## Treatment delivery methods

X Oral supplementation
X Transdermal applications

## Practitioner barriers to treatment:

X Lack of education
X Perceived or actual risk(s)

☐ Patient X Provider

X Perceived or actual symptom severity
☐ Patient X Provider
X Comfort prescribing MHT/HRT
X Other: difficulties keeping up with MHT information, differences in recommendations from various government bodies, menopause/endocrine societies and medical colleges
X Contraindications to MHT/HRT

## Practitioner facilitators to treatment:

X Education

X Other: "Lack of awareness"

X Severity of menopausal symptoms

## Primary menopause symptoms discussed/indications:

X Vasomotor symptoms
X Genitourinary symptoms
X Early onset osteoporosis or CVD
X Other: well being, dyspareunia, colon cancer prevention, cognitive disorder prevention, manage vaginal bleeding, prevention of diabetes mellitus

Author's conclusion

Knowledge gaps may influence HP's attitudes and prescribing practices, consumer knowledge and preferences are also important.

Although most HPs will recommend HT for symptomatic menopausal women, variations exist between specialties in prescribing practices. Targeted education for HPs and consumers addressing particular menopause related topics and age groups is needed.

Collaboration between menopause societies, government, medical colleges and consumer groups is needed to facilitate the provision od evidence based, consistent information/messaged regarding menopause and menopausal therapies.

Reviewer's comments

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| Interesting commentary in this study on facilitators and barriers to prescribing by specialty. Membership to a menopause society was associated with an increased likelihood to prescribe MGY, particularly in light of potential indications and contraindications. |

Results

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| Limitations - online questionnaires meant the response rate of HPs couldn't be determined- some participants may have belonged to more than one society or college. Self reported knowledge and attitudes wer also limitations. Strengths included the novelty of the research, the recruitment of multiple medical specialties to participate and the large sample size. |