

Health, gender, and the invisibility of unpaid domestic work

Saúde, gênero e invisibilidade no trabalho doméstico não remunerado

Sibele de Jesus Santos¹, Maria Luiza Caires Comper¹

DOI: 10.1590/2358-28982025E2104961

ABSTRACT Unpaid domestic work, historically associated with the female gender, remains invisible in public policies on occupational health and safety. This essay, based on a literature review, discusses the importance of recognizing this work as legitimate, considering its direct implications for women's work schedules, health, and well-being. The Ergonomic Work Analysis is proposed as an effective methodology to identify and diagnose the conditions of domestic work, as well as to advocate for the technical and social recognition of this labor in public policies. The text also suggests that the 5th National Conference on Workers' Health should serve as a strategic space to debate and promote solutions aimed at gender equity and social justice.

KEYWORDS Household work. Ergonomics. Gender and health. Women, working.

RESUMO O trabalho doméstico não remunerado, historicamente associado ao gênero feminino, continua invisibilizado nas políticas públicas de saúde e segurança no trabalho. Este ensaio, baseado em revisão de literatura, discute a importância de reconhecer esse trabalho como legítimo, considerando suas implicações diretas na jornada de trabalho, saúde e bem-estar das mulheres. Propõe-se a Análise Ergonômica do Trabalho como metodologia eficaz para identificar e diagnosticar as condições do trabalho doméstico, além de defender o reconhecimento técnico e social desse trabalho nas políticas públicas. O texto também sugere que a 5ª Conferência Nacional de Saúde do Trabalhador e da Trabalhadora seja um espaço para debater e promover soluções voltadas para a equidade de gênero e a justiça social.

PALAVRAS-CHAVE Trabalho doméstico. Ergonomia. Gênero e saúde. Mulheres trabalhadoras.

¹Universidade Federal do Sul da Bahia (UFSB) – Teixeira de Freitas (BA), Brasil.
sibep_pa@hotmail.com



Introduction

Unpaid domestic work is an essential activity for maintaining daily life, and historically, it has been mostly assigned to women. According to data from the Brazilian Institute of Geography and Statistics, approximately 90% of Brazilian women aged 14 and older perform domestic tasks and/or care for people in their homes, spending an average of 21.3 hours per week on unpaid domestic activities, which corresponds to approximately 3 hours of work per day, often in addition to paid work hours¹. These data highlight how unpaid domestic work is associated with the identity of 'being a woman', reflecting an unequal division of tasks that reinforces stereotypes and perpetuates the cycle of gender inequality, while also posing significant challenges to the physical and mental health of the women involved²⁻⁴. This is because, although these tasks are essential to the functioning of society, they are often undervalued and rendered invisible⁵⁻⁷.

The overload of domestic and caregiving responsibilities, often combined with a limited support network and the lack of social and economic recognition for these roles, has adverse effects on women's well-being, restricting their opportunities for full participation in other social spheres, such as the labor market, education, and leisure⁸⁻¹¹. This precariousness is further exacerbated by the double shifts performed by women who divide their time between paid work and unpaid domestic work¹²⁻¹⁴. It is also important to consider that domestic work involves the presence of risk factors, such as performing repetitive and physically demanding tasks, adopting inadequate postures, and lack of sufficient rest. Conditions that, combined with the constant repetition of activities such as washing clothes, cleaning the house, and caring for children, predispose women to illness¹⁵.

Therefore, recognizing unpaid domestic work as part of the realm of occupational relations, and not just as a personal responsibility, is essential for building a more just society, in

which the rights of all workers, regardless of their occupation or gender, are respected and valued. Thus, what was previously considered 'unproductive or reproductive' work must be made visible and redefined, receiving a new perspective on its economic and social importance, since these tasks play a crucial role in the functioning of society^{7,12-14,16}.

In this context, Ergonomic Work Analysis (EWA) appears to be a promising methodological approach to shed light on unpaid domestic work. This is because EWA is based on an approach centered on analyzing actual work, seeking to understand the complexity of the activities performed by workers and propose solutions compatible with the specificities of the occupational context^{17,18}. This characteristic makes EWA particularly suitable for highlighting the concrete and multifaceted nature of domestic work, considering its physical, cognitive, and organizational demands, as well as the conditions under which it is performed and the impacts it has on the health of the women who perform it. Among the potential contributions of EWA to unpaid domestic work, the following stand out: i) diagnosing working conditions and assessing their impacts on women's health; ii) identifying activities that generate overload and proposing interventions to reduce risks; iii) generating data to support public policies and statistical recognition; and iv) the promotion of more equitable measures that review the labor, health and social rights of Brazilian women¹⁷.

This essay aimed to discuss the social role of gender, its relationship with unpaid domestic work, and its impacts on women's health. It focused on the TEW method, which is a viable approach for identifying, characterizing, diagnosing, and proposing improvements to women's unpaid domestic activities. To this end, it was organized into three sections. The first section aims to retrace women's history, the search for their rights, and how feminist struggles contributed to the recognition of unpaid domestic work as an identity linked

to 'being a woman', as addressed by social studies of gender and labor. The second section addresses the concept of unpaid domestic work, examining the tasks performed and their impacts on women's physical and mental health. Finally, the third section reflects on the role of TEW as a viable approach for informing public policies that promote and protect women's health, recognizing unpaid domestic work as a constitutional right.

Historical construction of women and work

Studying women is an important topic, as it brings a plurality of concepts linked to their lives throughout history, such as: marriage, submission, parent, maternal, care, family, strength, work, resistance, existence, health, safety, protection, responsibility, respect, among other definitions. Some of these concepts are being erased, others are forgotten, and many are emerging and taking on new meanings with the political, economic, and social changes that impact women's existence in society.

Precisely for this reason, it is possible to say that women's history is intrinsically linked to representations, concepts, and social markers shaped by a social convention about what it means to 'be a woman', which often establishes a single definition related to gender. Unilateral concepts are not acceptable, as understanding women's individualities and expectations is a *sine qua non*. Although these singularities are intertwined with the collective aspects of being a woman, each woman is uniquely intertwined with race, class, culture, and identity, influenced by the different historical and cultural contexts of certain groups^{19,20}. Such influences have profoundly shaped the construction of the relationship between women and work.

Throughout its historical and sociocultural history, women's occupations have always been rendered invisible and considered irrelevant

to changes in a society dominated (and still dominated) by patriarchy and machismo⁵. In this context, women were seen as submissive, dependent beings who should perform their occupations exclusively for marriage, reproduction, and family. This condition, depending on race and class, increases the silencing of women and their consequent invisibility in the social process, reinforcing structural inequalities and limiting equal access to rights, recognition, and representation²¹.

For many centuries, women's silence was a religious, political, and social commandment²². This silence became a survival strategy, as failing to conform to societal standards led to exclusion, confinement, limitations, and even death. Thus, the stories of these protagonists long went unnoticed in their diaries, photographs, and family correspondence – and, when written, were informed by men. However, feminist demonstrations and movements, sparked by women's listening and discussing intimate struggles among themselves, the labor shortage during the industrial period, historical and cultural changes, and the need for social research, led to this story being told, published, and modified over time²³⁻²⁵.

In this context, the feminist movement became a path for women's entry into the workforce, achieved through many struggles. Struggles for their bodies, for the separation from marriage, for academic education, for participation in public spaces, for political representation, for equal pay, and for the validation of their existence and relevance in society. It can be said that these movements marked the beginning of women's history in the workplace, opening doors in universities, laboratories, and research groups formed by women, who, from then on, began to tell – and more than that, live – their own stories²⁴.

The results of this movement in defense of women's rights have translated into several aspects, because, although the achievements reached women collectively, the struggles were based on experiences and social and cultural realities of class and race that were

intersected by different contexts. Now is not only the time to fight for civil rights, voting rights, and freedom in public spaces, but also, *a fortiori*, to demand that their gender and racial identities be recognized and represented – and from there, the achievement of decent working conditions, protections and rights for their children, and the essential need for a Black feminist perspective, challenging us to think and see that there can be no universalization of being a woman without considering the intersections that cross them^{26,27}.

In light of these circumstances, black feminism is built from the struggle of women who do not belong to a privileged class, reflecting on the difficulties faced by those deprived of many rights: working-class women, poor women, women of various races, ethnic minorities who fight for the right to political representation, employment, wage increases, the right to daycare, the fight against racism and better living conditions for these women and their generations²⁸. Djamila Ribeiro²⁶⁽¹⁴⁾ adds in her book ‘What is speaking place?’ that:

Thinking about black feminism is precisely about breaking with the division created in an unequal society, and therefore about thinking about new projects, new civilizing milestones so that we can think about a new model of society.

In reality, what these women wanted, and still want, are the right to choose in constructing their own identities, without being tied to the obligations of motherhood, domesticity, marriage, caregiving, and the subordination of power to men. Hence, we see the reflection on women, their bodies, and their social, public, and private roles, so important and significant for expanding their sociability and changing history and the world²⁹. The fact is that women’s subversion of the suppression of choices over their bodies and lives brought great achievements and social transformations that fostered a new configuration of labor relations in society. The world of work, albeit with limitations, ceased to be something

exclusively recognized, associated with, and strictly performed by men. It began to be accepted, included, and expanded for women, breaking with the dichotomy between who should be responsible for public and private life; reason and feeling; productive and reproductive; science and care.

The inclusion of women in the labor market brought a new way of living and surviving for women, but it did not eliminate their participation in unpaid domestic activities, which resulted in an intensification of the total workload^{30,31}. Furthermore, there was a continuation of the principles of separation and hierarchization of activities by gender division, now not only restricted to the sphere of private life, but also present in the dynamics of the world of work³². This is because there is a tendency for women to be allocated to activities socially defined as feminine in sectors traditionally associated with care, health, and education, associated with male predominance in leadership, decision-making, and prestige positions, which implies higher salaries and higher hierarchical positions^{30,31,33,34}.

In this model, a minority occupies high-paying, well-paid positions, while a predominant group of women occupies low-paying positions with excessive working hours, precarious work, reduced or excluded labor and social security rights, outsourcing of domestic work, low qualifications, lack of career advancement, and migration. Consequently, this leads to further intensification of social inequalities and job inequalities, now among women themselves, through the bipolarization of work, thus perpetuating inequalities and indicators of precarious work^{10,32,35,36}. For example, social indicators for women in Brazil in 2022 reveal that female participation in management positions is lower than that of men, and that their salaries are lower. This disparity tends to increase as women age, contrasting with the male scenario, in which older men with children can reach higher positions⁹.

The data also show that the weekly workload dedicated to unpaid domestic activities,

such as caregiving and/or household chores, is significantly higher for women, especially in adulthood^{38,9}. These data may be partially linked to the double shift women undertake, which intertwines paid work and unpaid domestic work, or forces them to give up one of these spheres, directly impacting their physical and mental health³⁷⁻³⁹. This demonstrates that family care and the work associated with it are still seen as a gendered social role, thus resulting in vertical and horizontal segregation⁴⁰.

Thus, it is clear that major transformations have occurred in women's private and public spheres over time, a result of feminist struggles, historical and cultural developments, and new public policies. However, women's health and lives continue to be impacted by greater responsibility for unpaid domestic activities, in addition to challenges in their professional advancement, especially when they require time off to raise and care for their families. This highlights the need to expand and modify public initiatives and scientific studies that seek to understand and intervene in the recognition of unpaid domestic work as a right, not simply as an identity linked to 'being a woman'.

Unpaid domestic work and its impacts on women's physical and mental health

The word 'work' can be understood as an activity that involves performing a task with the objective of achieving a specific result, whether paid or not. This word unfolds into several concepts that emerge from a historical process of construction and that reflect forms and meanings attributed to work based on the relations of production, social organization, and human knowledge of each time period⁴¹. Albornoz describes work from two distinct perspectives: first, as the realization of a work capable of expressing the individual, providing them with social recognition and transcending

their own life; second, as a routine and repetitive effort, without freedom, whose result is consumable and often marked by inevitable discomfort⁴². Within this approach, work can be conceived as the application of human strengths and faculties to achieve a specific objective through the performance of a coordinated activity, whether physical or intellectual in nature.

Exploring these definitions allows us to understand that work goes beyond the paid sphere. It involves a range of activities that are not limited to generating profit but also to meeting social, cultural, and emotional needs, playing a fundamental role in the organization and functioning of societies⁴³. For example, unpaid domestic work refers to all work performed continuously in the residential environment, by a single resident or by several, without receiving remuneration^{7,16,44}. It includes both indirect and direct household care tasks and care for individuals in the home^{11,45}. These tasks can be characterized by activities such as: cleaning and/or organizing the home; cooking, washing, or organizing kitchen utensils; cleaning and maintaining clothes or shoes; ironing and/or putting away clothes; assisting with the personal or educational care of other household members; caring for pets, among other activities^{11,45,46}.

In this context, unpaid domestic work assumes an essential dimension, with the objective of providing care and maintaining living conditions. As work, it shares fundamental characteristics with any other paid work, such as: defining a clear objective, carrying out processes, tasks, or steps necessary to achieve that objective, repetitiveness or continuity, and the value generated, which can reflect economic, social, cultural, or psychological benefits. However, although it can be classified as work, why is it not properly recognized or valued? Perhaps because these activities, although essential, are often considered part of the private sphere and not seen as formal, socially and economically recognized work. In part, this response is associated with the fact

that, historically, unpaid domestic work has been constructed as an exclusive responsibility of women, almost as a *sine qua non* of their identity, as described in the previous section.

Indeed, despite so many years, unpaid domestic work continues to be predominantly performed by women, who dedicate their physical and mental efforts to carrying out a daily routine that is invisible and often undervalued by society^{7,14,46,47}. This reality reflects the persistence of a gender division that has relegated women to the role of caregivers, which, in turn, contributes to the devaluation of the work they perform. Some studies show that the workload dedicated to unpaid domestic work by women is always greater than that of men, being even more intense when it involves caring for children and other residents, further impacting their health^{10,11,45,46}.

In this sense, the impact of unpaid domestic work responsibilities on women's health can be significant. The overload of household tasks, often combined with paid work and other responsibilities, results in significant physical and emotional strain^{3,48}. In these women's lives, there is no defined time limit or shift limit for domestic work, nor are there specific rest periods or a balanced division of tasks among household members. This scenario was intensely evident during the COVID-19 pandemic, when domestic and caregiving responsibilities were intensified due to social isolation^{3,4,49}.

Furthermore, the pandemic has fueled the emergence of a new work configuration – teleworking in a home office – which has required adapting the home environment to accommodate this new format. In this context, teleworking in a home office has contributed to further perpetuating the already established gender divide and, consequently, increased women's exposure to the risk factors associated with this overload of responsibilities^{50,51}. This has resulted in the development of health conditions related to chronic stress, exhaustion, sleep disorders, musculoskeletal problems, and, in more severe cases, the emergence of

mental illnesses such as anxiety and depression. For example, in 2024, women accounted for the majority of absences due to mental disorders in the workplace. According to data from the Ministry of Social Security⁵², 64% of the 472,328 sick leaves granted for mental health reasons were registered among women, with an average age of 41, and include depressive episodes, anxiety disorders, severe stress, and adjustment disorders.

All of the above reveals that the lack of recognition, institutional support, and an equal division of unpaid domestic labor are significant determinants of women's health. These conditions are exacerbated by physical and psychological demands, such as pressure to fulfill multiple responsibilities; biomechanical demands, overtime, lack of weekly rest, long working hours, and the emotional overload of domestic work⁵³⁻⁵⁶. Perhaps the first step toward changing these women's reality lies in recognizing unpaid domestic labor as a constitutional right. This requires the creation of policies that ensure the equitable division of domestic responsibilities among all family members, regardless of gender. Furthermore, it is crucial to adopt an effective approach to inform public policies that promote health and well-being. In this sense, the use of ergonomic knowledge can be an essential tool to identify, evaluate and diagnose unpaid domestic activities, aiming not only to understand the physical and mental demands imposed on them, but also to drive significant changes in their working conditions and well-being^{15,57,58}.

Ergonomic work analysis: a possibility to make unpaid domestic work visible

Ergonomics is a multidisciplinary science that studies the relationship between humans and the physical, cognitive, and organizational elements of work. Its objective is to adapt and transform the work environment, aiming to

ensure the safety, health, and well-being of workers while promoting sustainability, efficiency, and productivity^{45,59}. Furthermore, ergonomics seeks to generate knowledge, analyze problems, and propose solutions through specific methods and techniques for each variable studied, be it human, machine, environment, or system¹⁷.

According to the International Ergonomics Association (IEA), ergonomics can be divided into three domains: i) the physical domain, which studies the anthropometric and biomechanical characteristics of workers and the components of the work environment (machines, furniture, tools and instruments); ii) the cognitive domain, which analyzes and describes the worker's interactions with work through mental processes; and iii) the organizational domain, which addresses elements related to management, planning, working hours, production standards and communication⁵⁹.

Each of these domains should be considered when assessing working conditions and proposing interventions, especially when faced with demands related to health and safety, changes in work environments, or transformations in the workforce profile. These principles also apply to the development of new systems and processes, including in unconventional contexts such as unpaid domestic work. To this end, both the individuality and the collective nature of workers must be considered, respecting their specificities and promoting environments that improve health, well-being, and efficient performance¹⁸.

EWA is a methodology developed in the field of ergonomics, based on the analysis of prescribed and actual work, as well as its performance conditions. Its main objective is to investigate the relationships between the causes and effects of the work environment on workers' health, in order to propose improvements that promote health, safety, and the well-being^{18,60}. It is an approach that evaluates, in an integrated manner, the physical, cognitive, and organizational domains of work,

considering both the individual and collective aspects of the occupational context^{17,59}.

It is important to mention that, although EWA was initially designed for industrial and formal environments, especially those structured according to the principles of Taylorism and Fordism, its application has been consolidated as an effective approach also in non-conventional work contexts^{17,61,62}. Iida presents theoretical foundations that legitimize the expansion of the use of EWA, as long as its tools and procedures are properly adapted to the particularities of the work environment and the profile of the workers involved¹⁷.

EWA is divided into five assessment stages: demand analysis, task analysis, activity analysis, diagnosis, and ergonomic recommendations^{17,63}. Demand analysis expresses motivation, highlighting the social, health, and legal reasons that motivate the application of EWA to solve a problem. Therefore, it aims to identify workers' needs and/or understand the reasons for dysfunctions in the workplace, with the study of these workers' characteristics being essential^{18,54,56,63}. Therefore, in addition to the contributions found in social, gender, and health science studies in the analysis of unpaid domestic work, the importance of collecting information and analyzing sociodemographic, occupational, and health data related to Brazilian women who perform this work is highlighted. The objective is to understand who these women are and what their social, economic, occupational, and health realities are. It is important to know which women we are talking about, since there are specificities that permeate 'being a woman', considering that each one is affected differently by factors such as race, class, culture and identity^{64,65}.

The second stage of ergonomic analysis, called task analysis, seeks to understand the tasks performed, the workload, the execution times, and the characteristics of the equipment, machines, or tools used^{17,18,54,63}. This stage aims to understand the characteristics of unpaid domestic work, relating pre-established tasks

to actual work, so that the tasks performed in Brazilian households can be identified, distinguished, and included⁵⁶. This can be done by identifying and characterizing tasks and subtasks (time spent, main task, support, multitasking, care for others, among other items) using a self-administered questionnaire made available through digital platforms.

Activity analysis seeks to understand how tasks are effectively performed in the real work context, considering both individual and environmental aspects. To this end, an assessment of the operational mode through which the work is performed is carried out, taking into account the practical knowledge, strategies, and adaptations developed by the workers^{17,54}. This assessment can be performed through quantitative approaches using direct measurement instruments, observational methods, and closed-ended questionnaires, or through qualitative approaches aimed at understanding the perceptions, practices, behaviors, and perspectives of women who perform unpaid domestic work^{65,66}. It is recommended that activity analysis not be restricted to pre-formatted tools, since different demands and occupational contexts require specific approaches that are sensitive to the particularities of the situation analyzed^{18,61,68}.

The information collected through the analysis of demand, task, and activity will be consolidated into an ergonomic diagnosis^{17,69}. The main objectives of this diagnosis are: i) to describe work-related risk factors, their nature, and their impacts on workers' health, considering the characteristics of the population and the occupational environment and their interactions; and ii) to provide a solid basis for the development and implementation of ergonomic solutions that can reduce or eliminate the identified risks and improve the health and well-being of workers^{17,18,53,54,63}.

EWA can be an effective approach to making unpaid domestic work visible, as its steps can be applied in this context with the same degree of systematization and legitimacy granted to other forms of work¹⁷. Demand

analysis, for example, allows us to understand the women who perform this work, their health conditions, and the occupational demands they face. Task analysis allows us to map the activities performed in domestic work, identifying not only the tasks themselves but also the time spent on them, the use of technologies (such as appliances), tools, and utensils, providing a detailed view of the workload. Activity analysis, on the other hand, allows us to observe how these tasks directly impact women's health, taking into account these women's perceptions, physical effort, and mental overload. Based on these data, it would be possible to diagnose working conditions and suggest interventions that promote health and well-being⁷⁰.

Furthermore, EWA presents itself as an objective, valid, and reliable method for establishing a true diagnosis of working conditions related to domestic tasks, overcoming the subjectivity that often points to physical and mental overload without a specific quantitative and qualitative assessment. By applying EWA, it is possible to identify and measure risk factors, ergonomic conditions, and the health impacts of women who perform unpaid domestic work, providing a solid basis for effective interventions. This approach not only makes the workload visible but also provides support for the formulation of public policies that promote health and well-being and recognize unpaid domestic work as work and a legitimate right of the women who perform it.

Final considerations

The 5th National Conference on Workers' Health (CNSTT) plays a fundamental role in recognizing that work, in its various forms, is an essential human right and a crucial factor for the health and well-being of individuals. It serves as a collective and collaborative space for the development of public policies that promote health and safety in the workplace, strengthening the fight for better living and

health conditions for all workers. Precisely for this reason, we believe it is important to bring issues related to unpaid domestic work to the forefront, sparking necessary reflections at a time when workers' right to health is being discussed. It is also a unique opportunity to bring something historically ingrained in the lives of so many women out of obscurity.

In this essay, we discuss how unpaid domestic work has historically been configured as a social function attributed to women rather than recognized as a legitimate form of work. This attribution contributes to its invisibility in institutional frameworks and public policies focused on health and safety at work. Our motivation is to promote the inclusion of unpaid domestic work in the discussions and proposals of the National Commission on Health and Safety at Work (CNSST), advocating for its consideration as work in the full sense, regardless of its formal remuneration.

We understand that this recognition requires a prior systematization stage: identifying the activities involved, mapping the occupational processes, the resources used, and the physical, cognitive, and emotional demands placed on those who perform them. This exercise in visibility is fundamental to deconstructing the notion that domestic work constitutes a natural extension of female identity or an occupation accessory to women's lives. On the contrary, it is an activity central to the reproduction of daily life and, therefore, substantially integrates the total workday of many women, especially those working double or triple shifts.

In this sense, we present the EWA methodology as a viable approach to making unpaid domestic work visible, enabling an in-depth study of the tasks, working conditions, and risks to which women are exposed. EWA enables rigorous observation of the organization and execution of actual work, contributing to the identification of physical and mental overloads, as well as frequently overlooked psychosocial aspects. Furthermore, we highlight how this methodology can serve as

a basis for formulating public policies that promote women's health and well-being, ensuring the protection and appreciation of their rights.

We believe that until unpaid domestic work is translated into prescribed and real work – that is, until its tasks are formally described, recognized, and analyzed with the same criteria applied to professional work – it will remain invisible, erroneously associated with women's identity. This invisibility represents one of the greatest obstacles to effective care actions targeting this occupational group. A prime example is the current National Workers' Health Policy, which ensures health for all urban and rural workers, both in the formal and informal markets, but does not explicitly cover unpaid domestic work⁷¹.

This gap highlights the urgent need to reposition this type of work at the center of discussions on health, social protection, and gender equity. Only through social, political, and technical recognition of this work, which requires planning, execution, care, and responsibility, will it be possible to advance the development of adequate protection, prevention, and recognition mechanisms. In this context, public policies focused on the health of male and female workers must be expanded, ensuring that women not only have access to adequate health care but also that the occupational risks of unpaid domestic work are analyzed and minimized through safety measures, training, and social and economic recognition.

Care actions must also be structured to promote the comprehensive health of women workers, offering psychological, physical, and social support and ensuring that their rights are respected, both in the domestic environment and in the formal labor market. Furthermore, it is essential that public policies encourage a more equitable division of domestic labor, ensuring that responsibility for these tasks does not fall exclusively on women, thus promoting gender equality. This is an indispensable step toward building a more

just society, in which care work is valued in all its dimensions: productive, reproductive, and relational.

Finally, we believe that the 5th CNSTT is a crucial opportunity to discuss these issues and build integrated solutions that recognize unpaid domestic work as a legitimate form of work, with direct implications for women's health and well-being. The creation of effective public policies and actions that protect

women workers is essential to ensure that their rights, both as workers and as human beings, are fully recognized and respected.

Collaborators

Santos SJ (0000-0001-6111-8967)* and Comper MLC (0000-0003-2152-5263)* contributed equally to the preparation of the manuscript. ■

References

1. Nery C, Britto V. Em 2022, mulheres dedicaram 9,6 horas por semana a mais do que os homens aos afazeres domésticos ou ao cuidado de pessoas. Agência IBGE [Internet]. 2023 ago 28 [atualizado em 2023 ago 24; acesso em 2024 abr 20]; Notícias. Disponível em: <https://agenciadenoticias.ibge.gov.br/agencia-noticias/2012-agencia-de-noticias/noticias/37621-em-2022-mulheres-dedicaram-9-6-horas-por-semana-a-mais-do-que-os-homens-aos-afazeres-domesticos-ou-ao-cuidado-de-pessoas>
2. David Chelliah H, Boo HS, Karupiah P. Division of Housework and Subjective Feelings Among Indian Women During the COVID-19 Pandemic in Malaysia. *MJSSH*. 2023;8(5):e002310. DOI: <https://doi.org/10.47405/mjssh.v8i5.2310>
3. Reich-Stiebert N, Froehlich L, Voltmer JB. Gendered Mental Labor: A Systematic Literature Review on the Cognitive Dimension of Unpaid Work Within the Household and Childcare. *Sex Roles*. 2023;88(11-12):475-494. DOI: <https://doi.org/10.1007/s11199-023-01362-0>
4. Lu J, Chen Y, Lv Y. The effect of housework, psychosocial stress and residential environment on musculoskeletal disorders for Chinese women. *SSM Popul Health*. 2023;24:101545. DOI: <https://doi.org/10.1016/j.ssmph.2023.101545>
5. Soihet R, Soares RM, Costa SG. A História das mulheres. Cultura e poder das mulheres: ensaio de historiografia. *Rev Gênero*. 2001;2(1):7-30. DOI: <https://doi.org/10.22409/rg.v2i1.282>
6. Perrot M. As mulheres ou os silêncios da história. Bauru, SP: Edusc; 2005. 520 p.
7. Bruschini C. Trabalho doméstico: inatividade econômica ou trabalho não-remunerado? *Rev Bras Estud Popul*. 2006;23(2):331-53. DOI: <https://doi.org/10.1590/S0102-30982006000200009>
8. Bruschini MCA, Ricoldi AM. Revendo estereótipos: o papel dos homens no trabalho doméstico. *Rev Estud Fem*. 2012;20(1):259-87. DOI: <https://doi.org/10.1590/S0104-026X2012000100014>
9. Instituto Brasileiro de Geografia e Estatística. Estatísticas de Gênero: Indicadores sociais das mulheres no Brasil [Internet]. [Rio de Janeiro]: IBGE; 2023 ago 11 [acesso em 2024 abr 20]. Disponível em: <https://www.ibge.gov.br/estatisticas/multidominio/>

*Orcid (Open Researcher and Contributor ID).

genero/20163-estatisticas-de-genero-indicadores-sociais-das-mulheres-no-brasil.html

10. Carneiro CMM, Pinho PS, Teixeira JRB, et al. Unpaid domestic work: persistence of gender-based labor division and mental disorders. *Rev Saúde Pública*. 2023;57:31. DOI: <https://doi.org/10.11606/s1518-8787.2023057004502>
11. Instituto Brasileiro de Geografia e Estatística. Estatísticas de Gênero – Indicadores sociais das mulheres no Brasil. Estudos e Pesquisas Informação Demográfica e Socioeconômica, número 38 [Internet]. [Rio de Janeiro]: IBGE; [data desconhecida] [acesso em 2024 jun 20]. Disponível em: <https://www.ibge.gov.br/estatisticas/multidominio/genero/20163-estatisticas-de-genero-indicadores-sociais-das-mulheres-no-brasil.html>
12. Dias B. Apropriação capitalista do trabalho doméstico e reprodutivo não remunerado da dona de casa sob a perspectiva de gênero. Observatório Segurança Pública e Relações Comunitárias [Internet]. 2021 abr 19 [acesso em 2024 fev 24]; Artigos e Pesquisas. Disponível em: <https://www.observatoriodeseguranca.org/pesquisas-e-estudos/apropriacao-capitalista-do-trabalho-domestico-e-reprodutivo-nao-remunerado-da-dona-de-casa-sob-a-perspectiva-de-genero/>
13. Duarte I, Pereira de Melo H. A riqueza gerada pelo trabalho não-remunerado. *ABET*. 2024;23(1). DOI: <https://doi.org/10.61999/abet.1676-4439.2024v23n1.65530>
14. Jesus JC. Trabalho doméstico não remunerado no Brasil: uma análise de produção, consumo e transferência [tese na Internet]. Belo Horizonte: Faculdade de Ciências Econômicas, Universidade Federal de Minas Gerais; 2018 [acesso em 2024 set 21]. 121 f. Disponível em: <https://repositorio.ufmg.br/handle/1843/FACE-B27PW9>
15. Domingos P, Souto BG. Risco Osteomuscular Relacionado ao Trabalho Doméstico. *Rev Med Minas Gerais*. 2018;8:[1-8]. DOI: <https://dx.doi.org/10.5935/2238-3182.20180070>
16. Beem GPV. Trabalhadoras invisíveis: o trabalho doméstico não remunerado de mulheres no Brasil [monografia na Internet]. São Paulo: Centro de Economia e Administração, Pontifícia Universidade Católica de Campinas; 2022 [acesso em 2024 out 11]. 63 f. Disponível em: <https://repositorio.sis.puc-campinas.edu.br/handle/123456789/16743>
17. Iida I, Guimarães LB. Ergonomia: Projetada e produção. 3ª ed. São Paulo: Blucher; 2016. 850 p.
18. Guérin F, Laville A, Daniellou F, et al. Compreender o trabalho para transformá-lo: a prática da ergonomia. São Paulo: Edgard Blucher; 2001. 200 p.
19. Assis DN. Interseccionalidades [Internet]. Salvador: UFBA, Instituto de Humanidades, Artes e Ciências; Superintendência de Educação a Distância; 2019 [acesso em 2024 out 27]. 57 p. Disponível em: <http://repositorio.ufba.br/ri/handle/ri/30892>
20. Del Priore M. História das Mulheres no Brasil. São Paulo: Contexto; 2004. 680 p.
21. Bosi E. As outras testemunhas. In: Dias MO, organizadora. Quotidiano e poder em São Paulo no século XIX. 2ª ed. São Paulo: Brasiliense; 1995. 264 p.
22. Perrot M. As mulheres ou os silêncios da história. Bauru, SP. Edusc; 2005. 520 p.
23. Hahner JE. A mulher brasileira e suas lutas sociais e políticas (1850-1937). São Paulo: Brasiliense; 1981. 140 p.
24. Del Priore M. História das mulheres: as vozes do silêncio. In: Freitas MC, organizador. Historiografia brasileira em perspectiva. 4ª ed. São Paulo: Contexto; 2001. p. 217-235 p.
25. Silva TMG. Trajetória da historiografia das mulheres no Brasil. *Rev Politeia: Hist e Soc*. [Internet]. 2010 [acesso em 2024 jan 19];8(1):223-231. Disponível em: <https://periodicos2.uesb.br/index.php/politeia/article/view/3871>
26. Ribeiro D. O que é lugar de fala? Belo Horizonte: Letramento; 2017. Feminismos plurais. 112 p.

27. Akotirene K. Interseccionalidade. São Paulo: Polém; 2019. 150 p.
28. Davis A. Mulheres, raça e classe. Tradução: Heci Regina Candiani. São Paulo: Boitempo; 2017. 248 p.
29. Novaes ED. Entre o público e o privado: o papel da mulher nos movimentos sociais e a conquista de direitos no decorrer da história. *Hist Cult*. 2015;4(Esp 3):50-66. DOI: <https://doi.org/10.18223/hiscult.v4i3.1691>
30. Ibarra ACR, Ramos NB, Oliveira MZ. Desafios das mulheres na carreira científica no Brasil: uma revisão sistemática. *Rev Bras Orientac Prof*. 2021;22(1):17-28. DOI: <https://doi.org/10.26707/1984-7270/2021v22n102>
31. Cornejo PA, Villanueva CI. La Perspectiva de Género, Desafios para la Ergonomía en Chile: Una Revisión Sistemática de Literatura. *Cienc Trab*. 2014;16(49):28-37. DOI: <http://dx.doi.org/10.4067/S0718-24492014000100006>
32. Hirata H, Kergoat D. Novas configurações da divisão sexual do trabalho. *Cad Pesqui*. 2007;37:595-609. DOI: <https://doi.org/10.1590/S0100-15742007000300005>
33. Schmidt JF. As Mulheres na Revolução Francesa. *Rev Thema [Internet]*. 2012 [acesso em 2025 mar 30];9(2):1-19. Disponível em: <https://periodicos.ifsul.edu.br/index.php/thema/article/view/147>
34. Macedo RM, Medeiros TM. Marcadores sociais da diferença, interseccionalidade e saúde coletiva: diálogos necessários para o ensino em saúde. *Saúde debate*. 2025;49(144):e9507. DOI: <https://doi.org/10.1590/2358-289820251449507P>
35. Hirata H. Mudanças e permanências nas desigualdades de gênero: divisão sexual do trabalho numa perspectiva comparativa [Internet]. São Paulo: Friedrich Ebert Stiftung Brasil; 2015 [acesso em 2025 mar 30]. Disponível em: <https://library.fes.de/pdf-files/bueiros/brasilien/12133.pdf>
36. Hirata H. Globalização e divisão sexual do trabalho. *Cad Pagu*. 2002;(17-18):139-56. DOI: <https://doi.org/10.1590/S0104-83332002000100006>
37. Hirata H. Gênero, Patriarcado, Trabalho e Classe. *TN*. 2018;16(29):14-27. DOI: <https://doi.org/10.22409/tn.16i29.p4552>
38. Oliveira SS, Neves MY, Brito J, et al. Relações sociais de sexo/gênero, trabalho e saúde: contribuições de Helena Hirata. *Saúde debate*. 2021;45(Esp 1):137-53. DOI: <https://doi.org/10.1590/0103-11042021E111>
39. Matos RA, Albuquerque CS. “Questão social”, divisão sexual do trabalho e saúde mental na pandemia. *Rev Katálisis*. 2023;26(1):43-53. DOI: <https://doi.org/10.1590/1982-0259.2023.e88287>
40. Hirata H, Kergoat D. Atualidade da divisão sexual e centralidade do trabalho das mulheres. *Rev Pol Trab*. 2021;1(53):22-34. DOI: <https://doi.org/10.22478/ufpb.1517-5901.2020v1n53.50869>
41. Neves DR, Nascimento RP, Felix Jr MS, et al. Sentido e significado do trabalho: uma análise dos artigos publicados em periódicos associados à Scientific Periodicals Electronic Library. *Cad Ebapebr*. 2018;16(2):318-30. DOI: <https://doi.org/10.1590/1679-395159388>
42. Albornoz S. O que é trabalho. São Paulo: Editora Brasiliense; 1986. 100 p. (Coleção Primeiros passos).
43. Morin EM. Os sentidos do trabalho. *Rev Adem Empres*. 2001;41(3):8-19. DOI: <https://doi.org/10.1590/S0034-75902001000300002>
44. Presidência da República (BR). Lei Complementar nº 150, de 1º de junho de 2015. Dispõe sobre o contrato de trabalho doméstico; altera as Leis no 8.212, de 24 de julho de 1991, no 8.213, de 24 de julho de 1991, e no 11.196, de 21 de novembro de 2005; revoga o inciso I do art. 3º da Lei no 8.009, de 29 de março de 1990, o art. 36 da Lei no 8.213, de 24 de julho de 1991, a Lei no 5.859, de 11 de dezembro de 1972, e o inciso VII do art. 12 da Lei no 9.250, de 26 de dezembro 1995; e dá outras providências. *Diário Oficial da União [Internet]*, Brasília, DF. 2015 jun 2 [acesso em 2024 abr

- 24]; Seção I:1. Disponível em: https://www.planalto.gov.br/ccivil_03/leis/lcp/lcp150.htm
45. International Labour Organization. Principles and guidelines for human factors/ergonomics (HFE) design and management of work systems [Internet]. Geneva: ILO; 2021 [acesso em 2024 jan 25]. Disponível em: https://www.ilo.org/sites/default/files/wcmsp5/groups/public/%40ed_dialogue/%40lab_admin/documents/publication/wcms.826596.pdf
 46. Monteiro RP, Araújo JNG, Moreira IC. Você, dona de casa: trabalho, saúde e subjetividade no espaço doméstico. *Pesqui Prát. Psicossociais* [Internet]. 2018 [acesso em 2025 mar 30];13(4):1-14. Disponível em: https://www.seer.ufsj.edu.br/revista_ppp/article/view/3155
 47. Bolanos IN, García, Brígida y Edith Pacheco, Uso del tiempo y trabajo no remunerado en México. *Estud Demogr Urbanos*. 2017;32(2):415-424. DOI: <https://doi.org/10.24201/edu.v32i2.1746>
 48. Sullivan O, Gershuny J. Domestic outsourcing and multitasking: How much do they really contribute? *Social Science Research*. 2013;42(5):1311-24. DOI: <https://doi.org/10.1016/j.ssresearch.2013.05.004>
 49. Dorna LBH. O trabalho doméstico não remunerado de mães na pandemia da COVID-19: mudanças e permanências. *Laboreal*. 2021;17(1). DOI: <https://doi.org/10.4000/laboreal.17860>
 50. Labronici RB, Antunes R, organizadores. *Uberização, trabalho digital e indústria 4.0*. São Paulo: Boitempo. 333 p. *Mana*. 2021;27(1):e271803. DOI: <https://doi.org/10.1590/1678-49442021v27n1r803>
 51. Nunes CA. Os riscos à saúde mental no teletrabalho em home-office sob a perspectiva de gênero, classe social e raça [tese na Internet]. São Paulo: Universidade Presbiteriana Mackenzie; 2024 [acesso em 2024 set 21]. 201 f. Disponível em: <https://dspace.mackenzie.br/handle/10899/39417>
 52. Casemiro P, Moura R. Crise de saúde mental: Brasil tem maior número de afastamentos por ansiedade e depressão em 10 anos. *Portal G1* [Internet]. 2025 mar 10 [acesso em 2001 jan 25]; *Trabalho e Carreira*. Disponível em: <https://g1.globo.com/trabalho-e-carreira/noticia/2025/03/10/crise-de-saude-mental-brasil-tem-maior-numero-de-afastamentos-por-ansiedade-e-depressao-em-10-anos.ghtml>
 53. Couto HÁ, Couto DC. *Ergonomia 4.0 – Dos Conceitos Básicos à 4ª Revolução Industrial*. Belo Horizonte: Ergo; 2020.760 p.
 54. Camisassa M. *Segurança e Saúde no Trabalho: NRS 1 a 38 comentadas e descomplicadas*. 9ª ed. Rio de Janeiro: Método; 2023. 928 p.
 55. Baruki LV. Riscos psicossociais e saúde mental do trabalhador: por um regime jurídico preventivo. 2ª ed. São Paulo: LTr; 2018. 171 p.
 56. Estrázulas JA, Jr Sobral M. *Ergonomia aplicada à indústria: planejamento e elaboração de AEP e AET*. Manaus: BiomechaLab; 2024. 230 p.
 57. Osinuga A, Janssen B, Fethke NB, et al. Understanding rural women's Domestic Work Experiences (DWE) in Ibadan, Nigeria: Development of a measurement tool using confirmatory factor analysis. *Int J Environ Res Public Health*. 2021;18(21):11043. DOI: <https://doi.org/10.3390/ijerph182111043>
 58. Habib RR, El Zein K, Hojeij S. Hard work at home: musculoskeletal pain among female homemakers. *Ergonomics*. 2012;55(2):201-11. DOI: <https://doi.org/10.1080/00140139.2011.574157>
 59. International Ergonomics Association. What Is Ergonomics (HFE)? IEA [Internet]. [data desconhecida] [acesso em 2024 jun 28]; Home\About. Disponível em: <https://iea.cc/about/what-is-ergonomics/>
 60. Daniellou F. *A ergonomia em busca de seus princípios: debates epistemológicos*. São Paulo: Edgard Blücher; 2004.
 61. Ferreira MC. *Ergonomia da atividade aplicada à qualidade de vida no trabalho: lugar, importância e contribuição da Análise Ergonômica do Trabalho (AET)*.

- Rev Bras Saúde Ocup. 2015;40(131):18-29. DOI: <https://doi.org/10.1590/0303-7657000074413>
62. Hayashi E, Faria JRG. Condições ambientais em escolas Municipais de ensino infantil da Cidade de Marília (São Paulo): estudo de caso [Internet]. In: Paschoarelli LC, Menezes MS, organizadores. São Paulo: Editora UNESP; São Paulo: Cultura Acadêmica; 2009 [acesso em 2025 jul 1]. p. 119-146. Disponível em: <https://static.scielo.org/scielobooks/yjxnr/pdf/paschoarelli-9788579830013.pdf>
 63. Ministério do Trabalho e Emprego (BR). Norma Regulamentadora No. 17 (NR-17). Gov.br [Internet]. 2020 out 22 [atualizado em 2024 nov 4; acesso em 2024 maio 6]; Acesso à Informação. Disponível em: <https://www.gov.br/trabalho-e-emprego/pt-br/acesso-a-informacao/participacao-social/conselhos-e-orgaos-colegiados/comissao-tripartite-partitaria-permanente/normas-regulamentadora/normas-regulamentadoras-vigentes/norma-regulamentadora-no-17-nr-17>
 64. Carneiro S. Enegrecer o feminismo: a situação da mulher negra na América Latina a partir de uma perspectiva de gênero. In: Ashoka Empreendimentos Sociais & Takano Cidadania, organizadores. Racismos contemporâneos. Rio de Janeiro: Takano; 2003. p. 49-58.
 65. Carneiro S. Mulheres em movimento. *Estud Av.* 2003;17(49):117-33. DOI: <https://doi.org/10.1590/S0103-40142003000300008>
 66. Lamarão AM, Costa LCM, Compera MLC, et al. Observational methods for biomechanical risk assessment in workers: a systematic review. *Fisioter Mov.* 2017;30(2):379-89. DOI: <https://doi.org/10.1590/1980-5918.030.002.AR01>
 67. Valentim DP, Comper MLC, Cirino LSMR, et al. Observational methods for the analysis of biomechanical exposure in the workplace: a systematic review. *Ergonomics.* 2024;1-22. DOI: <https://doi.org/10.1080/00140139.2024.2427864>
 68. Ferreira LL. Sobre a Análise Ergonômica do Trabalho ou AET. *Rev Bras Saúde Ocup.* 2015;40(131):8-11. DOI: <https://doi.org/10.1590/0303-7657ED0213115>
 69. Abrahão J, Sznclwar L, Silvino A, et al. Introdução à ergonomia: da prática à teoria (2009). São Paulo: Blucher; 2009. 243 p.
 70. Santos SJ, Comper MLC. Metodologia para análise ergonômica do trabalho doméstico não remunerado. In: Congresso Brasileiro de Ergonomia e Fatores Humanos (ABERGO); 2024 dez 16; Goiânia. Goiânia (GO): ABERGO; 2024. DOI: <https://doi.org/10.29327/1465153>
 71. Ministério da Saúde (BR), Gabinete do Ministro. Portaria nº 1.823, de 23 de agosto de 2012. Institui a Política Nacional de Saúde do Trabalhador e da Trabalhadora. *Diário Oficial da União* [Internet], Brasília, DF. 2012 ago 24 [acesso em 2024 set 25]; Edição 165; Seção I:46. Disponível em: <https://pesquisa.in.gov.br/imprensa/jsp/visualiza/index.jsp?data=24/08/2012&jornal=1&pagina=46&totalArquivos=240>

Received on 04/13/2025

Approved on 07/12/2025

Conflict of interest: Non-existent

Data availability: Research data are contained in the manuscript itself

Financial support: Non-existent

Editor in charge: Heleno Rodrigues Corrêa Filho