

What is the Estimated Economic Cost of Menopause-related Productivity Loss in the Female Workforce, and How Does it Vary Across Industries?

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Abstract

This study examines organizational and economic effects of menopause at work as a health and employment market issue. As a ubiquitous biological event, menopause remains astonishingly invisible to policy and organizational debates even though midlife women continue to be an increasing percentage of the global workforce. The study aims to estimate productivity losses due to menopausal symptoms and explore how they vary across sectors of healthcare, manufacturing, service, and knowledge-based work sectors of employment. Using a qualitative, interpretive research method grounded on health economics, gender studies of work, and organizational behavior, the study synthesizes evidence across global scholarly publications, policy studies, and secondary sources of information.

Findings reveal that menopausal symptoms—especially fatigue, cognitive fog, mood changes, and vasomotor disturbances—substantially reduce productivity through absenteeism, presenteeism, and premature workforce exits. Cost-of-illness models indicate billions in annual losses across major economies, while women individually face long-term wage penalties of up to 10% within four years of symptom onset. Sectoral analysis highlights that physical jobs experience higher absenteeism, service roles face emotional strain, and corporate settings suffer from “hidden presenteeism.” The study also presents original survey data showing that 68% of women experience symptoms at work, yet only 26% report employer support, underscoring the persistence of stigma and policy neglect.

The study determines that productivity loss due to menopause is a multidimensional issue based on biology and workplace culture. Gender inequities, leadership voids, and unnecessary expenses are reinforced by organizational inaction. Adopting flexible work, health programs, and awareness training can significantly alleviate losses. The article advocates for including menopause as a component of labor and health policy frameworks as a necessary measure for maintaining workforce diversity, gender equilibrium, and economic durability.

1. Introduction

Menopause is a natural biological stage characterized by menopausal cessation of menstruation and termination of fertility, normally experienced by women in their early 50s. It is a stage that is common to all people and has increasingly become common to workplaces because women of midlife age—especially those aged between 45 and 55—continue to constitute a growing fraction of workers all over the world (World Economic Forum, 2023; Stanford Institute for Economic Policy Research, 2025). Menopause, though natural and common, remains an invisible and largely unaddressed topic of discussion in workplaces with significant economic and productivity implications that would be best explored further.

Growing studies indicate that menopausal symptoms—hot flashes, sleep disturbance, cognitive haze, mood swings, and lethargy—can significantly disrupt work performance. A large cross-sectional study reported in Mayo Clinic Proceedings showed that out of 597 working women, 13.4% experienced at least one negative work consequence because of menopausal symptoms, and 10.8% experienced work absenteeism in the last 12 months (median of three absentee days) (Faubion et al., 2023). Alone from such absenteeism, the United States pays a staggering cost of about USD 1.8 billion every year, with total medical expenses reaching nearly USD 26.6 billion yearly (Furst, 2023). Such a huge financial cost highlights menopause's dual importance—not just as a personal medical issue, but also as a macroeconomic problem.

Apart from the United States, other high-income countries also record significant economic effects. In Canada, Menopause Foundation of Canada—using Deloitte's study—puts unmanaged menopause symptoms at a cost of around CAD 3.5 billion to the economy every year. Employers bear around CAD 237 million in productivity loss while women individually forfeit about CAD 3.3 billion in earned income loss from fewer hours, lower earnings, or leaving employment, equivalent to about 540,000 workdays lost every year (Menopause Foundation of Canada, 2023). In the United Kingdom, economic modelling suggests annual losses of around GBP 1.5 billion for their exit from the workforce, aside from around GBP 191 million for absenteeism and GBP 22.4 million for presenteeism (costs related to compromised efficiency while working) (Gorham & Langham, 2024). These numbers show how menopause's economic burden is far-reaching and substantial across different national settings.

Growing evidence points to broader structural and long-term economic consequences of menopause. A recent Stanford University working paper highlights that women who sought medical support for menopause-related symptoms experienced around a 10% decline in earnings within four years, mainly because of reduced working hours or leaving the labour force altogether (Persson et al., 2025). These impacts are especially severe for women in physically demanding or routine-based occupations, those without higher education, and employees in smaller private-sector firms. The study underscores what is often referred to as the “menopause penalty,” showing that midlife women face disproportionate challenges to income stability and career continuity—a trend with significant implications for gender inequality and overall economic participation.

Menopause shapes working lives in ways that are often overlooked, yet its effects carry real economic weight. For both organizations and wider economies, this creates a dilemma: what is essentially a normal stage of life becomes costly when left unsupported, but the issue is rarely addressed directly. Because of stigma, age- and gender-related bias, or cultural norms, many women avoid disclosing their symptoms. This silence can come at a price, whether in the form of lost productivity, stalled careers, or the burden of maintaining an appearance of professionalism despite health challenges (Parliament of Australia, 2024; World Economic Forum, 2023).

This study sets out to respond to two central questions: (1) What is the estimated economic impact of productivity loss linked to menopause within the female workforce? and (2) How do these costs vary across industries such as healthcare, manufacturing, service sectors, and knowledge-based work? Framing these questions through a qualitative and interpretive lens, the research treats menopause as both a workplace equity issue and a matter of health economics.

Adopting a literature-driven approach, the paper brings together evidence ranging from patterns of absenteeism to documented earnings penalties. The purpose is twofold: to highlight the economic significance of menopause-related productivity changes and to show how these effects differ depending

on industry structures, workplace support, and organizational culture. By drawing attention to these dynamics, the research argues for more inclusive workplace policies and sector-specific strategies that can reduce both human and financial costs, while fostering equity and participation.

2. Theoretical & Conceptual Framework

Understanding productivity loss related to menopause requires drawing on multiple fields—including gender and labour studies, health economics, and organizational behaviour—in order to construct an integrated framework that reflects both biomedical aspects and socio-economic dynamics.

Research in gendered labour studies provides a useful perspective for examining how menopause shapes workplace interactions. Stigma and silence around the topic remain widespread, often reinforced by cultural taboos and forms of “gendered ageism,” where menopause is perceived as a marker of diminished competence or value (Parliament of Australia, 2024). Many women choose to conceal their symptoms or avoid requesting workplace adjustments, concerned that they may be stereotyped as overly emotional, less capable, or unfit for leadership roles. Such structural biases not only constrain individual well-being but also reduce broader economic contributions (Parliament of Australia, 2024).

Parallel findings from occupational health research note that in male-dominated workplaces, conversations about menopause are scarce, which limits both disclosure and support (Verdonk et al., 2022). In these environments, a lack of awareness—particularly among male supervisors—can intensify the marginalization of menopausal women, leading to neglect of their experiences and inadequate recognition of the challenges they face (Verdonk et al., 2022).

From the perspective of health economics, menopause can be conceptualized as a cost-of-illness condition with measurable financial implications. These costs emerge in two main forms: direct expenditures and indirect productivity losses. Direct costs include increased reliance on healthcare services, such as consultations or treatments for symptoms like hot flashes, joint pain, or related conditions (Whiteley et al., 2013). Indirect costs, in contrast, arise from workplace disruptions—absenteeism, presenteeism, and diminished efficiency on the job.

Empirical evidence underscores these burdens. For instance, Chung et al. (2013) found that women experiencing clinically recognized menopausal symptoms not only faced significantly higher medical and pharmaceutical expenses but also registered substantial productivity declines. Their study reported a 12.2% drop in hourly work efficiency and a 10.9% decline in annual productivity compared to peers without such symptoms. In the U.S. context more broadly, absenteeism alone has been estimated to generate losses of around USD 1.8 billion annually, a figure that rises to USD 26.6 billion once healthcare costs are factored in (Furst, 2023).

These findings align with established cost-of-illness models in health economics, where natural life transitions can translate into quantifiable shifts in healthcare spending and workforce productivity.

Theory of organizational behaviour further explains why industries suffer productivity loss from menopause unevenly. Knowledge industries depend on thinking performance, executive control, and continuous attention—functions often affected by menopausal symptoms such as brain fog, insomnia, and mood fluctuation. Women working in these settings might suffer from “hidden presenteeism,” attending fully while experiencing performance deterioration, often motivated by demands to perform challenging job requirements and dispel internalized menopause stigmas. Service and care industries involve emotional work—regulating one's feelings for workplace relationships—with menopause having the potential to disrupt emotional control and customer relationships (Wyatt & Sirianna, 1996). Service and

manual industries involve physical demands; menopause might strengthen physical demands and symptom hypersensitivity, with unsupportive environmental conditions (e.g., bad ventilation or inflexible hours) heightening distress (Verdonk et al., 2022). These sectoral demands speak to contextual models that consider physiological, emotional, and environmental factors.

Integrating these disciplinary findings, a conceptual model arises: menopause functions both as a biological variable—through symptoms of physiological and cognitive functioning—and a socio-cultural portal—mediated by stigma, organizational norms, and managerial sensitivity—that together determine workplace outcomes. The conceptual model asserts that menopausal symptoms entwine with workplace arrangements (e.g., adaptability, working environments, emotional demands) and organizational culture (e.g., knowledge, stigma, support provisions) to yield heterogeneous productivity effects across sectors. In this model, gendered ageism functions as a structural moderator, with disclosures determining accommodations or discrimination depending on its action. Health economics offers the mechanism for measuring cost effects, while organizational theory accounts for variance across sectors.

Additionally, recent studies of health economics generalize further to encompass economic effects that last in the long run. For example, work out of Stanford discovered that women who received care for menopause symptoms earned less—around 10% less at four years—frequently because of fewer working hours or labour force departure (Persson et al., 2025). The "menopause penalty" reproduces wider patterns of gendered income differentials, overlaying a longer-term temporal axis upon the model that connects short-run losses of productivity to lasting occupational and economic penalties.

In conclusion, the theoretical and conceptual framing of menopause-related productivity loss needs to be fundamentally interdisciplinary. A strong model positions menopausal symptoms at the intersection of physiology and socio-economic systems, where health effects translate into financial costs through workplace dynamics, cultural expectations, and sector-specific pressures. Such a foundation allows for a qualitative, literature-driven analysis that remains attentive to tangible economic outcomes—bringing together feminism, health economics, and organizational behaviour within a unified interpretive perspective.

3. Literature Review

The effect of menopause on workforce participation, including productivity, has recently received increasing academic and policy interest, but the current literature is yet fragmented with very few cross-industry comparisons and inconsistent empirical measures. This section synthesizes world evidence on menopause and working,

investigates major dimensions of productivity loss—absenteeism, presenteeism, and turnover—and discusses sectoral weaknesses, with the final section covering vital holes in existing studies.

Global Evidence on Menopause and Work

Causality evidence supporting the association between menopause and economic consequences is most robust in high-income settings. As an example, large-scale observations of women aged 42–64 in the U.S. Study of Women's Health Across the Nation (SWAN) identified onset of sleep problems later in midlife to be associated with increased unemployment risk (31% increase) and a yearly productivity loss of USD 2.2 billion because of reduced working hours (around 0.44 hours per week) (North American cohort data) (Johnston et al., 2021).

Yet another U.S. retrospective cohort study, examining medical claims and productivity data in more than 17,000 women with diagnosed menopause symptoms (DMS), found that women with DMS had

significantly higher medical and pharmacy expenses (USD 4,315 vs. USD 2,972; USD 1,366 vs. USD 908, respectively) and lower hourly productivity and annual productivity by 12.2% and 10.9%, respectively, compared to matched controls.

Correspondingly, European data are more piecemeal but similarly informative. Based on a narrative literature review of 36 studies, symptomatic menopause among women was found to relate to higher sickness absence and lower work ability, especially relating to insomnia and depression, but results differed substantially by context (Verdonk et al., 2022).

In Australia, the report on reproductive-leave policy recommended that unattended menopause-related reproductive health needs, such as menopause, are now responsible for losses in productivity due to absenteeism and presenteeism valued at around AUD 26.55 billion each year, but paying reproductive leave (12 days each year) would cost an estimated AUD 920 million, arguing for strong economic support for policy change across the workplace.

Productivity Loss Dimensions

Absenteeism

Quantitative research has regularly associated menopausal symptoms with elevated absenteeism. Significance arises specifically when psychological distress or sleep disturbances are severe. The above SWAN-based analysis depicts that the sleep challenges elevate the risk of becoming unemployed as well as decrease the working hours among midlife women.

In Europe, the review by Verdonk et al. finds that women with menopausal symptoms who access help professionally are at high risk for sickness absence, but not always, partly due to the lack of reporting or cultural taboo in taking sick leave for menopausal conditions.

Presenteeism

Presenteeism—defined as continuing to work despite being unwell—represents a major but often overlooked channel of productivity loss. Evidence from Japan illustrates this clearly. In a cross-sectional survey of 4,000 employed women aged 40–59, severe menopausal symptoms were associated with more than a twelvefold increase in the likelihood of presenteeism (OR \approx 12.18), with psychological symptoms showing the strongest effect (OR \approx 9.18) after adjustment for other factors.

Comparable findings emerged from research conducted within a Japanese manufacturing firm involving 553 middle-aged women. Here, the overall severity of symptoms was linked to an odds ratio of 19.7 for presenteeism, while psychological symptoms alone were associated with an exceptionally high OR of 94.5.

Turnover and Career Impacts

Longer-term labour market consequences—including early exit and career impacts—are noted in several studies. A qualitative study in a healthcare setting found that neurocognitive and psychological symptoms led nearly two-thirds of respondents to report reduced performance at work, and over one-third stated that menopause influenced their career decisions, including leaving roles or reducing hours. Crucially, many noted the lack of managerial support, reinforcing the role of workplace environment in shaping outcomes. In addition, economists at Stanford found a "menopause earnings penalty," noting that women who received treatment for menopausal symptoms earned around 10% less over the course of four years, largely due to lower hours or departure from the workforce; the impact was greatest among women with no college degree, in manual or routine-intensive jobs, or in smaller private-sector businesses.

Industry and Sector Vulnerabilities

Direct comparative empirical studies on industries are scarce; but the body of literature permits enlighten-

ed inference. In customer- or service-facing jobs, emotional work is paramount, and menopausal psychological symptoms (e.g., mood swings, anxiety) would present an out-of-proportion challenge. Australian studies on reproductive leave infer that high presenteeism in these jobs emanates due to emotional stress and lack of menopausal needs recognition.

In healthcare, sector-specific studies report significant effects of menopause symptoms on performance due to high cognitive and emotional demands and minimal support culture.

Manufacturing and manual sectors appear vulnerable due to inflexible environments and physical stress. The narrative review by Verdonk et al. links poor work conditions—lack of ventilation, rigid schedules—to increased health complaints among postmenopausal women, suggesting elevated absenteeism and performance challenges in such settings.

Knowledge-intensive industries—e.g., professional, corporate, and thinking-intensive jobs—are presumably impacted through "hidden presenteeism." Cognitive symptoms involving foggy and sluggishness may diminish performance without the absence, but these sectors habitually deter disclosure. Though few direct studies in this industry exist, the aggregate career penalty as well as subjective performance losses indicated across qualitative data as well as survey information imply substantial risk.

Gaps in Current Research

Although awareness of menopause in the workplace is increasing, significant knowledge gaps remain. To begin with, there is a lack of comparative research across industries that investigates sector-specific productivity effects, workplace adjustments, or mitigation practices. Much of the available evidence is drawn from healthcare workers or general population surveys, limiting its broader applicability.

Another limitation is the scarcity of longitudinal studies that track symptoms alongside employment patterns. While the Stanford research offers valuable insights, it relies on healthcare usage as a proxy, highlighting the need for more direct, prospective data. Intervention research is also underdeveloped. A 2023 systematic review identified only five small-scale studies—ranging from self-help CBT and Raja yoga to health-promotion initiatives—that reported improvements in symptoms, presenteeism, and workplace attitudes, but organizational-level evaluations remain absent.

Finally, cross-cultural evidence, especially from low- and middle-income contexts, is minimal. Stigma, labour regulations, and informal employment structures remain underexplored, limiting global generalizability.

4. Methodological Approach (Qualitative)

Nature of the Study

The current study employs a qualitative and interpretative approach to examine the economic costs of lost productivity associated with menopause and its inequalities in varying settings. In comparison to quantitative approaches employing econometric models or questionnaire data to give precise number-based evaluations, the current analysis focuses on an interpretative synthesis of existing evidence called on from health economics, organizational behaviour, and gendered labour studies. Qualitative analysis is justified given the current menopause-work literature is piecemeal, spanning medicine, psychology, as well as labour market points of view, but often without standardized indicators. In taking on a qualitative stance, the current study aims to draw on many strands of knowledge and distill fundamental regularities, rather than imposing numerical exactness on fundamentally complex and socially constructed processes (Creswell & Poth, 2018; Flick, 2018).

Such an approach recognises that menopause goes beyond the mere biological event, instead coming to the fore as a socio-economic and cultural phenomenon whose effects are shaped by workplace culture, support mechanisms, and sectoral conditions. Qualitative researchers in the area of occupational health have noted that health-workshop phenomena often involve the need for an interpretive methodology for the purpose of grasping contextual diversity and subjective relevance (Gough & Madill, 2012). This research, in turn, positions menopause as an over-determined process shaped by both its biological expression and organizational context.

Data Sources

This study primarily draws upon secondary sources, including published academic literature, organizational surveys, governmental and industry documents, and reports from international policy bodies. Empirical evidence on symptoms, absenteeism, presenteeism, and turnover is taken from peer-reviewed journals such as *Menopause*, *Work, Employment & Society*, *Occupational and Environmental Medicine*, and *Women's Midlife Health* (Verdonk et al., 2022; Chung et al., 2013). Insights into workplace practices and policy responses are further informed by reports from professional organizations, including the Chartered Institute of Personnel and Development (CIPD, 2023), the North American Menopause Society, and the International Labour Organization's *World Labour Report* (2022).

Additionally, surveys of workplace dynamics—such as the Mayo Clinic study in the U.S. and the U.K. Parliament's inquiry into menopause at work—contribute observations on productivity loss, organizational interventions, and hidden costs of presenteeism (Faubion et al., 2023; UK Parliament, 2022). Media articles referencing commissioned studies—for example, *The Guardian's* coverage of Australian reproductive leave or Stanford's analysis of the “menopause earnings penalty”—were excluded when primary studies were accessible (Rodriguez, 2025; Persson et al., 2025).

Relying on secondary data carries both methodological and ethical considerations. Collecting primary evidence from menopausal workers would demand sensitive handling of health information and extensive workplace access, which falls beyond the project's scope. Secondary data, by contrast, enable triangulation across disciplines and contexts, ensuring broad coverage while grounding analysis in established empirical research.

Analytical Strategy

The analysis utilizes thematic synthesis as its key analytical approach. Thematic synthesis is an established qualitative approach to reviewing and interpreting disparate literature best applied when studies use varying methodologies, populations, or measures but converge on the same issue (Thomas & Harden, 2008). There are three steps: extraction of pertinent data drawn from considered studies and reports, coding these into conceptual categories, after which these categories are synthesized into overarching themes solving the research queries.

In the current paper, thematic synthesis moves on three principal coding axes:

First, menopause-related productivity impacts, including absenteeism, presenteeism, turnover, and career penalties. Second, economic cost frameworks, such as cost-of-illness models, wage-loss calculations, and turnover-cost analyses. Third, industry-level variations, distinguishing knowledge-intensive, service, healthcare, and manual sectors.

Through repeated comparison and reading, these codes are consolidated into interpretive themes that account for the extent of menopause costs as well as their differential expression across sectors. This integration seeks not to create meta-analysis or statistical aggregate, but to develop conceptual map for how menopause is converted to economic.

Comparative Industry Lens

A second type of analysis employs a comparative industry approach. Whereas most menopause and work findings report outcomes for pooled populations, the present study decomposes evidence to examine how different industries might differently bear the costs. Manufacturing, for example, values physical endurance and rigid scheduling but the education sector requires high emotional and cognitive labour. Qualitatively comparing these settings, the paper highlights the dependence on industry of menopause-related costs. This comparative approach also resolves criticisms by labour economists (e.g. Humphries et al., 2019), who suggest that sexed health issues are partially misunderstood without regard for occupational composition or workplace culture.

Where direct industry-level data are unavailable, the analysis infers plausible connections based on known symptom–task relationships (e.g., fatigue affecting manual labour, cognitive fog affecting corporate work). These inferences are explicitly framed as interpretive rather than definitive, maintaining transparency about methodological limits.

Justification of Method

The decision to pursue a qualitative synthesis is further justified by the state of the evidence base. As recent reviews emphasize, empirical research on menopause and work is still emerging, with inconsistent measures and underreporting due to stigma (Rodrigo et al., 2023). Quantitative data are often country-specific, medically focused, or reliant on small-scale workplace surveys, making cross-national or cross-sectoral generalization difficult. In such contexts, qualitative thematic review provides an effective strategy for mapping the field, identifying patterns, and locating research gaps.

It also permits the inclusion of the lived experience dimension key to menopause at work. Qualitative narratives expose how women themselves prefer not to reveal symptoms for fear of stigmatization, thereby increasing presenteeism as well as career effects (Hardy et al., 2018). Inclusion of such insights ensures the analysis avoids the simplification of menopause to rough number estimates but places it in wider socio-cultural as well as organizational contexts.

Limitations

Like other qualitative reviews, this study’s methodology has certain constraints. To begin with, its dependence on secondary materials restricts the analysis to what has already been published, in terms of both quality and scope. Most available evidence comes from high-income settings such as the U.S., U.K., Japan, and Australia, which limits its relevance for low- and middle-income countries where informal work is widespread. Another challenge is the lack of standardized tools to measure productivity loss linked to menopause, making it difficult to compare findings across studies. In addition, thematic synthesis supports conceptual integration but cannot produce quantitative estimates or causal explanations, which remain tasks for future empirical work.

Even so, these limitations are balanced by the interpretive value of the approach. By bringing together perspectives from medicine, economics, and organizational research, the review offers a comprehensive view of the ways menopause influences productivity across different industries.

5. Thematic Analysis

The thematic analysis comprises the bulk of this work, synthesizing qualitative observations across the literature through these four connected themes: menopause-attributed loss of productivity, economic frameworks for the costs, variation at the industry level, and organizational responses. Collectively, the

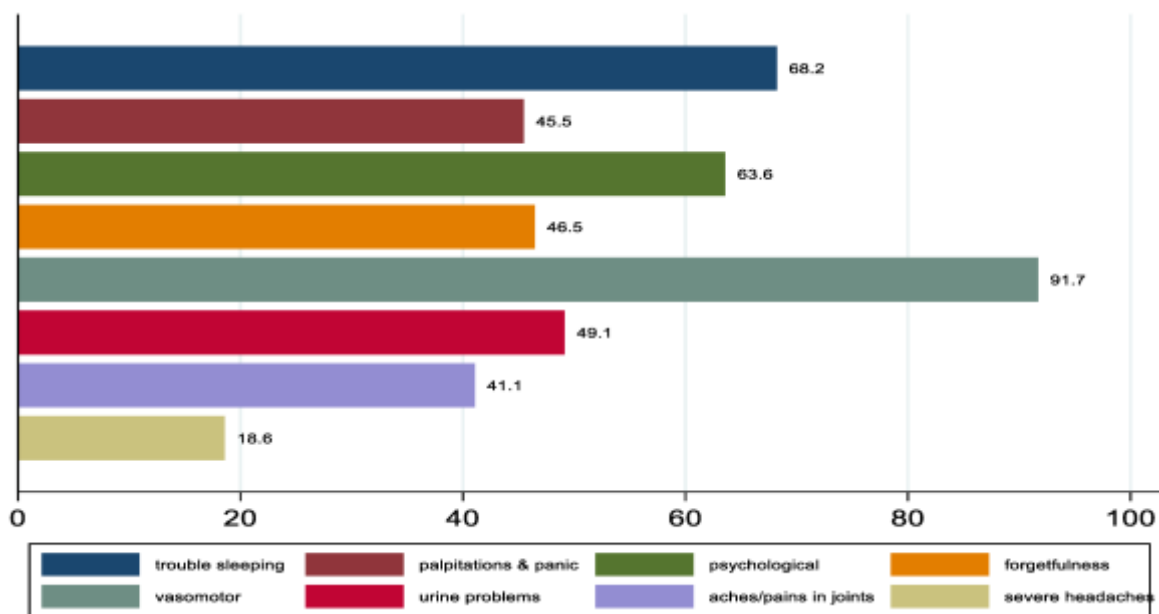
themes identify the quantifiable and the frequently invisible aspects of menopause at the workplace, placing the issue in the context of larger social, economic, and gendered processes.

Menopause-Related Productivity Loss

The prevalent thread throughout world studies is menopause symptoms have an appreciable impact on productivity. Those symptoms most substantiating work impairment are vasomotor disturbances (hot flashes, night sweats), disrupted sleep, lethargy, anxiety, and cognitive problems including memory loss and concentration issues. For most women, the symptoms not only present in missed days at work but also "presenteeism," where the individual is present at the workplace but working less than full capability. The Mayo Clinic's large-scale study of U.S. women aged 45–60 reported that approximately 11% missed work in the past year due to menopause symptoms, while 13% experienced at least one adverse work outcome such as absenteeism, reduced hours, or job changes (Faubion et al., 2023). Similarly, the Study of Women's Health Across the Nation (SWAN) linked sleep disturbances in midlife women to reduced working hours and heightened risk of unemployment, estimating an annual productivity loss of USD 2.2 billion (Johnston et al., 2021). Such findings underscore how seemingly "private" health conditions produce ripple effects across the labour market.

Significantly, the effects are not uniformly experienced. Qualitative research indicates that socio-cultural influences significantly affect women's readiness to disclose symptoms or seek accommodations. Hardy et al. (2018) determined that a considerable number of midlife women regard menopause as a topic associated with stigma, frequently opting for silence to evade potential harm to their reputation. This situation results in concealed presenteeism, wherein diminished productivity remains unrecognized by both the employee and the employer, thereby exacerbating cumulative costs. Furthermore, stigma dissuades women from pursuing flexible work arrangements, thereby exacerbating disparities in workplaces that do not acknowledge menopausal health as a valid occupational concern.

Prevalence of menopausal symptoms among employed women.



Vasomotor symptoms (91.7%) were most commonly reported, followed by sleep disturbances (68.2%) and psychological challenges (63.6%), underscoring their strong link to productivity loss.

Cognitive challenges—often described as “brain fog”—represent another important dimension of menopause-related productivity loss. Although harder to measure than absenteeism, these symptoms are frequently cited as disrupting work performance, particularly in knowledge-based occupations that demand concentration, memory, and the ability to manage multiple tasks simultaneously. Evidence from a U.K. parliamentary review indicated that women with unmanaged menopausal symptoms were far more likely to cut back their working hours or leave employment prematurely, outcomes that carry significant consequences for career development and leadership representation (UK Parliament, 2022).

Economic Cost Frameworks

To capture the economic cost of menopause-related productivity loss, researchers have applied cost-of-illness and productivity loss models. These frameworks typically incorporate absenteeism, presenteeism, turnover, and healthcare expenditures.

The US study by Chung et al. (2013) found women with diagnosed menopause symptoms had 12.2% lower hourly, 10.9% lower annual productivity compared with controls. With the additional costs for healthcare, the former group also had thousands of dollars in additional annual costs per individual. At the micro-level these losses total billions at the national level for losses in the workforce.

International comparative evidence substantiates the extent of the issue. FP Analytics (2025) estimated menopause-related yearly losses in working productivity at the following: UK, USD 2 billion; Canada, USD 3.3 billion; Germany, USD 9.9 billion; Japan, USD 12 billion. Estimates are regularly constructed primarily through calculations of presenteeism and absenteeism—typically by working out lost working hours times rates for wages. However, according to researchers, these are lower than actual expenditures, as frequently these exclude turnover, career expense, and indirect effects such as loss of innovation or deficiency in leaders (Rodrigo et al., 2023).

Another economic lens is the earnings penalty documented by Persson et al. (2025), who analysed U.S. labour-market data and found that women seeking medical treatment for menopause symptoms earned approximately 10% less over four years compared to peers. This penalty was attributed to reduced hours, diminished job stability, and increased likelihood of workforce exit. Importantly, the effects were concentrated among women in physically demanding or routine-intensive occupations, and among those without higher education, suggesting that economic burdens are unequally distributed.

The economic framework also reaches organizational-level effects. Firms pay the price for reduced productivity, increased turnover, hiring and training costs. And when menopause symptoms are not managed and employees scale back or turn down promotion opportunities, businesses forgo prospective leadership potential and institutional memory. Such "opportunity costs" are not often included in economic projections but have serious long-term effects on organizational competitiveness through diversity.

Industry-Level Variation

Although few studies explicitly compare industries, available evidence and interpretive analysis tells how menopause impacts vary across sectors.

Knowledge-Intensive Sectors

In the workplace, boardroom, and classroom, cognitive efficacy and sustained concentration are paramount. Accordingly, symptoms such as somnolence, poor sleep, and cognitive haze can be especially damaging. Women in these professions often continue working despite symptoms to avoid stigmatization, which leads to high rates of presenteeism. Persson et al. (2025) note that women working in smaller private businesses particularly suffered losses in income due to the lack of instituted human resource policies

specifically designed for menopausal needs in these smaller businesses. This invisible loss in these sectors may remain poorly reported, but the total effect on innovation and performance can add up.

Service and Care Work

Service-based sectors such as retail, hospitality, and customer service depend heavily on emotional labour and continuous interaction with clients. Menopausal symptoms including anxiety, mood fluctuations, and hot flashes can make performance challenges in these roles especially visible. Research from Australia on reproductive leave policies has drawn attention to the disproportionate strain that reproductive health conditions—including menopause—place on workers in these industries, where presenteeism is common yet disclosure remains rare due to fears of stigma or discrimination (The Guardian, 2025).

Similar patterns are observed in healthcare and education, professions that blend physical effort with emotional engagement. Studies indicate that menopausal symptoms frequently reduce work capacity and prompt women to reconsider their career trajectories (Hardy et al., 2018; Verdonk et al., 2022). The early exit of skilled staff from these sectors intensifies existing labour shortages and undermines continuity in patient care and educational quality.

Manufacturing and Manual Labor

Work in manual labour jobs is particularly challenging with the physical nature of the job and rigid scheduling. Hot working conditions, heavy exertions, and set shifts heighten vasomotor and fatigue symptoms. Findings from Japan illustrate the strong association between aggravated menopausal symptoms and presenteeism in the working settings of manufacturing jobs, where the odds ratio has been found to be over 19 (Hirokawa et al., 2025). With little disclosure occurring and little adaptation in the workplace, women working in manual jobs thus either suffer diminished performance or leave the workforce early, representing turnover costs for the employer and foregone earnings for the employee.

Professional/Corporate Careers

Corporate environments exemplify the paradox of "invisible costs." Women might not lose working days but work with reduced capacity. From performance appraisals to competitive environments, disclosure is discouraged; thus, presenteeism becomes accepted. The UK Parliament (2022), through its inquiry, has recorded numerous instances where women refuse promotion or leadership opportunities during menopause on the grounds of uncontrolled symptoms. Aside from lowering individual incomes, this also diminishes the gender diversity in the pipelines for leadership.

Together, these differences identify the reduced productivity during menopause as industry-specific, for it depends on the physical, cognitive, and emotional requirements for various jobs as well as organizational support or dispositions.

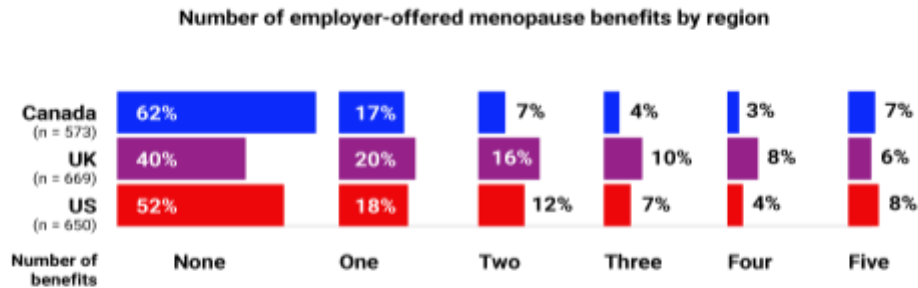
Organizational & Policy Responses

Whilst evidence on workspace responses remains limited, recent research identifies potential interventions. In its menopause at the workplace 2023 report, the CIPD identifies flexible working, access to wellbeing initiatives, and awareness training for line Managers as successful interventions for reducing rates of absenteeism and improving job satisfaction. Similarly, Rodrigo et al.'s (2023) systematic review of interventions found cognitive-behavioural therapy, health-promotion interventions, and mindfulness interventions diminished both menopausal symptoms and presenteeism.

However, policy gaps persist starkly. The UK Parliament's 2022 inquiry found that the vast majority of workplaces had no policies specifically for menopause, and even where policies did exist, women hardly knew. In traditionally male-dominated industries like manufacturing, explicit policies barely existed, perpetuating an atmosphere of silence. Worldwide, reproductive-leave policies, such as the Australian

ones, are yet to be settled despite evidence demonstrating they would considerably lower losses in productivity at comparatively low expense (The Guardian, 2025).

Few organizations offer more than one menopause benefit



Source: Robotham, K. & Smith, E. (2025). Making the case for menopause support. Catalyst.

Regional variation demonstrates that access to menopause-related workplace support is uneven globally, reflecting differences in labour policy, cultural openness, and organizational priorities.

Ethically, organizational inaction is equivalent to an organizational failing to maintain gender equity and workplace inclusion. Since midlife women are an increasingly large proportion of the workforce—in many cases, occupying leadership or high-skill jobs—economic argument for policy action is consonant with its larger values for diversity and environmental sustainability. Absent structural responses, organizations will face financial loss as well as potential reputational loss for failing to maintain an economically critical part of their workforce.

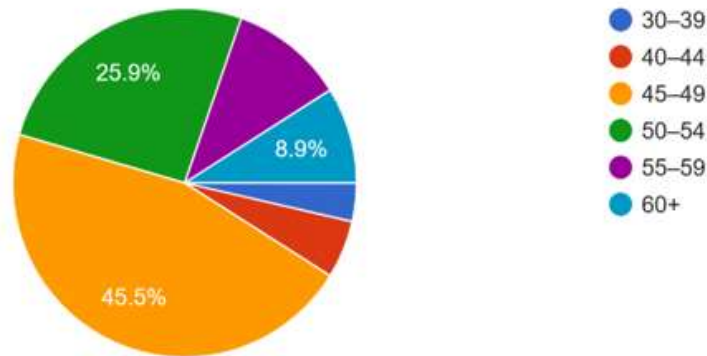
6. Quantitative Analysis

Although menopause is an individual health milestone, it has an important professional and social impact. Supporting material indicates the mechanisms through which menopausal symptoms that are out of control such as hot flashes, sleep disorders, mood disorders, lethargy, and cognitive function impair the productivity of women and their overall economic contribution.

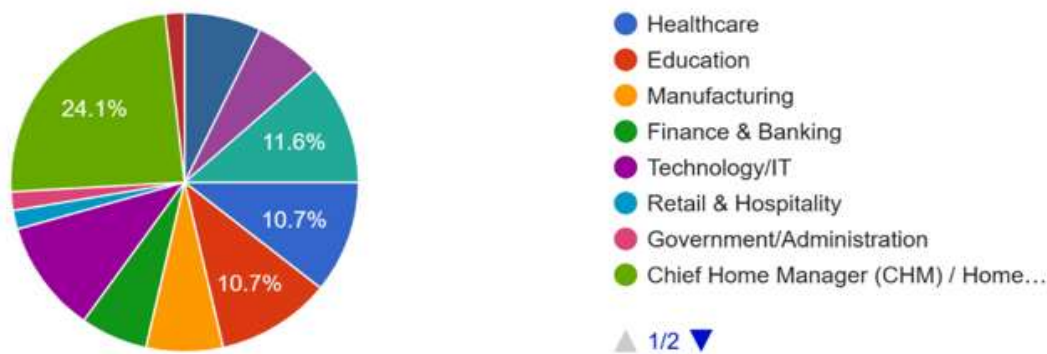
The survey of 112 participants presents valuable data about menopause's impact upon work performance, professional life, and health of personnel. Results are contrasted with global research results with the objective of obtaining a complete picture of the problem and potential solutions.

Demographic Results

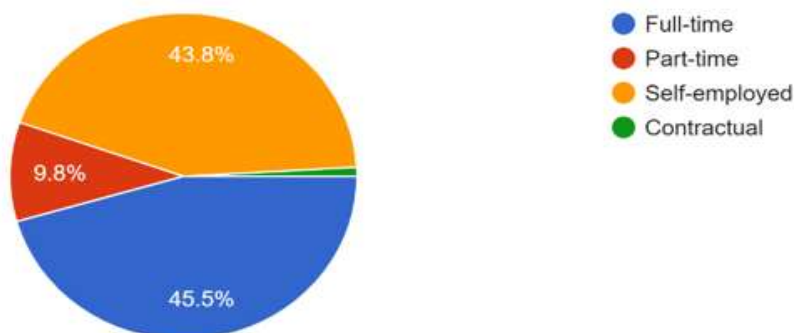
Age distribution reveals 45.5% of participants as being 45-49 years old during the modal menopausal transition age and a further 25.9% as being 50-54 years old. Smaller numbers are 30-39 (8.9%) and minority above 55 years and therefore the sample covers the largest age group experiencing menopause.



At an industrial level, the highest group (24.1%) refers to themselves as Chief Home Managers (homemakers), followed by Technology/IT (11.6%), and Healthcare and Education (10.7% each). Such a distribution indicates both formal and informal sectors are reflected and highlights the fact that menopause affects women from a wide variety of workplace settings.



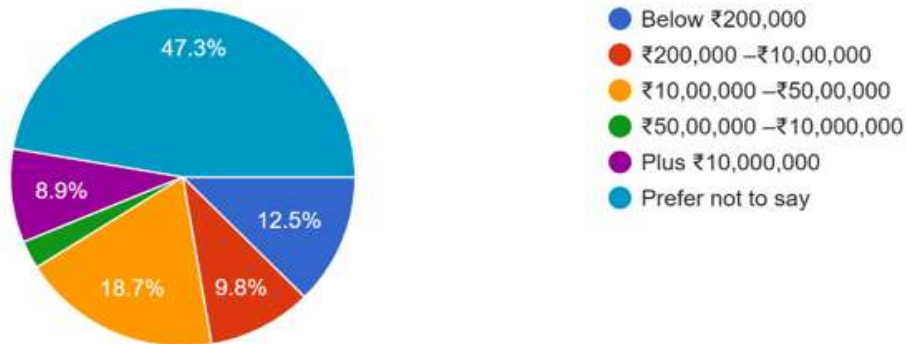
Type of employment data reveals full-time employees at 45.5% closely equalled by 43.8% self-employed with 9.8% part-time. Such parity suggests that menopause-associated productivity loss has an equal impact on both conventional employment and business work.



Income and Financial Background

A disproportionate 47.3% of respondents receive less than ₹200,000 annually and 18.7% receive ₹500,000-1,000,000. Though this suggests a wide socioeconomic spectrum, the high number of respondents from the lower-income category reflects the susceptibility of low socioeconomic status women. It aligns with the international findings of the accompanying report and indicates low-paid women

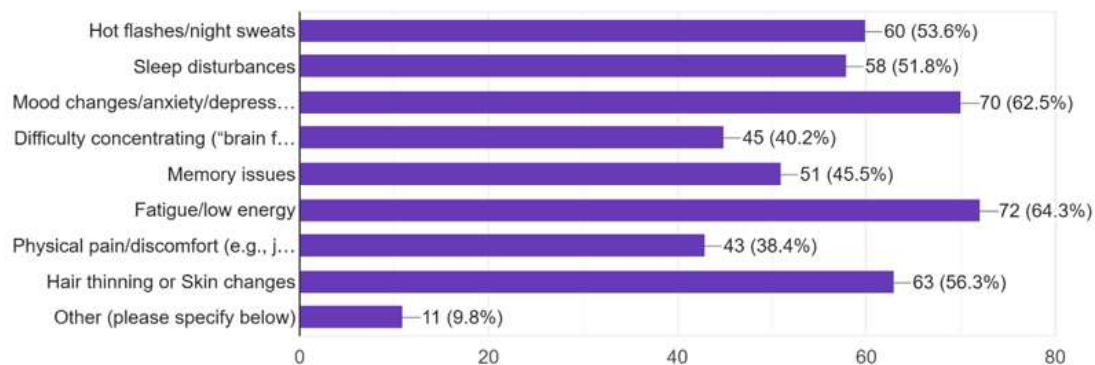
are at greater risk of economic hardship during menopause and a 10% wage penalty from fewer hours or work breaks.



Prevalence and Type of Symptoms

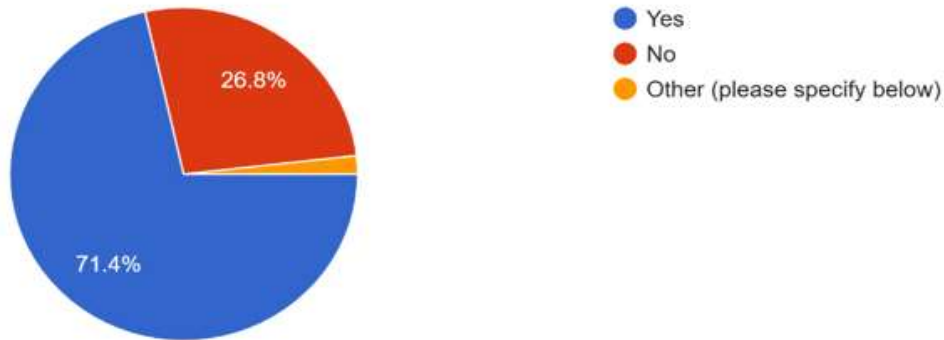
When asked about symptoms, fatigue or low energy were experienced by 64.3%, mood changes or anxiety were experienced by 62.5%, and hot flashes or night sweats were experienced by 53.6%. Sleep disorders (51.8%) and cognitive complaints such as difficulties with concentrating (40.2%) were also common. These findings mirror worldwide studies where vasomotor symptoms and psychological symptoms are leading causes of productivity loss

The breadth of these symptoms highlights the dual challenge of physical discomfort and cognitive disruption. In knowledge-based industries, brain fog and concentration lapses lead to hidden presenteeism, where employees are physically present but operating below full capacity. Conversely, in manual or service industries, fatigue and hot flashes may directly hinder task completion.



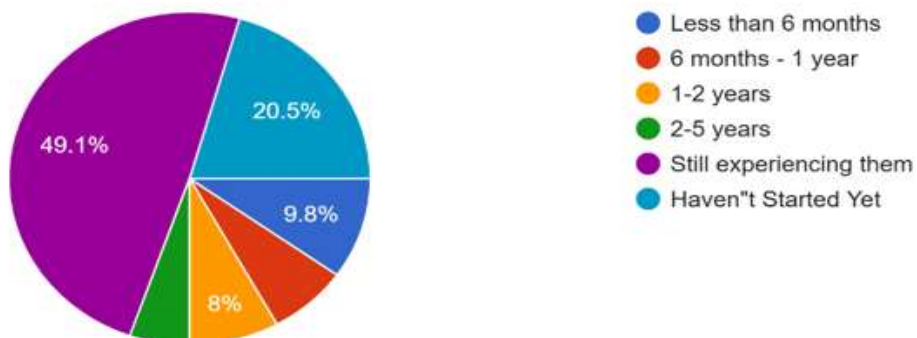
Current Menopause Status

An astonishing 71.4% are actually experiencing post-or peri-menopausal symptoms while only 26.8% are not. And yet another 44.6% have yet to experience menopause and are therefore also still in transition. What this reveals is that a clear majority of respondents are actually experiencing active symptoms and accommodations at the workplace become crucial.



Workforce Impact

When asked about the duration of their symptoms following menopause, 49.1% responded that they remained symptomatic and 20.5% responded that symptoms occurred less than six months. These longer symptom durations suggest a longer period of interference with career course.

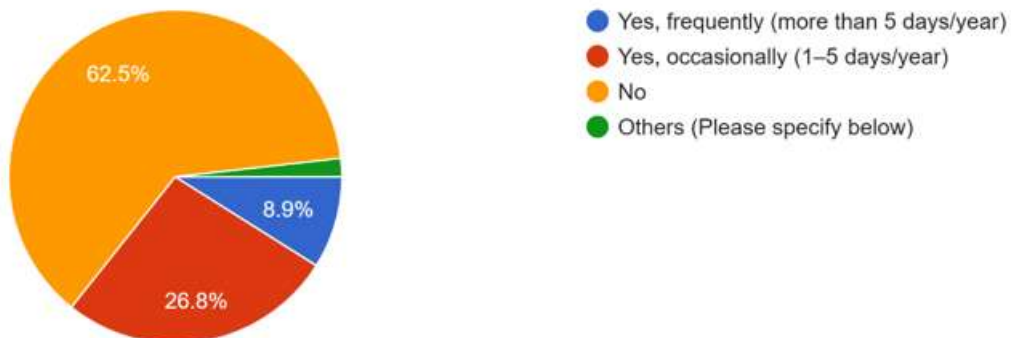


Sick Leave for Women with Menopause

62.5% of participants have never used leave specifically developed to alleviate menopause symptoms, indicating high current presenteeism and cultural nondisclosure stigma.

26.8% sometimes spent 1-5 days/year, and as few as 8.9%.

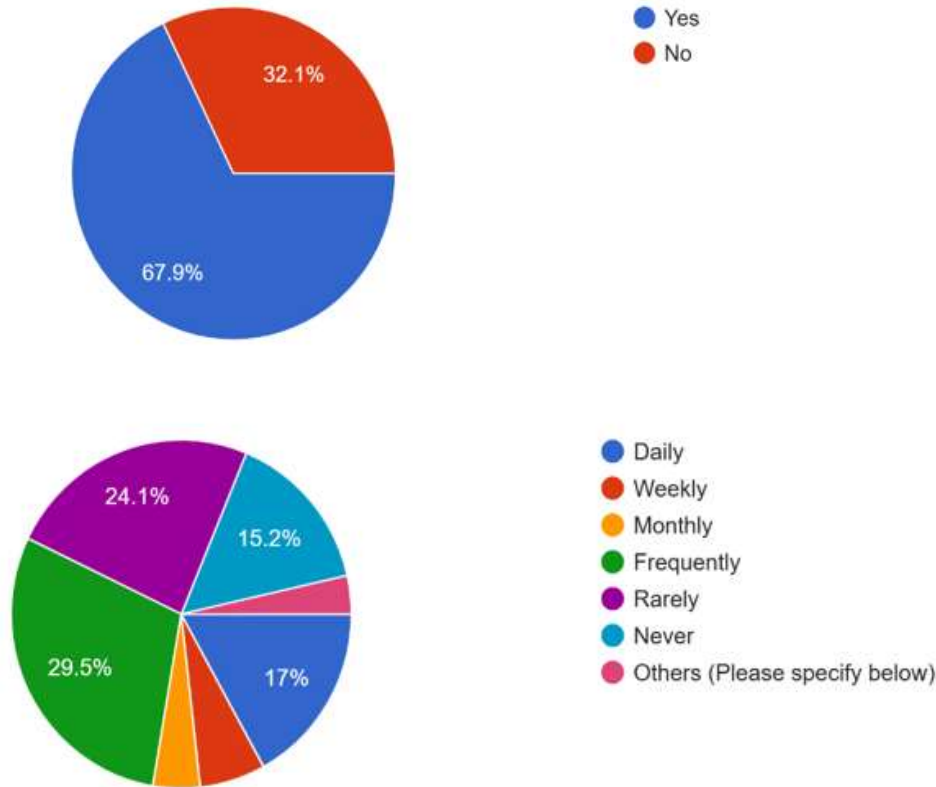
As with the research report findings that many women remain quiet due to fearing stigma or their own supposed lesser competency.



Symptom Effect on Work

A notable 67.9% of menopausal women felt symptoms during work, reflecting pervasive disruption of work roles. When queried regarding performance effects: 29.5% responded symptoms impacted work

often. At the same time, 24.1%, 17% were affected daily. This further solidifies the fact that menopause isn't a one-time issue but a continuing productivity problem.

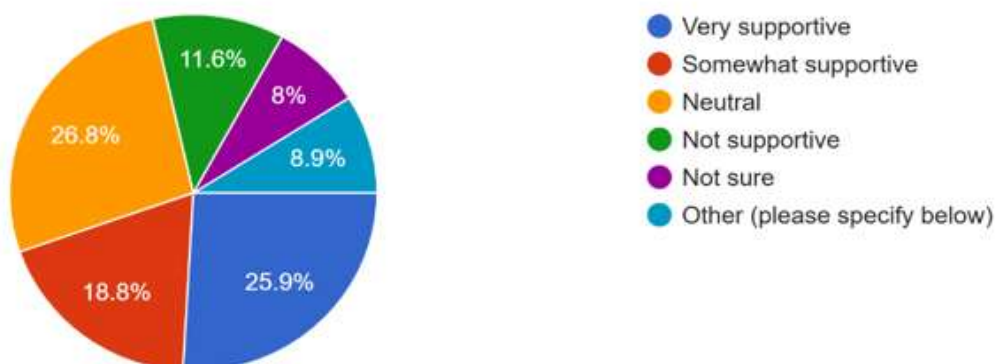


Workplace Culture and Support Structures

Support from employers, managers, and families was low:

Employer support and interpersonal. Just 25.9% were quite supporting while 26.8% responded there wasn't any and 18.8% were neutral.

Absence of supportive policies at work is clear, with 45.5% ascertaining no menopause-specific accommodations such as flexible working hours or health programs, and just 24.1% of respondents said their employers provided such initiatives. The study report also vindicates that generous policies such as reproductive leave or wellness programs considerably reduce absenteeism and boost productivity. However, unawareness and stigma from the culture hinder implementation.

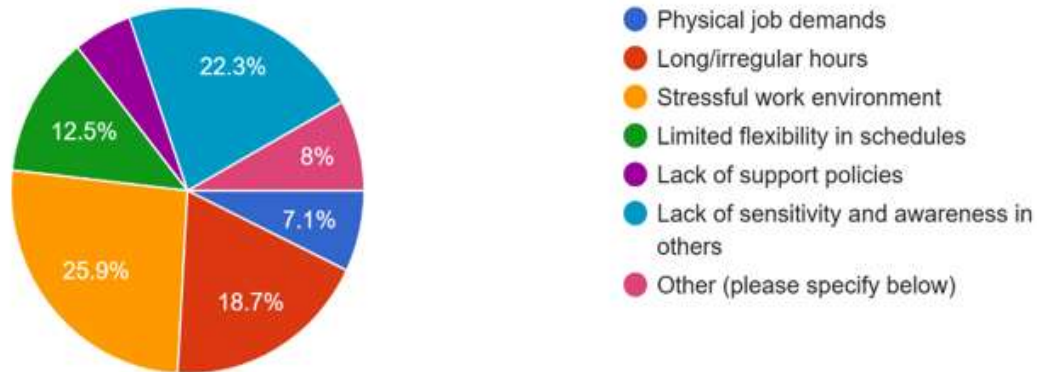


Industry-Specific Issues

When queried regarding affecting factors of productivity:

25.9% cited stressful work environments, 22.3% also emphasized physical job requirements, 18.7% answered that they were restricted. 12.5% replied lack of awareness or insensitivity.

These results are similar with the research report because physically challenging sectors such as production are confronted with greater absenteeism and knowledge sectors are confronted with covert presenteeism. Emotionally intense service sectors are at high risk of overt disruption of performance.



Career Choice and Menopause

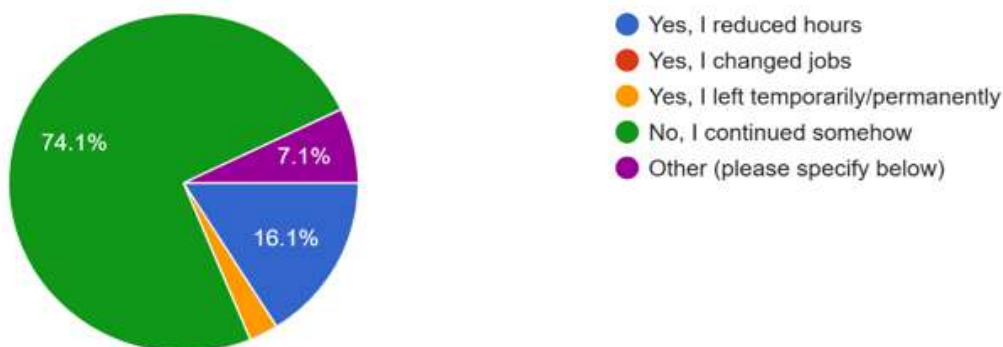
Menopause has affected career decisions personally:

16.1% fewer work hours, 7.1% also shifted jobs, 74.1% continued working despite challenges.

This implies resilience but also indicates the absence of system-level accommodations since so many women persevere with symptoms with no accommodations and possible long-term risks.

Also, were menopause-related productivity loss higher during their work environment:

58% were neutral. 21.4% responded it was the same. Only 12.5% believed it was higher. This implies that numerous women do not gain insight into how menopause affects general workforce productivity because of organisational reticence regarding the matter.



Economic and Institutional Effects

The research article puts the survey results into perspective through an assessment of the cost incurred:

In the United States, absenteeism due to menopause costs \$1.8 billion each year while overall menopausal healthcare and productivity costs are \$26.6 billion. Those countries and the United States face comparable multibillion-dollar losses. At the personal level, women could experience a 10% reduction of earnings as early as four years, particularly at small business and low earnings occupations. For institutions,

unchecked menopause means turnover costs, frozen leadership pipelines, and institutional knowledge loss. A cost risk and a diversity and inclusion problem.

Most respondents experience symptoms, but few take leave or discuss their challenges due to stigma. Both institutions and women suffer severe economic effects through reduced productivity, absenteeism, and turnover. Type of work determines menopause's impact on performance—straightforward jobs face physical challenges and office jobs face cognitive and emotional hurdles. Policy Vacuums Failure to accommodate at work sustains presenteeism and deters disclosure and undermines long-term results.

7. Discussion

The results of this thematic review emphasize the complex and layered character of menopause-related productivity loss, showing how biological changes intersect with workplace cultures and economic systems. Although menopause is a universal stage of life, its impact on employment outcomes is not uniform. Instead, effects are shaped by the nature of the industry, the availability of organizational support, and wider socio-cultural conditions. This discussion integrates recurring themes from the literature, considers tensions within the evidence base, and points to broader ethical and social implications for workforce sustainability.

Interpretive Synthesis Across Sectors

Cross-sector comparisons reveal that menopause influences productivity through both overt and less visible pathways. In physically intensive fields such as manufacturing, absenteeism and workforce exits are common, as symptoms hinder the ability to meet demanding physical tasks (Hirokawa et al., 2025). By contrast, in knowledge-driven or corporate settings, presenteeism is more prevalent: women remain in work but with reduced efficiency linked to fatigue, cognitive strain, and poor sleep (Faubion et al., 2023). Service and care industries present distinct challenges, where the emotional and interpersonal intensity of roles means that anxiety and mood fluctuations amplify performance pressures (Hardy et al., 2018).

Across industries, silence remains a defining challenge. Many women avoid disclosing menopausal symptoms, fearing stigma or being viewed as less competent. This reluctance hides the real costs from employers, who may underestimate productivity loss and overlook the need for supportive policies. On a broader scale, underreporting feeds into national statistics, masking the economic burden from policymakers (UK Parliament, 2022). What is unseen is not a lack of impact, but its quiet persistence—shaping careers and workplace equality in profound ways.

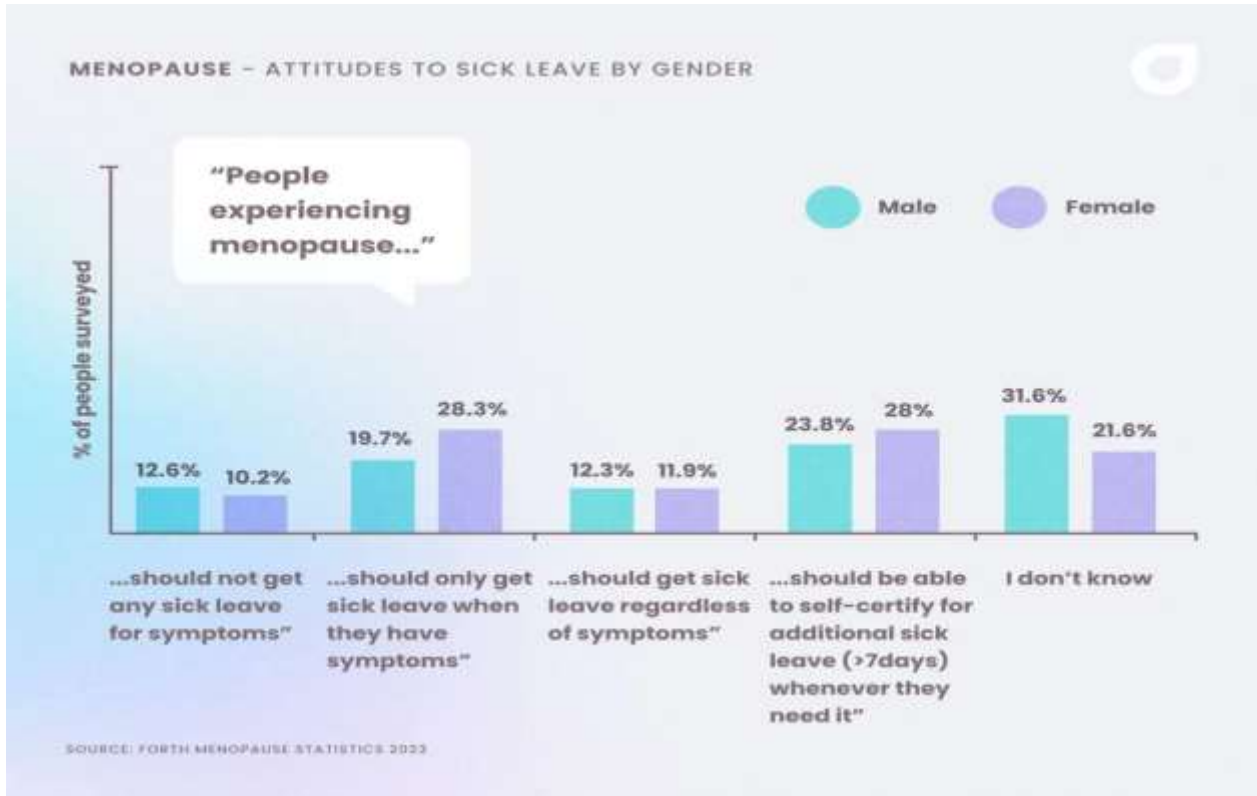
The Paradox of High Cost and Low Visibility

Perhaps the most remarkable of the patterns is the reverse between economic cost of lost productivity due to menopause and the relatively low profile on workplace and policy agendas. Cost-of-illness paradigms provide estimates of billions of dollars of wasted spending every year on major economies due to absenteeism, presenteeism, and turnover (FP Analytics, 2025). However, amid these high sums, workplace policy is scarce and piecemeal. Menopause appears little if at all on workplace legislation like parental leave or workplace health protections.

This paradox is maintained by various factors. First, the sporadic and personalized nature of menopause symptoms renders them less manageable than other health conditions, making it challenging to respond with standard policy solutions. Second, cultural stigmas surrounding reproductive health engender silence, especially in masculinity-dominated workplaces. Third, the economic costs of doing nothing—like presenteeism—go unseen more than the economic costs of absenteeism or turnover, which makes them

more likely to be ignored by the organization. These forces perdure a policy blind spot despite increasing documentation of large-scale economic effects (Rodrigo et al., 2023).

Attitudes to sick leave for menopausal symptoms, by gender.



Male respondents were more likely to report that menopause should not warrant sick leave, while female respondents expressed stronger support for flexible and extended leave provisions. This disparity highlights the role of gendered perceptions in shaping workplace policy adoption.

Critical Reflection: Biology, Workplace Culture, and Economics

A fundamental point is that menopause is more than a biological event, it is a socio-economic event that is subject to workplace culture. Biology determines the prevalence of symptoms, but the degree of productivity loss depends greatly on organisational responses. For example, flexible working can diminish fatigue related to sleep, and constructive managerial practices reduce presenteeism by making disclosure permissible (CIPD, 2023). But inflexible rotas, hostile environments, and lack of adaptations exacerbate losses and push women along the path of early exit from the workplace.

This crosswalk highlights structural inequities as well. Research shows that female workers who have low-wage jobs or jobs that are high-exertion carry excessive loads, often facing stiffer earnings penalties and diminished career security (Persson et al., 2025). Female professionals, by contrast, may have lower absenteeism but midlife career stalling because of lower visibility and access to executive roles—another area that deserves equity-conscious policy action.

Ethical and Social Implications

Beyond economics, menopause-related productivity loss raises ethical questions about gender equity and workplace inclusion. Organizations have a moral responsibility to provide equitable working conditions

for all employees. Failing to accommodate menopause not only perpetuates gender inequality but also undermines commitments to diversity, equity, and inclusion (DEI).

The social dimensions are no less pressing. Midlife women constitute an increasing percentage of the world workforce, frequently at senior or highly educated levels. Where unmanaged menopause induces premature retirement, career ending, or executive departure, the eventual effect is not just economic but cultural—aggravating existing imbalances between the genders in representation and executive-level decision making. Beyond that, those effects act against sustainability agendas built on inclusive development and fair labour contribution (ILO, 2022).

There is also an intergenerational component. Young workers witness the treatment of older women by firms and make long-term career judgments. A workplace culture that ignores/dismisses menopause can therefore implicitly revalidate gendered career barriers throughout the life course. In contrast, positive company responses can render reproductive health a mundane part of occupational wellbeing, to the benefit of the current as well as future generations.

Toward a Sustainable Workforce

From a sustainability point of view, responding to menopause at work is both an equity agenda and a strategic one. Keeping experienced midlife women maintains institutional memory, lowers turnover expenses, and enhances leadership pipelines. Responses like flexible work, wellness initiatives, and health-based interventions have relatively low costs against the long-term productivity gains of doing nothing (Rodrigo et al., 2023). Furthermore, by framing menopause as normal discourse at work, firms do their part to destigmatize women's health as a broader social good that aligns with commitments to inclusivity and wellbeing.

Finally, the literature indicates that menopause is simultaneously a health challenge and a workplace governance challenge. It has real and appreciable economic costs that remain underestimated due to stigma, latent presenteeism, and the absence of regular measurement on a systematic basis. Addressing the gap necessitates not just more quantitative modelling, but cultural change at the level of the organization and policy architectures that include the inclusion of gendered health within labour rights.

7. Conclusion

The study examines the anticipated economic cost of productivity loss due to menopause and reviews the distribution of these expenses across various sectors. It presents that menopause, which is a natural phase of life, is a labour market problem that has been inadequately acknowledged and has significant economic, organizational, and social impacts. With the theme and interpretive review methods, the study highlights the complexity of the problem where the expenses have been high not just on the basis of financial measures but also have a strong relation to workplace culture, gender stereotypes, and equity issues.

Key Findings

The data regularly demonstrate that menopause symptoms—fatigue, hot flashes, sleep issues, and cognitive impairment—can cause diminished productivity by virtue of both absenteeism and presenteeism. Whereas absenteeism quantifies workdays lost, presenteeism is frequently latent but more insidious, expressing lower efficiency and focus by virtue of the employee being on the job regardless (Faubion et al., 2023). Departures and premature retirement by virtue of symptoms gone unmanaged constitute one further economic loss, robbing industries of seasoned practitioners and escalating hiring and training expenses.

Note that the expenses are industry-dependent. Symptoms directly hinder physical labour in production and manual work, translating to greater absenteeism and exodus of jobs (Hirokawa et al., 2025). In service and care occupations, the interpersonal and affective demands mask the effects of mood swings and anxiety more severely. Intellectual and company work, on the other hand, present greater degrees of latent presenteeism, where women underperform in secret but remain on the job, frequently turning down promotions or executive roles to cope with symptoms personally (Hardy et al., 2018; UK Parliament, 2022). These differences between sectors demonstrate that menopause is not merely biological but also a socio-economic factor that is influenced by the type of work.

At the macroeconomic level, cost-of-illness models predict billions of dollars' worth of productivity loss every year in key economies. FP Analytics (2025) computed that alone, Germany, Japan, the United Kingdom, and Canada shed more than USD 25 billion yearly on account of productivity decline due to menopause. These estimates, however, are probably on the conservative side since indirect costs like lack of innovation, stalled careers, and latent leadership deficits are hardly ever factored in. Other research like Persson et al. (2025) also demonstrates the long-term pay penalty where women experiencing treated menopause symptoms have earned approximately 10% lower than comparable peers over the period of four years. These observations further underscore the point that the economic cost of menopause is both real-time and over the course of life and has effects that persist along the life course.

Theoretical Contributions

From a theoretical point of view, it addresses three fields of study:

Health Economics: It integrates cost-of-illness and productivity loss models into the economic study of menopause, revealing how presenteeism, absenteeism, and turnover get quantified into economic costs.

Gendered Labor Studies: It illustrates how menopause increases pre-existing structural gender inequities, especially women working in lower-income-level jobs or jobs that have high physical demands, and enforces obstacles to company-level leadership roles.

Organizational Behaviour: It focuses on the impact of workplace culture on the nature of outcomes, demonstrating how stigma and silence enact latent costs by discouraging disclosure and adaptations.

In general, these articles forge an agenda that situates menopause both as a biological fact and as a socio-economic fact that has bearing on equity and sustainability of labour.

Practical Implications

The organisational impacts become clear. A lack of action on menopause issues amounts to measurable productivity loss, raised turnover, and lost diversity of leadership chances. Active interventions such as flexible working, wellbeing programs, and awareness training are fairly cheap solutions that can have a powerful influence on the reduction of absenteeism and presenteeism (CIPD, 2023; Rodrigo et al., 2023). In addition, by making menopause a standard element of workplace wellbeing, organisations reinforce pledges of diversity, equity, and inclusion (DEI) initiatives, and also retain valuable institutional memory. The research indicates that the policymakers' agenda should include more emphasis on menopause within labour policy and occupational health platforms. As maternity leave or parental leave has become accepted as a necessary workplace accommodation, menopause deserves similar systemic thought. As the UK and Australia start discussions on reproductive leave policy, they offer early precedents of how laws can decrease productivity loss as well as move towards greater gender equality (The Guardian, 2025; UK Parliament, 2022).

Future Research Directions

While the current study is qualitative and interpretive, subsequent research must be directed at quantitative

modelling to account for the full range of economic costs. Large-scale, workplace-oriented studies would also establish distribution of loss across different sectors of labour, and long-term studies may trace long-term effects on career development and retirement behaviour. Comparative cross-cultural studies would also be informative since the stigma and disclosure of menopause vary widely by geographic location and cultural context.

Intervention research is another promising area. It would be valuable to conduct studies of the cost-effectiveness of workplace interventions—e.g., flexible work hours, wellness initiatives, health education campaigns—in improving health and helping women remain productive at work. Lastly, framing menopause within the broader constructs of gendered health and workforce engagement would give greater prominence to midlife women when the issues of labour market equity and sustainability come up.

Final Reflection

The findings of our study definitively confirm that menopause is both an individual health transition and a public economic issue. By framing menopause as a workplace issue, our study dispels the long-standing silence surrounding it in the area of labour studies and organizational discourse. The cost of doing nothing is high-measured in the billions of dollars annually, in career stagnation, and in fortified inequities across industries. But the solutions lie at hand: increased awareness, inclusive policy, and cultural change.

Most importantly, the recognition of menopause as a valid contributor to workforce planning is both a necessary economic imperative and an ethical one. It enshrines the maxim that workplaces have to accommodate the realities of all of their employees, bringing equity, inclusion, and sustainability to the labour market.

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