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Intersecting Burdens: Comorbidity, Symptom Severity, and Structural Gaps in Menopausal Care (MARIE WP2a Study)

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Abstract

Objective: Menopause, whether natural, medical, or surgical, is a universal yet heterogeneous health transition shaped by biological, psychological, socio-cultural, and systemic factors. Despite growing awareness in the UK, the experiences of those with multimorbidity, neurodivergence, reproductive trauma, or abrupt menopause remain under-represented in research and underserved in policy. This study aims to provide a critical lens to examine how social positioning, structural inequalities, and clinical marginalisation converge to influence symptom burden, care access, and health outcomes. **Design:**Prospective cross sectional study **Setting:** Urban and rural regions of UK. **Population or Sample:** Midlife women. **Methods:** We conducted a qualitative analysis using the Delanerolle and

Phiri Framework, which integrates four interdependent domains, *Biological, Psychological, Socio-cultural, and Health System* to capture the complexity of menopausal experiences. Data from in-depth interviews were coded both deductively, using framework-aligned a priori codes, and inductively to identify emergent themes. Intersectional analysis mapped the interplay between comorbidities, symptom severity, structural barriers, and care pathways across natural, medical, and surgical menopause. **Results:** Participants reported high symptom burden beyond vasomotor complaints, including cognitive impairment, mood disturbance, musculoskeletal pain, and urogenital dysfunction, often exacerbated by co-existing health conditions. Systemic barriers included delayed diagnosis, inadequate menopause-specific training for general practitioners, fragmented mental and physical health services, and limited non-pharmacological care options. Marginalised groups particularly those who were neurodivergent, from racially minoritised backgrounds, or living in socioeconomically deprived or rural areas faced compounded disadvantage. The framework enabled disaggregation of experiences into system-specific deficits, such as lack of trauma-informed primary care, absence of neurodiversity awareness in mental health services, and culturally non-adapted communication in community outreach. **Main Outcome Measures:** Themes emerged from the qualitative interviews. **Conclusions:** Menopause care in the UK requires redesign to reflect its intersectional and multisystem nature. Findings support the need for integrated, trauma-informed, and equity-driven models that address biological, psychological, socio-cultural, and systemic determinants in tandem. The Delanerolle and Phiri Framework provides a practical tool for translating lived experiences into targeted clinical, policy, and workplace interventions, with relevance for health systems globally.**Funding:** NIHR Research Capability Fund**.**

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Background

Evidence before this study

Existing menopause research prioritises vasomotor symptoms and hormone therapy, with limited focus on intersectionality, comorbidity, and health system barriers. Marginalised groups remain under-represented, and qualitative insights rarely translate into actionable system reform.

Added value of this study

Using the Delanerolle and Phiri Framework, this study integrates biological, psychological, socio-cultural, and health system domains to map intersecting burdens across natural, medical, and surgical menopause, producing practice-ready, equity-driven recommendations.

Implications of all the available evidence

Equitable, integrated, and trauma-informed menopause care models are essential to address complex, intersectional needs and can inform policy and service redesign in the UK and internationally.

Menopause, whether occurring naturally, or induced through medical or surgical intervention, represents a universal yet highly individual health transition, defined clinically as the absence of menstruation for 12 consecutive months in the absence of other causes [1, 2]. This transition spans a continuum, *perimenopause*, characterised by fluctuating hormones and irregular cycles; *menopause*, marking the final menstrual period; and *post-menopause*, where symptoms may persist and long-term health risks emerge [3-5]. Abrupt onset following interventions such as bilateral oophorectomy, chemotherapy, or pelvic radiotherapy often precipitates more severe symptom profiles and distinct care needs compared with gradual, natural transition [6].

Public and clinical discourse frequently centres on vasomotor symptoms and hormone replacement therapy (HRT) access, yet this narrow framing obscures the broader burden [7, 8]. Cognitive decline, mood disturbance, musculoskeletal pain, urogenital dysfunction, and increased long-term risks related to cardiometabolic, autoimmune, and neurological conditions are common and often compounded in those with pre-existing comorbidities. Individuals experiencing medical or surgical menopause frequently face sudden symptom escalation with limited preparatory information or tailored support [9].

An intersectional perspective highlights how clinical challenges are intensified by structural and social inequities [10, 11]. Socioeconomic disadvantage, occupational instability, cultural stigma, racial and ethnic disparities in diagnosis and treatment, neurodivergence, and histories of trauma interact to shape both the experience of symptoms and access to care [10]. The Delanerolle and Phiri Framework, comprising four interdependent domains of *Biological, Psychological, Socio-cultural*, and *Health System*, captures these overlapping influences, reframing menopause as a convergence of lifetime health trajectories, mental wellbeing, cultural norms, and health system responsiveness [12].

Despite increasing public awareness and recent UK policy reforms aimed at expanding HRT provision and menopause education, current strategies fail to address the diversity of symptom profiles, the high burden of comorbidity, and the compounded disadvantages faced by marginalised populations. Individuals with long-term mental health conditions, rare diseases, neurodevelopmental disorders, or treatment-induced menopause remain at particular risk of unmet needs [13].

Rationale

This study applies a qualitative, intersectional-informed analysis to chart the experiences of perimenopause, menopause, and post-menopause across natural, medical, and surgical pathways. It examines how biological, psychological, socio-cultural, and health system factors interact to shape symptom severity, comorbidity burden, and access to care. By centring participant narratives, the study generates evidence to inform responsive clinical service design and targeted policy interventions. While grounded in the UK context, the findings have international relevance, offering a framework for equitable, context-sensitive menopausal care across diverse health systems.

Methods

Design

A secondary qualitative analysis was conducted using 50 semi-structured interviews from the MARIE UK WP2a study. Participants included cisgender and transgender individuals aged 35–70 who had experienced perimenopause, menopause, or post-menopause through natural, medical, or surgical pathways.

Framework

Qualitative data were analysed using the **Delanerolle and Phiri Framework**, a structured model incorporating four interrelated domains of ***Biological, Psychological, Socio-cultural***, and ***Health System***. This framework was selected for its capacity to integrate biomedical, psychosocial, and structural determinants of health, allowing for systematic exploration of symptom profiles and care experiences.

The *Biological* domain captured physiological mechanisms, hormonal changes, and coexisting medical conditions influencing symptom severity and trajectories. The *Psychological* domain encompassed cognitive, emotional, and behavioural dimensions, including the influence of stress, trauma, and pre-existing mental health conditions. The Socio-cultural domain examined the role of cultural norms, gendered expectations, stigma, and socioeconomic status in shaping health behaviours and access to care. The *Health System* domain interrogated the organisation, quality, and accessibility of services, clinician expertise, and systemic barriers to timely and equitable treatment.

Data Analysis

All transcripts were deductively coded into the four domains. Within each domain, content analysis was used to identify comorbidities, symptom patterns, and severity (mild, moderate, severe). Symptom severity was cross-mapped with participants' comorbidity profiles and the health system responses they received. NVivo was used to manage the data. A thematic synthesis followed, integrating narrative quotes, frequency counts, and participant-reported impact across domains. A final cross-case matrix was developed to identify patterns and intersectional overlap.

Codes and sub-codes used for the scope of this study aligned to the Delanerolle and Phiri framework is shown in Table 1.

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Table 1. indicates the hierarchical code and sub-code system used alongside of operational definitions and key indicators to conduct the analysis.

Code	Sub-code	Operational Definition	Example Indicators
Access to care	GP engagement	Initial recognition, referrals	Number of visits before diagnosis
	Specialist services	Menopause clinics, endocrinology	Wait times, distance
Care quality	Clinician knowledge	Menopause-specific expertise	Appropriate prescribing
	Continuity of care	Consistent provider	Fragmented pathways
Policy and structure	Workplace policy	Menopause accommodation	Paid leave, adjustments
	Health equity	Intersectional care gaps	Services for marginalised groups
Treatment	HRT access	Prescribing barriers, supply	Contraindications, shortages
	Non-HRT management	Holistic care	Lifestyle advice, alternative therapies

Ethics

The study received integrated ethical and governance approval from the Health Research Authority and Health and Care Research Wales (Reference: 22/EE/0158) and sponsorship from Hampshire and Isle of Wight Healthcare NHS Foundation Trust (formally Southern Health NHS Foundation Trust). The study was conducted in accordance with the Declaration of Helsinki.

Results

A characteristics table of the study (Table 2) explain the sample. Thematic analysis revealed marked disparities in menopausal symptom experience, care access, and support, strongly shaped by intersecting biological, psychological, socio-cultural, and systemic factors (Table 3; Figure 1). Intersectional disadvantages arising from the overlap of comorbidity, neurodivergence, socioeconomic deprivation, and marginalised identities were evident across all domains.

Table 2. Characteristics table of the study sample.

PID	Menopause Stage	Menopause Type	HRT Use	GP Use	Gynaecology Use	Employment Status	Country
PID01	Perimenopause	Natural	Yes	Yes	No	Employed	England
PID02	Menopause	Natural	Yes	Yes	No	Employed	England
PID03	Postmenopause	Surgical	Yes	Yes	No	Employed	England
PID04	Menopause	Natural	Yes	Yes	No	Employed	England
PID05	Perimenopause	Natural	Yes	Yes	No	Employed	England
PID06	Menopause	Natural	Yes	Yes	No	Employed	England
PID07	Menopause	Natural	Yes	Yes	No	Employed	England
PID08	Menopause	Natural	Yes	Yes	No	Employed	England

PID09	Menopause	Natural	Yes	Yes	No	Employed	England
PID10	Menopause	Natural	Yes	Yes	No	Employed	England
PID11	Postmenopause	Surgical	Yes	Yes	No	Employed	England
PID12	Menopause	Natural	Yes	Yes	No	Employed	England
PID13	Menopause	Natural	Yes	Yes	No	Employed	England
PID14	Menopause	Natural	No	Yes	No	Employed	England
PID15	Menopause	Natural	Yes	Yes	No	Employed	England
PID16	Perimenopause	Natural	No	Yes	No	Employed	England
PID17	Perimenopause	Natural	No	Yes	No	Employed	England
PID18	Perimenopause	Natural	Yes	Yes	No	Employed	England
PID19	Menopause	Natural	Yes	Yes	No	Employed	England
PID20	Perimenopause	Natural	Yes	Yes	No	Employed	England
PID21	Menopause	Natural	No	Yes	No	Employed	England
PID22	Perimenopause	Natural	Yes	Yes	No	Employed	England
PID23	Postmenopause	Natural	Yes	Yes	Yes	Employed	England
PID24	Menopause	Natural	Yes	Yes	No	Employed	England
PID25	Menopause	Natural	Yes	Yes	No	Employed	England
PID26	Postmenopause	Natural	Yes	Yes	Yes	Employed	England
PID27	Menopause	Natural	Yes	Yes	No	Employed	England
PID28	Menopause	Natural	Yes	Yes	No	Employed	England
PID29	Menopause	Natural	No	Yes	No	Employed	England
PID30	Menopause	Natural	Yes	Yes	No	Employed	England
PID31	Postmenopause	Natural	Yes	Yes	No	Employed	England
PID32	Postmenopause	Natural	No	Yes	No	Unemployed	England
PID33	Menopause	Natural	Yes	Yes	No	Employed	England
PID34	Postmenopause	Natural	Yes	Yes	No	Employed	England
PID35	Menopause	Natural	Yes	Yes	No	Unemployed	England
PID36	Postmenopause	Natural	Yes	Yes	No	Unemployed	England
PID37	Menopause	Natural	Yes	Yes	Yes	Employed	Scotland
PID38	Postmenopause	Natural	Yes	Yes	No	Unemployed	England
PID39	Postmenopause	Natural	Yes	Yes	No	Employed	England
PID40	Postmenopause	Surgical	No	Yes	No	Employed	England
PID41	Perimenopause	Natural	No	Yes	No	Employed	England
PID42	Postmenopause	Natural	Yes	Yes	No	Employed	England
PID43	Perimenopause	Surgical	Yes	Yes	No	Employed	England
PID44	Menopause	Medical	Yes	Yes	No	Employed	England
PID45	Perimenopause	Natural	Yes	Yes	No	Employed	England
PID46	Menopause	Natural	Yes	Yes	No	Employed	Scotland
PID47	Menopause	Surgical	Yes	Yes	Yes	Employed	England
PID48	Perimenopause	Not stated	No	Yes	No	Employed	England

PID49	Postmenopause	Not stated	Yes	Yes	No	Unemployed	England
PID50	Perimenopause	Natural	Yes	Yes	No	Unemployed	England

Biological Domain

Participants with cardiometabolic, autoimmune, and endocrine disorders reported severe or accelerated menopausal symptoms that were frequently misattributed to existing conditions, delaying appropriate intervention. Abrupt hormonal withdrawal following BRCA-related surgery or premature ovarian insufficiency (POI) led to sudden, debilitating symptoms and elevated long-term health risks.

"I went through it early… but nobody explained why my heart was racing. I thought I was dying." (PID33)

"I've got diabetes and Crohn's, so when the hot flushes and night sweats started, they thought it was infection. It wasn't—it was menopause." (PID40)

The absence of multidisciplinary coordination left many managing complex, overlapping conditions without integrated support. For some, menopause appeared to exacerbate baseline disease activity, including interstitial cystitis and cardiovascular instability.

Pre-existing comorbidities and abrupt hormonal changes heightened physical symptom burden.

"The pain and tiredness I already had got worse overnight—like someone had turned the volume up on everything." (PID2)

"I'd stand up and the room would spin, but no one thought it was menopause-related." (PID30)

"The joint pain after menopause became relentless—painkillers just didn't touch it anymore." (PID7)

"One day I was fine, the next I was drenched in sweat every hour—my body went into shock." (PID22)

"The heat and sweating were unbearable—I'd have to change clothes three times a night."(PID27)

Menopausal symptoms emerged within the context of complex multimorbidity, including head and neck cancer treated with high-dose radiotherapy, thyroid dysfunction, long-term Mirena coil use, and historical heavy menstrual bleeding. Early symptoms were mild and managed with oestradiol and the Mirena coil, but severity escalated in late 2022–2023, with persistent nausea (a known trauma trigger from hyperemesis gravidarum), tinnitus, fatigue, and low energy. Symptom attribution was complicated by oncology sequelae, delaying targeted intervention and increasing cumulative symptom burden.

"The nausea was getting intolerable… I've had really bad hyperemesis gravidarum with both my pregnancies… feeling nauseous is a bit of a trigger for me." (PID17)

Psychological Domain

Cognitive dysfunction and psychological symptoms memory lapses, word-finding difficulties, mood instability were described as among the most distressing yet least understood aspects of menopause. Intersectional vulnerability was acute for those with pre-existing mental health diagnoses, trauma histories, or neurodivergence.

"I lost my words in meetings. I thought I had dementia. It terrified me." (PID40)

"I already had mental health issues, but menopause sent me into a spiral. I didn't want to live." (PID38)

"I'm autistic—change is hard enough, but this felt like my brain was being rewired overnight. My GP didn't believe menopause could do that." (PID47)

For neurodivergent participants, menopausal cognitive changes amplified sensory and executive function challenges, often leading to medical dismissal or misdiagnosis. Psychological distress was frequently treated as unrelated to menopause, and specialist referrals were rare. The lack of integrated menopause–mental health pathways emerged as a recurrent structural gap.

Mental health vulnerabilities compounded the impact of physical symptoms.

"Every time I lost my words at work, my heart sank. I thought—what if this is dementia?" (PID13)

“The lack of sleep and pain pushed me into a dark place. I didn’t want to get out of bed.”(PID7)

“I already struggle to process too much information—brain fog made everything overwhelming.”(PID27)

“The panic attacks came back worse than before—it was like my body remembered every bad thing at once.”(PID2)

“I’d wake up at 3 a.m. panicking about forgetting something important—it made the brain fog even worse.”(PID30)

The severity of her cognitive and emotional symptoms escalated alongside physical changes. She reported heightened anxiety, panic attacks linked to tinnitus, low mood, and difficulty processing care disruptions possibly amplified by her suspected ADHD or other neurodivergent traits. Her account suggested sensory sensitivity and rigidity around treatment routines, with significant psychological distress triggered by the prospect of HRT regime changes.

“I’m autistic—change is hard enough, but this felt like my brain was being rewired overnight. My GP didn’t believe menopause could do that.”

“The prospect of having to change my HRT really sent me in quite a bad spiral… I just couldn’t cope with it.” (PID17)

Socio-Cultural Domain

Workplace discrimination, gendered stigma, and social invisibility defined much of the socio-cultural experience. Participants described masking symptoms in professional settings, leading to presenteeism, performance decline, and, in some cases, job loss.

“No one at work talks about it… only the online groups got me through.” (PID29)

“I was a senior clinician, but when I started forgetting things, I felt ashamed. I didn’t tell anyone.” (PID44)

Early or surgical menopause brought additional grief related to reproductive loss, compounded by silence and marginalisation. Peer networks Facebook groups, WhatsApp chats, charity forums emerged as essential spaces for validation and knowledge exchange, underscoring the failure of mainstream services to meet cultural and emotional needs.

Workplace expectations and social stigma forced participants to conceal symptoms.

“I smiled through it at work, but inside I was counting the minutes until I could get home.”(PID30)

“After surgery, people expected me to just get on with things—cooking, looking after everyone—no one asked how I was coping.”(PID22)

“People judged me for my weight, so I kept quiet about the sweats and exhaustion.”(PID27)

“Friends just didn’t get it. I stopped talking about it and found comfort online instead.”(PID2)

Although not currently in formal employment, PID17’s workplace observations revealed a growing but inconsistent recognition of menopause, often driven by external social pressure rather than embedded policy. She noted the absence of formal menopause support during her working life and highlighted how informal networks (e.g., forums, peer discussions) remain vital sources of information and solidarity. Her account linked structural decision-making about drug licensing and prescribing rules to feelings of disempowerment and loss of agency.

“Decisions are made about our health and well-being, and we don’t have a say in it at all.” (PD17)

Health System Domain

Care pathways were characterised by delays, contradictions, and inequitable access. Many were denied HRT due to comorbidities without alternative management plans; others navigated conflicting advice across general practice, gynaecology, and mental health services.

“I was a midwife, but when it hit me, no one could help. I felt betrayed by the system I’d served.” (PID44)

“My GP just kept saying it was stress. I was crying every day, couldn’t sleep, couldn’t think straight, and still—no HRT.” (PID39)

Rural and underserved populations faced heightened barriers, with some accessing timely support only through personal networks or private care. Intersectional disadvantage was particularly evident where health system fragmentation overlapped with socioeconomic constraints, racial marginalisation, or neurodivergence, compounding both clinical and emotional harm.

The severity in symptoms was exacerbated by systemic failures. A service gap in Mirena coil provision for HRT purposes, caused by policy changes shifting insertion to sexual health clinics without integrated menopause care. This discontinuity triggered high anxiety and reinforced feelings of being “lost in the system.” recounting funding refusals for menopause-specific GP training, inconsistent HRT availability, and restricted access to testosterone treatments such as Androfeme.

“Somebody sitting in an office somewhere taking these decisions away from me… I feel strongly that this is a massive gap within women’s health.” (PID17)

The capacity to self-fund private consultations buffered the worst impacts, but she expressed guilt knowing most women could not do the same framing this inequity as a moral and systemic failing. These findings illustrates how **high symptom severity** both physical (nausea, tinnitus, fatigue) and psychological (panic, anxiety, cognitive disruption) can emerge from the interaction of complex medical histories, suspected neurodivergence, and rigid or inaccessible care pathways. Her experience demonstrates that severity is not only a function of hormonal change but is magnified by trauma triggers, sensory sensitivities, service fragmentation, and loss of patient agency. Within the Delanerolle & Phiri framework, her account spans all four domains, with particular emphasis on the **health system domain as an active driver** of symptom escalation.

Gaps in clinical pathways often prolonged or worsened symptoms.

“One doctor told me I needed HRT, another said no—it went on for months while I struggled.”(PID30)

PID22 said, *“They kept saying it was too soon after surgery for HRT, but the symptoms were unbearable.”*

PID7 recalled, *“I had to fight for every appointment—by the time I got one, the pain was constant.”*

PID27 noted, *“There’s no menopause clinic near me. My GP tries, but they don’t have the training.”*

PID2 explained, *“They told me it was just ageing—I believed them until I couldn’t function anymore.”*

“Every time I saw a new doctor, I had to start my story again—no one joined the dots.”(PID13)

Table 3. Summary of findings.

Framework Domain	Subthemes	Example PIDs	Symptom Severity
Biological	Cardiometabolic comorbidity; Hormonal disruption	PID40, PID42, PID33, PID39, PID17	High
Psychological	Cognitive loss; Suicidality; ADHD	PID38, PID45, PID40, PID47, PID17	High
Socio-cultural	Stigma; Peer support; Reproductive injustice	PID29, PID41, PID49, PID44, PID17	Moderate
Health System	Delayed HRT; Fragmented care; Workforce attrition	PID39, PID46, PID38, PID44, PIS17	Moderate–High

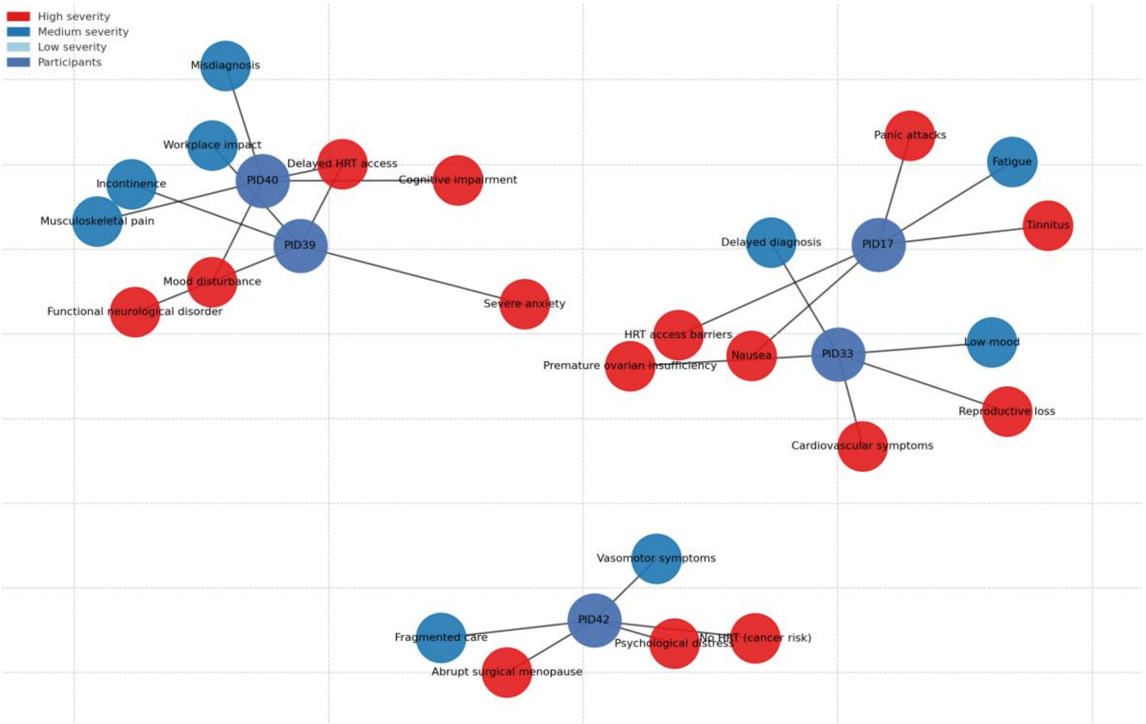

Figure 1. Symptom severity map based on PID40, PID42, PID33, PID39 and PID17.

Average symptom severity scores were highest in the *Biological and Psychological* domains (Figure 2), suggesting these areas had a more profound symptom impact. In contrast, the *Socio-cultural* domain showed the lowest average severity, while the *Health System* domain exhibited a moderate increase, reflecting the interplay between structural barriers and symptom experience.

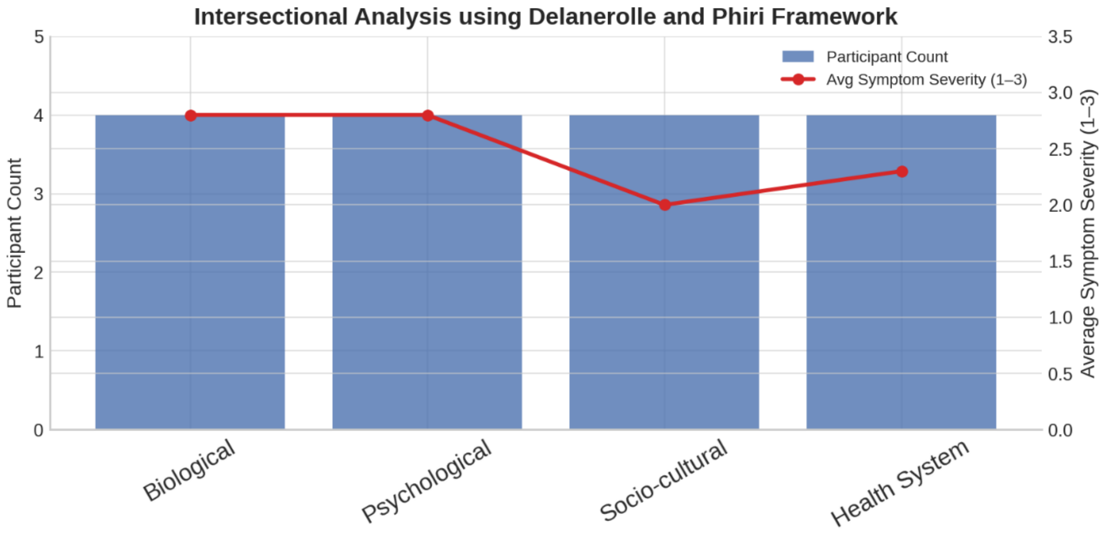

Figure 2. : Intersectional analysis using the Delanerolle & Phiri theory and framework.

Discussion

Intersectionality, applied through qualitative methodologies, offers a critical lens to examine the compounded effects of social positioning, structural discrimination, and clinical marginalisation in women's health. In the context of menopause, qualitative approaches capture nuanced lived experiences that remain obscured by biomedical metrics alone. The Delanerolle and Phiri Framework, which categorises inequalities across four intersecting domains of *biological*, *psychological*, *socio-cultural*, and *health system* has revealed how comorbidities, stigma, and fragmented care pathways influence both symptom burden and access to quality care [12].

In the UK, where menopause has entered mainstream discourse, our findings challenge the adequacy of one-size-fits-all policies. Standardised approaches overlook the needs of individuals with neurodivergence, chronic illness, or reproductive trauma, and risk exacerbating inequities. An intersectional perspective is therefore essential to achieving equity in clinical practice, education, and service delivery. Without it, the most vulnerable populations remain underserved despite policy advances.

Clinical Impact

This study demonstrates that the severity and management of menopausal symptoms are shaped by the interaction between co-existing health conditions and social identities. Participants with cardiometabolic disease, neurodevelopmental disorders, or complex trauma histories described amplified cognitive, emotional, and somatic symptoms, often compounded by diagnostic delays and fragmented treatment.

Current UK clinical pathways inadequately reflect this complexity. Menopause care remains siloed, with pharmacological management separated from mental and physical health support. This division neglects the biopsychosocial interplay central to menopause and disproportionately disadvantages racially minoritised, neurodivergent, and socioeconomically disadvantaged groups. For those declining pharmacological treatment, non-medical options are often limited to generic lifestyle advice or referrals to overstretched services, further entrenching barriers.

Integrated, trauma-informed, and person-centred models are required. Routine assessments should screen for mental health disorders, neurodiversity, histories of reproductive injustice, and social determinants of health. Clinicians must be equipped to deliver culturally competent, inclusive care that bridges physical and mental health, ensuring continuity and equity.

Beyond the Academic Impact

Despite an expanding evidence base, much menopause research remains disconnected from practice. Interventions, including digital platforms, pharmacological therapies, and educational tools are often developed without sustainable adoption plans, clear licensing pathways, or integration into NHS and community services. This limits their reach, undermines public trust, and wastes public investment. Industry-led solutions may offer alternatives, but concerns persist over data use, ownership, and potential harm.

The financial consequences of narrow, non-translational research are significant. Publicly funded projects that fail to embed sustainability risk duplicating efforts, burdening NHS services, and excluding underserved populations. Proprietary licensing models, poor interoperability, and limited clinical relevance reduce value for patients and clinicians, placing avoidable costs on the taxpayer. Narrow methodologies also perpetuate epistemic exclusion by under-representing racially minoritised, neurodivergent, socioeconomically disadvantaged, and LGBTQ+ populations in study design and dissemination.

A Paradigm Shift: The Delanerolle and Phiri Framework

The Delanerolle and Phiri Framework offers an integrated approach that addresses structural, clinical, and experiential complexity [12]. Moving beyond frequency-based coding or abstracted thematic categorisation, it situates narratives within intersectional contexts, combining socio-structural mapping, experiential trajectory modelling, and translation into policy- and practice-ready outputs.

Socio-structural coding links participant experiences to determinants such as race, income, disability, and geography. Experiential trajectory modelling captures how menopause symptoms evolve across natural, surgical, premature, and medically induced pathways, shaping care access and self-management. Translation layering converts these data into actionable outputs, including tailored escalation pathways, culturally adapted communication prompts, and intersectionality-informed public health recommendations.

By retaining narrative complexity while structuring it for decision-making, the framework generates evidence capable of informing NHS practice, commissioning, and workplace policy, bridging the research–practice divide while embedding equity.

Healthcare Service Impact

Across primary, acute, community, and mental health services, we identified persistent fragmentation, insufficient training, and minimal accountability, particularly for individuals with multimorbidity, neurodivergence, or complex psychosocial histories.

In primary care, participants frequently reported symptom minimisation, misdiagnosis, and reluctance to prescribe HRT, especially in the presence of comorbidities. Antidepressants were often prescribed inappropriately, reflecting a lack of menopause-specific training. Acute care settings rarely recognised menopause as a contributing factor in presentations such as cognitive decline or cardiovascular events, leading to missed opportunities for prevention and delayed management. Community services were often inaccessible outside urban areas, with little integration across care settings. Mental health services operated in isolation from menopause care, failing to link psychological symptoms with hormonal changes, particularly in those with trauma histories.

Our intersectional, multisystem approach revealed how these deficits intersect, producing compounded disadvantage. The analysis identified actionable, system-specific gaps such as the absence of trauma-informed care in general practice, lack of neurodiversity awareness in mental health triage, and inadequate cultural adaptation in community outreach offering a roadmap for policy and commissioning reform.

Policy Impact

Current UK menopause policies inadequately address intersectional disparities [14]. Future reforms must prioritise tailored workplace support, national clinical guidelines that account for diverse menopausal pathways, and equity-driven funding for menopause research. Expanding self-referral routes, implementing digital triage, and developing regional menopause hubs could help close access gaps. Global health systems can adapt these principles to embed intersectionality in policy, ensuring that menopause care is equitable, context-sensitive, and responsive to diverse lived experiences.

The IMS 2024 White Paper emphasises a biopsychosocial approach to menopause diagnosis and management, integrating biological, psychological, and social determinants to optimise care [15]. This reflects a shift towards holistic, patient-centred models that account for individual symptom profiles, comorbidities, and contextual factors. In contrast, cognitive health in menopause, while increasingly recognised, remains an area with limited high-quality evidence, particularly regarding the role of HRT. The position statement of The North American Menopause Society (NAMS) on hormone therapy on brain fog underscores that HRT should not be promoted primarily for cognitive benefit, given the paucity of robust data, and instead offers a practical toolkit for clinicians to assess and manage cognitive complaints through multidisciplinary and non-pharmacological strategies [16]. Our findings build on these foundations, advancing the IMS approach by embedding intersectional health inequalities, lived experience insights, and cross-cultural perspectives, while operationalising findings into actionable, scalable interventions. The MARIE project takes the IMS vision ten steps further bridging evidence to real-world adoption, sustainability, and policy integration.

Conclusions

In the UK, menopausal symptom burden is intensified by intersecting comorbidities, neurodivergence, and structural inequities, while fragmented services perpetuate delays and mismanagement. Urgent, coordinated reform spanning clinical training, integrated care pathways, workplace policy, and equitable research funding is essential to ensure accessible, person-centred menopause care for all.

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