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THE INVISIBLE COST:

The economic impact of menopause on productivity, Work, and public health In Brazil

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THE INVISIBLE COST: THE ECONOMIC IMPACT OF MENOPAUSE ON PRODUCTIVITY, WORK, AND PUBLIC HEALTH IN BRAZIL

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Executive Summary

Menopause represents the largest gap in public health policy regarding women's health in Brazil. Approximately 29 million Brazilian women are in the climacteric or postmenopausal phase (projection based on the 2022 IBGE Census for women aged 40 to 65). Of these, 63% are economically active, and 33% are the primary breadwinners for their families. The prevalence of menopausal symptoms reaches 87.9% of this population (Pompei et al., 2022), with direct impacts on productivity, job retention, and mental health.

Internationally, the economic costs of unmanaged menopause have already been quantified. In the United States, productivity losses amount to $1.8 billion per year, and associated medical costs reach $24.8 billion, totaling $26.6 billion annually (Faubion et al., Mayo Clinic Proceedings, 2023). Globally, productivity losses are estimated to exceed US$ 150 billion (AARP Research, 2024). The study *The Menopause Penalty* (Persson et al., Stanford/SIEPR, 2025) demonstrated, using population data from Scandinavia, that women diagnosed with menopause experience a 10% drop in income over four years, along with an increase in applications for disability retirement.

In Brazil, there is no national study quantifying the aggregate economic impact of menopause. However, a conservative projection—applying international parameters to Brazil's demographic reality—indicates that the annual cost of unmanaged menopause to the Brazilian economy could be in the range of billions of reais, considering lost productivity, social security-related absences, indirect medical costs, and premature exit from the labor market. This cost is preventable: evidence shows that access to menopausal hormone therapy and workplace accommodations significantly reduce economic losses.

The analysis conducted in this study, in light of the parameters set forth in Decree No. 10,411/2020, identifies a clear regulatory problem: the absence of an integrated diagnostic approach, a lack of systematized information, and the inability of current policies to address the needs of a significant portion of the economically active female population. The study proposes regulatory and non-regulatory alternatives, offering guidance to both the public sector and the private sector.

Keywords: *menopause; climacteric; productivity; labor market; economic cost; women's health; public policies; private sector.*

MENOPAUSE IN NUMBERS: DEMOGRAPHIC AND EPIDEMIOLOGICAL DIMENSIONS

The steady increase in life expectancy and the decline in fertility are transforming Brazil's demographic profile. According to the 2022 IBGE Census, Brazil has 104.5 million women (51.5% of the population). The median age of the population rose from 29 to 35 years between 2010 and 2022, and the group aged 65 and older grew by 57.4% during that period. It is estimated that approximately 29 million Brazilian women are currently in the climacteric or postmenopausal phase, a group that is expected to grow in the coming decades.

National data indicate a tendency for menopause to occur at an age younger than the average observed in high-income countries. A study conducted in the Campinas metropolitan area identified a median age of 46.5 years for natural menopause (Lui Filho et al.), while the international average ranges from 49 to 52 years. The National Health Survey (PNS 2019) reveals significant regional disparities, with a higher prevalence of depressive symptoms in the Central-West and Northeast regions. Preliminary data from the study "Climacteric Impacts on the Mental Health of Brazilian Women: A Nationwide Depression Screening" (Berta de Sousa et al., Science Valley Research Institute/UNIFESP, 2026), based on the PNS 2019, reinforce that the regional distribution of depression among climacteric women follows patterns of structural inequality, with significant variations between states and regions.

The study by Pompei et al. (2022), published in the journal *Climacteric*, identified a prevalence of menopausal symptoms of 87.9% among Brazilian women, with hot flashes (77.4%) and vasomotor symptoms (55.6%) being the most common. Despite this high symptom burden, only 22.4% of women use antidepressants. These data reveal a pattern of systematic underdiagnosis and undertreatment.

The *Menopause Experience & Attitudes* study (2024) reveals that the psychological dimension of menopause takes on particularly acute dimen-

sions in the Brazilian context. Approximately 79% of the Brazilian women interviewed reported negative psychological feelings associated with menopause, a percentage higher than the international average (66%). Among the most frequent symptoms are anxiety (58%), depression (26%), embarrassment (20%), and shame (16%).

From a comparative perspective, it is observed that the prevalence of anxiety among Brazilian women (58%) significantly exceeds the global rate (41%). Although the global rate of depression (33%) is higher than the Brazilian rate (26%), the set of indicators suggests a greater burden of psychological distress and stigmatization in Brazil, especially with regard to feelings of shame and embarrassment.

These impacts extend to the workplace. 47% of Brazilian women reported negative effects at work, a percentage higher than that observed internationally (36%). Among these impacts, the most notable are reduced productivity (26%), fear of disclosing their condition to colleagues (17%), and reports of explicit discrimination (9%). Only 29% of Brazilian working women say they feel comfortable discussing the topic with their direct supervisor, highlighting a significant cultural barrier to addressing menopause institutionally in the workplace.

Additionally, 80% of respondents believe that Brazilian women going through menopause do not receive adequate support in the workplace, and 49% acknowledge that they face barriers to career advancement and professional recognition during this stage of life. These findings reinforce the central hypothesis of this study: unmanaged menopause is not merely an individual health issue but a structural factor with measurable economic, organizational, and reputational effects.

The study by Tissiani et al. analyzes the impacts of menopause on women's mental health, highlighting the interaction between hormonal changes and psychosocial factors. The progressive decline in estrogen and progesterone affects neurotransmitters such as serotonin and dopamine, increasing vulnerability to depression, anxiety, irritability, and cognitive changes.

The reviewed literature indicates that approximately 40% of women going through menopause experience moderate to severe symptoms of depression or anxiety, with a higher risk among those with a prior psychiatric history, work overload, and low social support. External factors (such as occupational stress, family conflicts, and negative cultural perceptions of aging) amplify the emotional impact.

The article also describes the relationship between physical symptoms (hot flashes, insomnia, fatigue) and worsening psychological distress, emphasizing that sleep disorders increase the risk of anxiety and depression.

Indicator	Data	Source
Total female population	104.5 million (51.5%)	2022 IBGE Census
Women in menopause	~29 million	Demographic projection (ages 40–65)
Prevalence of menopausal symptoms	87.9%	Pompei et al., Climacteric, 2022
Hot flashes	77.4%	Pompei et al., Climacteric, 2022
Vasomotor symptoms	55.6%	Pompei et al., Climacteric, 2022
Negative psychological symptoms	79%	Astellas
Moderate to severe symptoms of depression or anxiety	40%	Tissiani et al., Brazilian Journal of Health Review, 2025
Symptoms of anxiety	58%	Astellas
Symptoms of depression	26%	Astellas
Embarrassment	20%	Astellas
Shame	16%	Astellas
Use of Antidepressants	22.4%	Pompei et al., Climacteric, 2022
Use of HRT	18.1%	PNS, 2019
Median duration of HRT	< 1 year	Pompei et al., Climacteric, 2022
Median age at symptom onset	47 years	Pompei et al., Climacteric, 2022
Economically active	63%	National survey, 2024
Head of household	45.3%	Pompei et al., Climacteric, 2022

The severity of symptoms is influenced by social determinants. Women with lower income, lower educational attainment, and those living in areas of greater social vulnerability experience more severe symptoms and have less access to treatment, establishing menopause as an intersectional marker of structural inequality, deeply influenced by race, income, location, and gender, as recognized by the National Policy for Comprehensive Women's Health Care (PNAISM).

From a racial perspective, the PNAISM acknowledges that Black women face greater socioeconomic vulnerabilities, resulting from the historical overlap between racial discrimination and gender inequality. Women in manual or physically demanding occupations, with less autonomy over their schedules and working conditions, have reduced opportunities to manage their symptoms, increasing the risk of taking leave from work and leaving their jobs. Data from the IBGE (2022 Continuous PNAD) show

that Black women have lower average incomes in virtually all occupational groups, a disparity that widens when cross-referenced with the menopausal age group.

The territorial dimension reinforces this finding. The 2022 Census shows that the Southeast and South regions, which have older populations (12.2% and 12.1% aged 65+), have the highest demand for menopause care, but the supply remains uneven. The sex ratio by age group shows that, starting at age 25, women are in the majority in all regions, meaning that the demand for women's health policies in middle age is structurally increasing. The convergence of these factors highlights that menopause is not an isolated event, but rather a turning point in a trajectory marked by cumulative exposure to inequalities.

Early menopause, occurring before age 40, affects approximately 1% of women and is associated with elevated risks of osteoporosis, cardiovascular disease, and cognitive decline. The literature demonstrates that the age of menopause onset is a relevant factor for functional health in old age, with a significant association between early menopause and limitations in activities of daily living (Salustiano et al., based on the 2019 National Health Survey [PNS]).

ECONOMIC IMPACT: PRODUCTIVITY, WORK, AND COSTS

This section constitutes the core of this study. Measuring the economic costs of unmanaged menopause is essential for formulating evidence-based public policies and mobilizing the private sector.

THE GLOBAL LANDSCAPE: MEASURING THE INVISIBLE COST

Over the past three years, the international economic literature has established robust evidence on the costs of unmanaged menopause:

Source	Key finding	Year
Mayo Clinic Proceedings (Faubion et al.)	Productivity loss: $1.8 billion/year (U.S.); medical costs: $24.8 billion; total: $26.6 billion/year	2023
AARP Research	90% of women aged 35 and older have at least one symptom; global losses: $150 billion; personal expenses: $13 billion/year	2024
Stanford/SIEPR (Persson et al.)	10% drop in income over 4 years; ↑ disability retirement; THM reduces losses	2025
Catalyst (8 countries)	84% ask for more support; 1 in 10 turned down a job; 72% hide symptoms at work	2024
IMF — WEO	Healthy aging: +0.4 percentage points of global GDP per year through 2050	2025
Foreign Policy Analytics	Global menopause market: US$ 17.66 billion (2024) → US$ 27.63 billion (2030)	2025
WEF	10% of women aged 45–60 missed work; most workplaces lack support	2024

The Stanford study deserves special mention. Titled “The Menopause Penalty,” the research by Persson, Conti, Ginja, and Willage (2025) used comprehensive population data from Norway and Sweden along with quasi-experimental methods to demonstrate that menopause leads to lasting declines in income and employment, accompanied by greater dependence on social transfers. The impact is most severe for women of lower socioeconomic status and those in manual or routine occupations. The study also showed that increased access to hormone therapy can partially offset these losses, a finding with direct implications for public and corporate policies.

Research by AARP Research (January 2024) expands our understanding of the phenomenon: 90% of women aged 35 and older experience at least one symptom of menopause; out-of-pocket spending on symptom management reaches $13 billion per year in the United States alone; and global productivity losses exceed $150 billion. The Catalyst survey (October 2024), conducted with 2,892 female workers in eight countries, found that 91% reported at least one moderate-to-severe symptom at work; 84% stated they needed more organizational support; 72% hid their symptoms from colleagues and managers; and one in ten turned down a job opportunity or promotion due to a lack of adequate support.

The global market for menopause-related products and services was estimated at $17.66 billion in 2024, with a projection of $27.63 billion by 2030 (Foreign Policy Analytics, 2025). This growth reflects both increased awa-

reness of menopause and the demand for clinical and corporate solutions. Companies such as Nvidia, Bank of America, and Fortune 500 corporations have already incorporated menopause support programs into their occupational health policies. In Brazil, there are no publicly known structured corporate initiatives, which represents both a gap and an opportunity for the Brazilian private sector.

THE COST IN BRAZIL: WHAT WE KNOW AND WHAT WE NEED TO KNOW

In Brazil, there is no national study that comprehensively quantifies the economic impact of menopause. This gap, in and of itself, is evidence of the issue's institutional invisibility. However, available data allow us to construct a preliminary assessment.

Applying international parameters conservatively to the Brazilian context, we can infer that: if 10.8% of economically active women between the ages of 45 and 60 miss work due to menopausal symptoms (Mayo Clinic parameter) and the economically active female population in this age group totals approximately 18.3 million, it is estimated that about 1.9 million Brazilian women per year lose workdays due to menopausal symptoms. Considering the international average of 3 days lost per year and the average female income from the Continuous National Household Sample Survey (PNAD Contínua), the direct loss of productivity due to absenteeism may exceed R$ 2 billion annually—without accounting for presenteeism (when an employee reports to work but is unable to perform their duties at full capacity), reduced hours, early retirement, and indirect medical costs.

Added to these costs are social security-related leaves of absence. The study by Salustiano et al. demonstrates that both early and late menopause are independently associated with functional limitations in old age, even after adjusting for multiple confounding factors. The Stanford study (Persson et al., 2025) revealed a significant increase in applications for disability retirement following a diagnosis of menopause. Projecting these parameters onto the INSS context, the impact on the Brazilian social security system could be substantial.

The IMF report (WEO, April 2025) underscores the macroeconomic dimension: it is estimated that healthy aging could add 0.4 percentage points to annual global GDP growth by 2050. Reducing gender inequalities in labor force participation is a central recommendation of the report. In Brazil, where women of menopausal age constitute a growing share of the workforce, ignoring menopause amounts to squandering qualified human capital on a national scale.

MENOPAUSE IN THE WORKPLACE

International literature shows that menopause remains largely invisible in the workplace. The Catalyst survey (2024), conducted with 2,892 female workers in 8 countries, found that 91% reported at least one moderate-to--severe symptom; 34% did not tell anyone at work about their symptoms; and 1 in 10 turned down a job opportunity or promotion due to a lack of adequate support. In Brazil, the Menopause Experience & Attitudes study (2024), conducted in six countries, found that 47% of Brazilian women reported a negative impact of menopause on their work and 79% experienced negative psychological effects.

The International Labor Organization (ILO) does not yet have a specific convention on menopause, but the issue falls within the existing regulatory framework: Convention No. 111 (discrimination in employment), Convention No. 155 (occupational safety and health), and Convention No. 190 (violence and harassment). The ILO's approach recognizes that the world of work has historically been structured around a male-centered model that renders women's bodily experiences—such as pregnancy, breastfeeding, and menopause—invisible.

The principle of reasonable accommodation (already applied to pregnancy, disability, and aging) is fully compatible with the inclusion of menopause. The premature exit of experienced women from the labor market, coupled with a lack of organizational support, represents a loss of skilled human capital and increased recruitment and training costs for companies.

Data from the Mayo Clinic indicate that Black women are nearly three times more likely to report negative outcomes at work compared to white women. In the Brazilian context, where the intersection of race, gender, and social class determines health outcomes, this disparity tends to be even more pronounced.

THE PRIVATE SECTOR AS AN AGENT OF CHANGE

Addressing the costs of menopause does not depend solely on the government. International experiences show that the private sector can act as an agent of change through low-cost, high-impact measures. The business and human rights agenda, enshrined in the UN Guiding Principles (2011) and implemented in Brazil through Decree No. 11,772/2023—which establishes the Interministerial Working Group to draft a proposal for the National Policy on Human Rights and Business—underpins this approach.

The main measures identified in the international literature include:

Environmental adjustments: temperature control and adequate ventilation, access to water, revision of dress codes, and spaces for breaks.

Organizational flexibility: telework options, flexible schedules, regular breaks, temporary reduction in workload.

Sensitive occupational health: inclusion of menopause in corporate health programs; access to specialized medical care; coverage of hormone replacement therapy (HRT) in health insurance plans.

Organizational culture: training for managers on menopause; support channels; policies against age and gender discrimination.

Certification: Models such as the Menopause Friendly Employer (United Kingdom) can be adapted to the Brazilian context, creating reputational incentives for companies.

In Brazil, there has been incremental progress in incorporating the gender dimension into sub-statutory labor regulations.

The regulatory framework governing the Internal Commissions for Accident Prevention and Harassment (CIPA) was designed with a general focus on prevention, guided by a formally neutral paradigm. Its regulatory design focuses on protecting the health and physical integrity of all workers, without, however, explicitly incorporating gender-specific considerations as a structural pillar of occupational safety policy. It is a universalist model that assumes homogeneity in working conditions and health impacts, even though empirical reality reveals significant disparities.

Among the Regulatory Standards as a whole, there is no standard dedicated exclusively to women's health. Nevertheless, the subordinate legislation contains provisions that allow for an integrative interpretation. Regulatory Standard No. 7 (NR-7), which establishes the Occupational Health Medical Monitoring Program (PCMSO), plays a central role in this context by setting guidelines for the clinical monitoring of workers and for the prevention of work-related health conditions. Its structure allows, at least in theory, for the adoption of protocols differentiated by sex and age group, making room for consideration of the specific characteristics of the female life cycle.

Complementarily, Regulatory Standard No. 17 (NR-17), concerning ergonomics, provides a regulatory basis for environmental and organizational adaptations aimed at mitigating conditions that may affect women at certain stages of life, such as temperature fluctuations, intense fatigue, or sleep disorders. Furthermore, Regulatory Standard No. 1 (NR-1), by governing Occupational Risk Management (ORM), now requires a systematic and integrated approach to risks—including psychosocial risks—which allows for a sensitive assessment of gender-specific impacts in the workplace.

In summary, although subordinate labor regulations provide instruments capable of addressing the issue of women's health, such incorporation occurs indirectly and depends on interpretive, technical, or negotiated initiatives. The system remains structured under a universalist paradigm that does not explicitly recognize the gender dimension as an autonomous regulatory axis, which raises debate about the need for regulatory updates to ensure materially equal protection in the workplace.

THE NEUROBIOLOGICAL DIMENSION: WHY THE SYMPTOMS ARE REAL

The understanding of menopause as an active neurobiological process has historically been limited by a legacy of neurossexism in biomedical science. Since the 19th century, anatomical and functional differences between male and female brains have been exploited to

justify intellectual hierarchies, excluding women from professional and political spheres.

Functional neuroimaging studies demonstrate transient changes in cerebral energy metabolism during the menopausal transition, particularly in regions associated with memory, attention, and emotional regulation (Mosconi et al., PNAS 2017; Neurology 2021; Brinton, 2009). These changes, far from representing "brain failure," constitute a process of adaptive systemic reorganization. The decline in estrogen affects neurotransmission, neuroplasticity, and cerebral blood flow, producing clinically significant symptoms such as *brain fog*, insomnia, anxiety, and mood changes.

These findings have direct implications for the debate on productivity. The cognitive and emotional symptoms of menopause are neither imaginary nor psychological in a pejorative sense; they have a documented neurobiological basis. The phenomenon of medical *gaslighting*—characterized by the dismissal of women's reports of physical and cognitive symptoms—constitutes a structural barrier to proper diagnosis and perpetuates underdiagnosis in the Brazilian Unified Health System (SUS) and in private health care.

The global systematic review by Johnson et al. (2023) estimated a prevalence of 38.95% for depression and 56.14% for anxiety among middle-aged women. The Menopause Experience & Attitudes study (2024) confirmed that 79% of Brazilian women interviewed reported negative psychological feelings during menopause. Recognizing the neurobiological basis of these symptoms is essential for formulating policies that effectively address them.

As endorsed by NAMS (The Menopause Society) in its 2022 Position Statement, hormone therapy remains the most effective treatment for vasomotor symptoms and has been shown to prevent bone loss and fractures. The IMS (International Menopause Society), the Endocrine Society, and FEBRASGO share this position. The FDA's removal of *the black box warning* for HRT products in 2023–2024 constitutes a significant regulatory milestone that reinforces the safety of the treatment when properly prescribed.

REGULATORY FRAMEWORK AND INSTITUTIONAL GAPS

The Brazilian legal framework provides a robust constitutional, legal, and technical basis for the inclusion of menopause in health policies, although this regulatory potential remains largely unrealized.

The Federal Constitution enshrines health as a fundamental social right (Art. 6) and a duty of the State (Art. 196), guaranteeing universal and equal access. Brazil is a signatory to the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW), which imposes the duty to adopt specific measures to ensure women's access to adequate health services, including during non-reproductive phases. International human rights treaties have supra-legal status according to the interpretation of the Federal Supreme Court (STF).

The inclusion of menopause in the array of specific public policies is part of a broader regulatory agenda linked to Brazil's commitments under the 2030 Agenda. SDG 5 (Gender Equality) constitutes the central foundation for equity policies, but the issue is also linked to SDG 3 (Good Health and Well-being), SDG 8 (Decent Work), SDG 10 (Reduced Inequalities), SDG 4 (Quality Education), and SDG 16 (Strong Institutions), reinforcing the need for inclusive work environments and policies that are sensitive to women's life cycles.

Domestically, Brazil has been gradually aligning its regulations with international standards, as demonstrated by Decree No. 12,122/2024 (prevention of harassment and discrimination in public administration) and Decree No. 11,772/2023 (National Policy on Human Rights and Business). These milestones align with the UN's "Protect, Respect, and Remedy" framework (John Ruggie, 2008), which established the pillars of the state's duty to protect, corporate responsibility to respect human rights, and access to remedy, inspiring the development of National Action Plans in various countries.

The National Policy on Comprehensive Women's Health Care (PNAISM) formally recognizes menopause as a legitimate phase of the female life cycle, moving away from a view of women's health that focuses exclusi-

vely on reproduction. However, the PNAISM does not provide a specific epidemiological diagnosis for menopause, does not establish monitoring indicators, does not define measurable goals, and does not outline a specific care pathway. The Ministry of Health's Manual on Care for Women in Menopause provides guidance but is not binding; it informs but does not establish a structured framework.

The Unified Health System (SUS) lacks specific national guidelines, integrated clinical protocols, or systematic monitoring strategies focused on menopause. Care is fragmented, limited to the field of gynecology, and lacks effective integration with primary care. There are no specific Clinical Protocols and Therapeutic Guidelines (PCDT) incorporated into the SUS.

On the legislative front, several bills are pending in the National Congress. In the Senate, Bill No. 3933/2023 addresses treatment within the SUS and establishes National Menopause Awareness Week. In the Chamber of Deputies, notable bills include PLs 4504/2024, 4941/2024, and 493/2025, which propose structured national policies. Bill No. 5980/2025 links menopause to labor rights. State Law No. 18,074/2024 (SP) represents a subnational milestone by establishing a specific policy.

The existence of these instruments indicates growing legislative mobilization, but also highlights the persistence of a gap: to date, no binding national policy has been enacted.

The adoption of a ministerial ordinance is an appropriate instrument for immediate implementation and administrative organization within the SUS, allowing for the structuring of care pathways and the standardization of clinical practices. However, formal law holds a higher normative hierarchy and creates a binding legal obligation for the federal government, states, and municipalities. The most consistent model, however, is a combined strategy: a framework law establishing the National Policy, a regulatory ordinance governing its technical implementation, and the inclusion of menopause in the SUS's Clinical Protocols and Therapeutic Guidelines (PCDT).

The fragmentation of contemporary medicine has a direct impact on the shortcomings of the SUS. Organized into compartmentalized specialties, the system is not equipped to treat menopause as a systemic condition that spans gynecology, endocrinology, cardiology, psychiatry, rheumatology, and occupational medicine. The consequences are significant: after menopause, women experience a higher incidence of anxiety, depres-

sion, Alzheimer's disease, autoimmune diseases, osteoporosis, and cardiovascular disease—all of which impose direct costs on the public health system.

In light of this, a structural overhaul of medical and multiprofessional training is required. It is recommended that the climacteric and menopause be mandatorily incorporated as a cross-cutting theme in the undergraduate curricula for medicine, nursing, and other health professions, with an integrated approach spanning gynecology, endocrinology, cardiology, psychiatry, rheumatology, geriatrics, and occupational medicine. At the graduate level, it would be advisable to create lato sensu specialization programs in Women's Health During the Climacteric with an interdisciplinary focus, as well as to include specific modules in medical and multiprofessional residency programs. Furthermore, continuing education courses focused on Primary Health Care could train professionals in early diagnosis, systemic management, and appropriate referral, thereby reducing fragmentation of care and avoidable costs. The development of this cross-cutting competency is a necessary condition for the SUS to address menopause not as an isolated event, but as a systemic phenomenon with measurable clinical, social, and economic impacts.

An analysis of recent legislative proposals reveals convergence along three axes: (i) rejection of fragmented or exclusively pharmacological responses; (ii) recognition of menopause as an intersectoral issue that links health, labor, social security, and policies for women; and (iii) the centrality of information and awareness-raising as a strategy for addressing the issue. These justifications align with the WHO's approach, which views menopause not as a pathology but as a natural biological event that can produce clinically significant symptoms and requires a proportionate institutional response.

INTERNATIONAL STANDARDS

The WHO recognizes menopause as a natural phase of the female life cycle with impacts on physical, mental, and social health, without treating it as a pathology. The OECD, adopting an economic and systemic approach, identifies menopause as a "silent variable" that affects productivity, gender equality, and fiscal sustainability. The OECD highlights the contradiction between the rising retirement age and the lack of policies that support women's participation in the labor market during these critical decades.

This approach offers a powerful argument for the Brazilian context: addressing menopause is not merely a matter of health or rights, but a rational decision regarding economic efficiency and the responsible management of human capital—a perspective consistent with the 2030 Agenda (SDGs 3, 5, 8, and 10), Decree No. 12,122/2024 (National Program of Actions on Business and Human Rights), and with the IMF's recommendations on healthy aging as an engine of growth.

RECOMMENDATIONS: WHAT THE GOVERNMENT AND THE PRIVATE SECTOR CAN DO

Consolidating an effective response requires coordinated action by the government and the private sector, through a combined strategy:

RECOMMENDATIONS TO THE GOVERNMENT

National Policy: Formulate a National Policy on Menopause Care, with evidence-based clinical guidelines, an interdisciplinary approach, and dedicated governance. The most consistent model is a combined strategy: a framework law combined with a regulatory ordinance and inclusion in the PPA.

Clinical Protocols: Incorporate specific clinical protocols for menopause into the SUS, with periodic updates based on evidence from NAMS, IMS, and FEBRASGO/SOBRAC. Ensure access to hormone replacement therapy (HRT) through the SUS.

National registry: Create a national menopause registry with systematic collection of clinical, sociodemographic, and regional data. Ongoing multicenter studies, such as MYPAUSA (NCT07005648), are already pointing the way toward such data collection.

Primary Care Training: Include menopause in the initial and continuing education of primary care professionals, with standardized protocols and expanded access to effective therapies.

Data and Monitoring: Include a specific module on menopause in the National Health Survey (PNS); produce data disaggregated by race, income, and region; establish monitoring indicators.

Intersectoral coordination: Integrate health, labor, social security, and women's policies, aligning the government's response to population aging.

Budget: Incorporate the policy into the PPA and budgetary instruments, ensuring financial predictability and quantifiable targets—in accordance with OECD recommendations on gender budgeting.

RECOMMENDATIONS FOR THE PRIVATE SECTOR

Environmental adaptations: Temperature control, ventilation, access to water, and review of work attire.

Flexibility: Telework, flexible schedules, breaks, and specific medical leave when necessary.

Corporate health: Include menopause in occupational health programs; ensure coverage for hormone replacement therapy (HRT) in health plans.

Culture and management: Train managers; create policies against age and gender discrimination; establish support channels.

Certification and ESG: Develop a Brazilian "menopause-friendly company" certification, integrating it into the ESG agenda and diversity compliance.

Tax incentives: Collaborate with public authorities to develop mechanisms that incentivize good business practices, as outlined in the UN Guiding Principles.

MONITORING INDICATORS

Indicator	Type	Frequency
Average age at menopause by region and race	Epidemiological	Biennial
% of women with moderate/severe symptoms	Clinical	Annual
Rate of access to THM in the SUS	Healthcare	Annual
Work absences due to menopausal symptoms	Socioeconomic	Annual
Coverage of Menopause Training in Primary Health Care	Institutional	Annual
Number of companies with a menopause support policy	Corporate	Annual
Prevalence of depression during menopause by region	Mental Health	Biennial

Conclusion

The analysis conducted in this study leads to a central conclusion: the absence of a structured national public policy on menopause in Brazil is not neutral. It has concrete effects on the health, economy, and citizenship of millions of women, with costs that are borne by the healthcare system, social security, and national productivity.

International data show that these costs are measurable and not negligible: $26.6 billion per year in the United States, $150 billion globally, and a 10% drop in the incomes of affected women. In Brazil, where 29 million women are going through this phase—87.9% of whom experience symptoms and only 22.4% of whom seek treatment—the magnitude of the problem is proportional to its invisibility.

Addressing menopause as a public policy issue does not mean pathologizing women's aging, but rather recognizing it as a legitimate stage of the life cycle that requires care, information, and institutional protection. It is also a matter of economic efficiency: investing in the health and continued employment of women going through menopause is investing in the most qualified and experienced human capital in the Brazilian workforce.

Brazil can lead this agenda in Latin America. The regulatory frameworks exist; the scientific evidence is well-established; and legislative momentum is growing. What is lacking is political will informed by data and driven by the realization that the cost of inaction is greater than the cost of action.

REFERÊNCIAS BIBLIOGRÁFICAS

AARP RESEARCH. *The Economic Impact of Menopause: Survey Results*. Washington: AARP, January 2024.

BERTA DE SOUSA, F. et al. *Climacteric Impacts on the Mental Health of Brazilian Women: A Nationwide Depression Screening*. Science Valley Research Institute/UNIFESP, 2026. [Poster/Master's Thesis].

BRAZIL. *2022 Demographic Census: Population by Age and Sex*. Rio de Janeiro: IBGE, 2023.

BRAZIL. *Decree No. 10,411, dated June 30, 2020*. Regulates regulatory impact analysis.

BRAZIL. *Decree No. 11,772, dated November 9, 2023*. Establishes a Working Group on Business and Human Rights.

BRAZIL. *Decree No. 12,122, dated July 30, 2024*. National Program of Actions on Business and Human Rights.

BRAZIL. *State Law No. 18,074/2024* (São Paulo). State Policy on Care for Women in Menopause.

BRAZIL. Ministry of Health. *Manual for the Care of Women During Menopause*. Brasília: MS, 2008.

BRAZIL. Ministry of Health. *National Policy on Comprehensive Women's Health Care*. Brasília: MS, 2004.

BRINTON, R. D. *Estrogen-induced plasticity from cells to circuits: predictions for cognitive function.* Trends in Pharmacological Sciences, vol. 30, no. 4, pp. 212–222, 2009.

CATALYST. *Menopause in the Workplace: A Global Survey.* New York: Catalyst, October 2024.

ENDOCRINE SOCIETY. *Clinical Practice Guideline: Treatment of Symp-*

toms of Menopause. Journal of Clinical Endocrinology and Metabolism, 2015 (revised).

FAUBION, S. S. et al. *Economic Impact of Menopause Symptoms*. Mayo Clinic Proceedings, 2023.

FAUBION, S. S. et al. *The 2022 Hormone Therapy Position Statement of The North American Menopause Society*. Menopause, vol. 29, no. 7, pp. 767–794, 2022.

FOREIGN POLICY ANALYTICS. *The Global Menopause Market*. Washington: FPA, July 2025.

IMF (International Monetary Fund). *World Economic Outlook: The Rise of the Silver Economy*. Washington: IMF, April 2025.

IMS (International Menopause Society). *Recommendations on Menopausal Hormone Therapy and Preventive Strategies*. Climacteric, 2024.

INTERNATIONAL LABOR ORGANIZATION. *Is menopause an issue in the world of work?* ILO.org (in Portuguese). Available at: https://www.ilo.org/pt-pt/resource/news/menopausa-e-um-tema-do-mundo-do-trabalho--ouca-o-podcast-futuro-do-trabalho. Accessed on: January 15, 2026.

INTERNATIONAL LABOR ORGANIZATION. *Gender and Occupational Safety and Health. The Big Picture*. Available at: https://www.ilo.org/topics-and-sectors/safety-and-health-work/gender-and-occupational-safety--and-health. Accessed on: January 15, 2026.

INTERNATIONAL LABOR ORGANIZATION. *International Women's Day 2016. ILO: Large gender gaps remain across a broad spectrum of the global labor market*. Available at: https://www.ilo.org/resource/news/ilo-large-gender-gaps-remain-across-broad-spectrum-global-labour-market. Accessed on: January 15, 2026.

INTERNATIONAL LABOR ORGANIZATION. *“Is the Menopause a Workplace Issue?” – ILO’s “Future of Work” podcast, discussing the impact of menopause on work*. Available at: https://voices.ilo.org/podcast/is-the-menopause-a-workplace-issue. Accessed on: January 15, 2026.

INTERNATIONAL LABOR ORGANIZATION. *ILO: Gender inequalities remain significant in the global labor market*. Available at: https://www.ilo.org/pt-pt/resource/news/oit-desigualdades-de-g%C3%AAnero-continuam-grandes-no-mercado-de-trabalho-global. Accessed on: January 15, 2026.

JOHNSON, A. et al. *Mapping global prevalence of menopausal symptoms among middle-aged women: a systematic review and meta-analysis*. 2023.

LUI FILHO, J. F. et al. *Epidemiology of menopause and menopausal symptoms in a population-based study.* Campinas: UNICAMP.

MEDICINA S/A. *Study Examines the Impact of Menopause on Women’s Mental Health*. Medicina S/A, March 19, 2025. Available at: https://medicinasa.com.br/estigma-menopausa/. Accessed February 15, 2026.

MENOPAUSE EXPERIENCE & ATTITUDES. *Global Survey: Australia, Brazil, Canada, Germany, Mexico, and the UK*. 2024.

MOSCONI, L. et al. *Perimenopause and the emergence of an Alzheimer’s bioenergetic phenotype in the brain and periphery.* PNAS, vol. 114, 2017.

MOSCONI, L. et al. *Sex differences in Alzheimer’s risk: Brain imaging of endocrine vs. chronological aging*. Neurology, 2021.

NAMS (The Menopause Society). *The 2023 Nonhormone Therapy Position Statement*. Menopause, vol. 30, no. 6, pp. 573–590, 2023.

ORGANIZATION FOR ECONOMIC COOPERATION AND DEVELOPMENT. *Best Practices for Gender Budgeting*. Paris: OECD, 2023.

ORGANIZATION FOR ECONOMIC COOPERATION AND DEVELOPMENT. *Health at a Glance 2025: OECD Indicators*. Available at: https://www.oecd.org/content/dam/oecd/en/publications/reports/2025/11/health-at-a-glance-2025_a894f72e/8f9e3f98-en.pdf. Accessed on: January 15, 2026.

ORGANIZATION FOR ECONOMIC COOPERATION AND DEVELOPMENT. *Employment Outlook 2025: Can We Get Through the Demographic Crunch*. Available at: https://www.oecd.org/content/dam/oecd/en/publications/reports/2025/07/oecd-employment-outlook-2025_5345f034/194a947b-en.pdf. Accessed on: January 15, 2026.

ORGANIZATION FOR ECONOMIC COOPERATION AND DEVELOPMENT. *Public Governance Policy Papers No. 80*. (Policy Paper – 2025). Available at: https://www.oecd.org/content/dam/oecd/en/publications/reports/2025/12/women-work-and-the-population-puzzle_3711a72f/5e2e6aae-en.pdf. Accessed on: January 15, 2026.

ORGANIZATION FOR ECONOMIC COOPERATION AND DEVELOPMENT. *Promoting an Age-Inclusive Workforce: Living, Learning, and Earning Longer. Available at: https://www.oecd.org/content/dam/oecd/en/publications/reports/2020/12/promoting-an-age-inclusive-workforce_835228f0/59752153-en.pdf*. December 16, 2020. Accessed on: January 15, 2026.

ORGANIZATION FOR ECONOMIC COOPERATION AND DEVELOPMENT. *Recommendation of the Council on Aging and Employment Policies*. Available at: https://legalinstruments.oecd.org/en/instruments/OECD-LEGAL-0419. Accessed on: January 15, 2026.

ORGANIZATION FOR ECONOMIC COOPERATION AND DEVELOPMENT. *Women, work, and the population puzzle: gender-sensitive responses to demographic change. OECD Public Governance Policy Papers, No.*

80. Paris: OECD Publishing, 2025. Available at: https://doi.org/10.1787/e808086f-en. Accessed on: February 15, 2026.

PERSSON, P.; CONTI, G.; GINJA, R.; WILLAGE, B. *The Menopause Penalty*. SIEPR Working Paper, Stanford University, March 2025.

POMPEI, L. M. et al. *Menopausal symptoms, hormone therapy use, and sociodemographic characteristics of Brazilian women*. Climacteric, vol. 25, 2022.

RUGGIE, John. Report of the Special Representative of the Secretary-General on the issue of human rights and transnational corporations and other business enterprises. A/HRC/17/31. Geneva: United Nations Human Rights Council, March 21, 2011.

SALUSTIANO, L. et al. *Association between age at menopause and limitations in activities of daily living*. Based on the 2019 National Population Survey (PNS).

SOARES, C. N. et al. *Quality of life among menopausal women receiving primary care*. 2024.

TISSIANI, Marcelo Paulo et al. The impact of menopause on women's mental health. *Brazilian Journal of Health Review*, Curitiba, vol. 8, no. 2, pp. 01–13, Mar./Apr. 2025. DOI: 10.34119/bjhrv8n2-084.

WEF (World Economic Forum). *Global Gender Gap Report 2024; Menopause in the Workplace Report*. Davos: WEF, 2024.

WORLD HEALTH ORGANIZATION. Menopause Factsheet (related to World Menopause Day – 2022). Accessed at: https://www.imsociety.org/2022/10/18/world-health-organisation-menopause-factsheet/. Accessed on: October 18, 2022.

WORLD HEALTH ORGANIZATION. Menopause. Fact sheet. October 16, 2024. Available at: https://www.who.int/news-room/fact-sheets/detail/menopause. Accessed on: January 15, 2026.

WORLD HEALTH ORGANIZATION. Women, aging, and health: a framework for action. Geneva: WHO, 2007.

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