

Labor relations and the formulation of public policies to promote access and retention of trans individuals in the workforce

Relações de trabalho e a construção de políticas públicas para acesso e permanência de pessoas trans no mercado de trabalho

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ABSTRACT The health of workers constitutes a fundamental right and is essential to ensuring dignified labor conditions and well-being. Nonetheless, transgender individuals continue to face pervasive structural, social, and institutional barriers that hinder both their entry into and sustained participation in formal employment. This article offers a critical examination of public policies aimed at promoting the inclusion of transgender populations in the labor market, with emphasis on addressing obstacles rooted in stigma, inequality, and the lack of safe, affirming workplace environments. The discussion is organized around three central axes: historical overview of systemic exclusions experienced by trans persons; contextual analysis of national and international policy frameworks; and strategic proposals to advance substantive inclusion. The findings underscore that eliminating labor market discrimination requires concrete, multisectoral, sustained efforts involving governments, private enterprises, civil society, and transgender communities. Promoting equity in workplaces must be recognized as both a public health imperative and a core human right. Despite legal and institutional advancements, significant challenges remain—chief among them, the lack of disaggregated data and the limited reach of existing policy measures. This study reinforces the urgent need for initiatives that not only value diversity but actively foster equal opportunities, particularly for historically marginalized groups.

KEYWORDS Gender-based division of labor. Labor exploitation. Transgender people. Public policy. Public health.

RESUMO A saúde da pessoa trabalhadora é um direito fundamental, essencial para garantir condições dignas de trabalho e bem-estar. No entanto, pessoas trans enfrentam barreiras estruturais, sociais e institucionais que dificultam tanto sua inserção quanto sua permanência em empregos formais. Este artigo analisa as políticas públicas voltadas à inclusão de pessoas trans no mundo do trabalho com enfoque na superação de obstáculos relacionados com o preconceito, a desigualdade e a falta de acesso a ambientes laborais seguros e respeitosos. A discussão está organizada em três eixos: um panorama histórico das exclusões enfrentadas por essa população, a contextualização de políticas nacionais e internacionais, e propostas de estratégias para ampliar a inclusão efetiva. Destaca-se que o combate à discriminação no trabalho exige ações concretas, intersetoriais e contínuas, que envolvam governos, empresas, sociedade civil e pessoas trans. A promoção da equidade no trabalho deve ser entendida como uma prioridade de saúde pública e um imperativo dos direitos humanos. Apesar de avanços legais, ainda há desafios significativos, como a ausência de dados específicos e políticas abrangentes. O estudo reforça a importância de iniciativas que valorizem a diversidade e garantam igualdade de oportunidades para todos, especialmente para populações historicamente marginalizadas.

PALAVRAS-CHAVE Divisão do trabalho baseada em gênero. Exploração do trabalho. Pessoas transgênero. Política pública. Saúde coletiva.

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Introduction

Worker health is a fundamental right, vital to ensuring dignified labor conditions and overall well-being. However, when addressing the inclusion of transgender individuals in the workforce, it is important to recognize the multiple obstacles they encounter. This necessitates a thorough evaluation of public policies, not only focused on their entry into employment but also on their job retention. Moreover, it is essential to consider the broader social determinants affecting their lives, including living conditions, work environments, health challenges, and mortality, underscoring the need for greater attention to their health and quality of life.

Drawing on thinkers such as Foucault, Butler, and Derrida, one can critically examine the relationship between identity and difference, highlighting the exclusion and violence experienced by sexual and gender minorities. Despite legal advances, heteronormativity and the social regulation of bodies continue to pose significant challenges. Overcoming these structural barriers requires the implementation of effective public policies, alongside educational, legal, and cultural initiatives that foster inclusion and equity¹.

In Brazil, health is recognized as a universal right and a responsibility of the State, as outlined by the 1988 Federal Constitution². Social and economic policies are designed to reduce health risks and ensure that everyone has fair and equal access to services and initiatives focused on promoting, protecting, and restoring health. This right emerged from the efforts of the Health Reform Movement and is firmly established in the Federal Constitution, which embraces a broad understanding of health that extends beyond medical care alone. Thus, health is understood as the result of people's access to public goods and services delivered through universal social policies. Social Security, Healthcare, and Social Assistance are integrated within the Social Welfare System, marking a major milestone that underscores the State's ongoing commitment to the well-being of its population².

The 5th National Conference on Workers' Health (CNSTT) represents a significant milestone in shaping new guidelines aimed at fostering a more inclusive and equitable society, with equity positioned as a core principle of the discussion³.

The principles guiding Brazil's Unified Health System (SUS) ensure that every person – whether born in the country or residing there, regardless of migratory status – has the right to appropriate and effective care tailored to their needs. This care must be delivered with humanity, compassion, and free from any form of discrimination, fostering a respectful and inclusive environment. Furthermore, each individual must be treated in such a way as to respect their dignity, values, and rights, ensuring that everyone can receive the necessary support fairly and equitably^{4,5}.

Within this framework, the design and implementation of public policies that ensure both access to and retention of transgender individuals in the labor market is a priority for fostering a sustained process of social inclusion. Such policies must guarantee that the human rights of all workers are not only protected by laws, regulations, and standards but are also genuinely realized in their everyday lives⁶.

Discrimination and lack of opportunities severely limit the inclusion of transgender individuals in the labor market. Travestis and transgender people face multiple obstacles throughout their lives, whether in education, access to healthcare services, or job seeking. Employment, beyond fulfilling basic needs, plays a crucial role in shaping identity and fostering social inclusion. However, due to structural and social barriers, many are confined to specific sectors such as the sex and beauty industries, which further reinforces the marginalization of this group. According to a report by the National Association of Travestis and Transsexuals (ANTRA), approximately 90% of travestis and transgender women in Brazil resort to sex work as a means of livelihood, while the remainder work in low-paying occupations such as hairdressers, estheticians, and cooks⁵.

According to Van de Cauter et al.7, when transgender individuals hold formal employment, many prefer not to disclose their gender identity immediately, often doing so only after several years in the formal workforce. The need to hide one's gender identity often stems from fear of discrimination and prejudice, which can worsen mental health issues such as distress, anxiety, and depression, and in extreme cases, lead to suicidal thoughts. In sectors like manufacturing and construction, many transgender people feel compelled to conceal their identity entirely while at work.

Furthermore, barriers to formal employment for transgender individuals are closely tied to transphobia, limited educational opportunities, and covert prejudices within workplaces. Challenges also persist regarding the official recognition of social or chosen names and modifying physical spaces, such as bathrooms and changing rooms, to be more inclusive. While some progress has been made through private sector initiatives and NGO-led training and capacity-building programs, substantial work remains to ensure genuine equity in the labor market⁸.

The objective of this article is to stimulate reflection on public policies and practices that promote the effective and sustainable inclusion of transgender individuals in the labor market, taking into account the social, structural, and health barriers faced by this population. The article is organized into three main sections:

1. Historical context and challenges faced: The first section provides a historical overview of the transgender population and their struggles to access social rights. It explores the specific challenges related to entering and remaining in the labor market while also examining the intersection of health conditions, gender identity, and the impacts of social stigma. Data and insights

on educational and employment barriers further support this analysis.

- 2. The role of public policy: The second section examines the current context of labor policies in Brazil, with a focus on the barriers transgender individuals face in accessing and maintaining employment. These include discrimination, transphobia, and limitations related to the recognition of social names. The section also presents a comparative analysis of international practices, aiming to identify successful policy approaches that could inform the development of new strategies and actions to promote inclusion and equity in the labor market.
- 3. Strategies for inclusion: The third section explores the role of public policies as strategic instruments for promoting the entry and sustained inclusion of transgender individuals in the workplace.

This article contributes to a critical reflection on health and labor policies in Brazil, where no specific policy currently addresses the needs of the transgender population. It highlights the importance of a historical overview of their struggles since the 1970s, including demands for dignity and the challenges faced during the AIDS epidemic of the 1980s. In addition, a comparative analysis of international policy models will be conducted, aiming to learn from successful experiences and propose new guidelines to support the entry and retention of transgender individuals in the labor market.

Historical background and barriers to inclusion

The transgender population has historically faced significant challenges in accessing formal employment. Prejudice from employers is one of the main barriers, forcing many to turn to informal work, which often becomes their primary means of livelihood and survival⁹.

According to the mapping of transgender individuals in the municipality of São Paulo conducted by the Center for the Study of Contemporary Culture (CEDEC)¹⁰, the primary occupation among those surveyed was sex work, with 34% identifying as sex workers, escorts, or call girls. This data highlights the exclusion and discrimination transgender persons face when seeking opportunities in the formal labor market. For many, sex work becomes a survival strategy, one that is marginalizing and isolating, exposing them to numerous risks such as physical and psychological violence, as well as increased vulnerability to sexually transmitted infections.

A study conducted by the Joint United Nations Program on HIV/AIDS (UNAIDS)¹¹, identified that in 2022, transgender individuals faced a risk of HIV infection twenty times higher than that of cisgender individuals aged 15 to 49. For transgender women, this risk was even greater, 19 times higher than that of cisgender women within the same age group. These findings not only highlight the profound impact of social exclusion but also underscore the urgent need to ensure access to and retention in the labor market, alongside the expansion of public policies aimed at improving healthcare and prevention services¹².

Despite their need for specific healthcare services, transgender individuals frequently encounter discrimination and violence within healthcare settings. Seeking care often exposes them to renewed experiences of prejudice, which can hinder access to long-term treatment and essential services, further exacerbating their vulnerability and compromising their overall well-being¹³.

The fight for healthcare access and social rights among trans women and *travestis* in Brazil gained momentum in the early 1990s, with the founding of the Association of *Travestis* and the Liberated (ASTRAL) in 1992 – the country's first organization dedicated to defending the rights of transgender people. However, the visibility and recognition of the trans population as a political and

social group can be traced back to the 1960s. During that period, trans women and *travestis* were generally acknowledged only in festive or entertainment settings. It was not until the 1970s that the *travestis*'s identity began to gain broader visibility and take on political relevance¹⁴.

During the first AIDS epidemic in the 1980s, transgender and *travestis* identities began to gain greater political visibility. However, despite increasing recognition of trans health issues within Brazil's Ministry of Health in the 1990s, official discourse remained stigmatizing, often linking HIV to so-called 'uncontrolled sexualities' 14,15.

Although the trans population has gained greater visibility and secured some rights over the years, significant challenges remain, particularly concerning access to formal employment^{16,17}. A primary obstacle to inclusion in the labor market is the marginalization experienced within the educational system. Schools often lack the institutional preparedness to address gender diversity, and persistent experiences of discrimination and transphobia contribute to alarmingly high dropout rates among trans students. This disruption in educational trajectories compromises access to qualifications necessary for employment, thereby limiting opportunities for full inclusion in the formal workforce¹⁸.

According to data from the Research Center on Human Rights and Health of the LGBT+ Population (NUDHES), collected through the TransOdara project'19, 42.8% of the 1,279 trans women and travestis surveyed had only completed primary education or were illiterate. Additionally, 52.1% had finished secondary education, while just 5.1% had accessed higher educationr¹⁴. These findings highlight the significant challenges trans individuals face in remaining within the educational system, underscoring the direct impact that the lack of access to quality education has on their professional development. In terms of educational attainment, another critical factor is the absence of familial support and recognition - an issue emphasized by Barroso²⁰

in the Mapping of the Trans Population in the State of São Paulo: Baixada Santista Region study. In the qualitative phase of the study, two trans women interviewed reported being expelled from their homes at ages 12 and 13 due to their gender identity. Furthermore, they faced significant challenges in staying in school and subsequently were unable to enter the formal labor market, largely due to a lack of training and experiences of verbal and/or physical violence²⁰.

In the formal labor market, trans individuals face numerous barriers, ranging from outright exclusion during hiring processes to the denial of their right to use their social name⁹. A study conducted in the state of São Paulo with 672 participants found that 91.2% of transgender individuals had not legally changed their name on official documents, 8.6% had made partial changes, and 0.1% were classified as ignored⁹. The lack of recognition of social names in workplace settings exemplifies one of the many ways in which trans people's gender identities are disrespected, further hindering their inclusion in the job market⁹.

The failure to respect a trans person's chosen name in the workplace goes beyond mere discomfort - it can lead to significant psychological harm. Disregarding an individual's gender identity fosters a hostile and unsafe environment, heightening the risk of job abandonment and exacerbating mental health issues already intensified by social stigma. When a person's social name is not acknowledged, it often triggers a chain of disrespectful and humiliating experiences that violate fundamental rights. This systemic invalidation increases the individual's sense of vulnerability and unease, particularly when colleagues fail to recognize or affirm their identity. As a result, many trans workers feel compelled to leave their jobs, not by choice, but as a means of self-preservation²¹.

Precarious working conditions and symbolic violence further contribute to the heightened vulnerability experienced by the trans population. Inadequate workplace environments, such as the absence of gender-appropriate

bathrooms and changing facilities, combined with job insecurity and limited access to professional training, intensify the barriers to stable employment. These factors help explain the disproportionately high rates of unemployment and informal labor among trans individuals compared to their cisgender counterparts^{16,22}.

Therefore, it is essential to emphasize the importance of public policies that promote the inclusion and retention of trans individuals in the labor market by fostering safe, respectful, and supportive environments for their professional development. To this end, it is crucial to implement targeted strategies that integrate education, vocational training, healthcare access, and the recognition of gender identity, thereby enabling the full participation of trans people in social and economic life and contributing to the construction of a more just and inclusive society²¹.

The role of public policy

The struggle for inclusion in the labor market goes beyond addressing exclusion – it is also a fight for survival and the fulfillment of basic rights. In this regard, the development of public policies that ensure the dignified and sustainable inclusion of trans people in the workforce becomes essential, promoting equity and genuine opportunities within professional environments.

In 2016, Decree No. 8,727 came into force in Brazil^{23,} regulating the use of chosen names and the recognition of gender identity for *travestis* and transgender individuals. This normative act guarantees the right of these individuals to request that their social name be included in official documents and information systems, as well as in registries, programs, services, records, forms, and medical files. This ensures that they can use the name with which they identify²⁴, across various administrative contexts, including their work and social security cards^{23,24}.

Furthermore, in 2018, the Internal Affairs Office of the National Council of Justice (CNJ), through Provision No. 73/2018, established that transgender individuals over 18 years old could amend their name and gender on birth and marriage certificates directly at civil registry offices²⁵. Before that measure, the name and gender change process required a court order. This amendment also ensures the updating of all other documents and records, which must be adjusted following the new certificate²⁵. Although the procedure has been simplified, bureaucratic obstacles and differing costs remain, varying by the state where the rectification is requested.

Not all transgender individuals, therefore, find it easy to change their name and gender on official documents, even though the right to use their chosen name remains crucial for identity building and overall well-being. Whether this right is respected or ignored directly affects their experiences in various settings, including healthcare and workplaces. Disregarding the use of their chosen name fosters feelings of frustration and devaluation, pushing them away from important spaces and hindering their full social inclusion²⁶.

In this context, the marginalization and discrimination often experienced by *travestis* and transgender individuals – which frequently restrict their access to essential services – can be alleviated through measures such as the recognition of their social name. This strategy, being both straightforward and low-cost, enhances acceptance, humanization, and comprehensive care, fostering citizenship and ensuring greater inclusion of this population across various social spheres²⁷.

Accordingly, public policies that guarantee the right to use social names in the workplace and during hiring processes are essential for building more inclusive and respectful environments. Ensuring that trans people can use their true names not only acknowledges and validates their gender identity but also contributes to a more equitable professional setting in which diversity is valued and respected²⁷.

It is essential to invest in public policies that guarantee the right to use of social names, access to healthcare services, dignified housing, support for education and professional training, empowering trans people toward financial autonomy, citizenship, and improved quality of life²⁸.

An example of this is the Trans Citizenship program, which aims to train and include transgender people in the formal labor market^{28,29}. This initiative is a public policy implemented by the municipality of São Paulo, established through Decree No. 55,874/2015 and later updated by Decree No. 58,227/201830. The Trans Citizenship program promotes citizenship, autonomy, and opportunities for the transgender population by increasing educational levels, professional qualifications, and training for the labor market^{29,31}. Another key mechanism that facilitates both access to and retention in employment for trans individuals is the Transsexualization Process, or Gender-Affirming Process, within SUS, which was redefined and expanded by Ordinance No. 2,803 of November 19, 2013^{32,33}.

Trans individuals who have access to appropriate care within healthcare institutions, including regulated specialized services, hormone and therapy, and surgical procedures – are more likely to achieve gender expression aligned with their identity. This alignment not only enhances their overall well-being and quality of life but also helps mitigate the discomfort and discrimination they may face in professional environments³⁴.

Several nonprofit initiatives have been actively engaged in promoting the inclusion of LGBTQIAPN+ individuals in the workplace. Notable examples include TransEmpregos (Trans Employment), Pride at Work, Pride Connection, and Out & Equal, each playing a significant role in advancing the employability of trans people. In addition to these efforts, it is essential to highlight public policies implemented both in Brazil and internationally. For instance, the São Paulo state law encourages the hiring of trans individuals by companies,

while countries such as New Zealand and Canada have adopted inclusive practices in both the private and public sectors. These international examples provide valuable insights into effective strategies for fostering trans inclusion in the labor market^{35,36}.

In Brazil, the Constitution and labor legislation aim to ensure equal opportunities. One such measure is Law No. 9,029/1995³⁷, which prohibits discriminatory practices that limit access to or continuity in employment based on gender identity, in addition to other factors³¹. However, despite existing legal protections, the inclusion and retention of trans and non-binary individuals in the labor market

continue to face significant barriers, such as discrimination during recruitment processes, the absence of affirmative policies within companies, and hostile work environments²⁸.

Several countries have adopted quota systems or affirmative action policies to advance the inclusion of transgender individuals in the formal labor market. Such measures are designed to promote equitable representation and challenge structural barriers to employment. *Table 1* highlights selected international policies, legislations, and initiatives that offer useful insights and potential models for shaping inclusive strategies in the Brazilian context.

Table 1. Legislation on forma	I amployment for the	transgender nonula	tion in various countries
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United - Title VII of the Civil Rights Act of 1964: protects individuals against discrimination based on sex, which has States been interpreted to include discrimination based on sexual orientation and gender identity38 - Executive Order 13672: prohibits discrimination based on sexual orientation and gender identity by federal government contractors39. European - European Union Directive 2000/78/EC: prohibits discrimination based on sexual orientation in employ-Union ment40 - European Union Directive 2006/54/EC: prohibits discrimination in employment based on sex, which may include discrimination based on gender identity and gender expression⁴¹. Canada - Canadian Human Rights Act: prohibits discrimination based on sexual orientation and gender identity in employment42. - Bill C-16: amended the Canadian Human Rights Act to include protection against discrimination based on gender identity and gender expression43. Argentina - The Gender Identity Law (Law No. 26,743) of Argentina, enacted in 2012, recognizes the right to selfdeclared gender identity and establishes measures to ensure the inclusion of transgender people in the labor market. This law covers issues such as the right to equal opportunities, non-discrimination in employment, and the promotion of affirmative action policies44.

India

- The Transgender Persons (Protection of Rights) Act 2019 is a piece of legislation in India aimed at protecting the rights and well-being of transgender individuals, combating discrimination, and promoting their equality and inclusion in society⁴⁵.

Thailand

- The document Legal Gender Recognition in Thailand: A Legal and Policy Review is a report produced by the United Nations Development Program (UNDP) in collaboration with Thailand's Ministry of Social Development and Human Security. It examines legal gender recognition in the country, addressing legal and policy aspects relevant to the inclusion of transgender individuals⁴⁶.

Uruguay

- Uruguay passed the Gender Identity Law (Law No. 18,620) in 2009, which allows transgender individuals to legally change their gender identity. The law also prohibits discrimination based on gender identity and promotes the inclusion of transgender individuals in the workplace⁴⁷.

Spain

- Spain enacted the LGBTI+ Equality Law (Law 3/2021) in 2021, which aims to ensure equal treatment and opportunities for lesbian, gay, bisexual, transgender, and intersex individuals. This law establishes measures to prevent discrimination in employment based on gender identity and promotes the inclusion of transgender persons in the labor market⁴⁸.
- Law 4/2023 provides for the real and effective equality of transgender individuals and guarantees the rights of LGTBI+ persons⁴⁹.

Source: Own elaboration

Strategies for addressing challenges

To address the ongoing challenges faced by trans individuals in the labor market, a comprehensive and coordinated set of strategies is essential. Key actions include the organization of National Health Conferences and the development and enforcement of legal frameworks such as Regulatory Standard No. 1 (NR 1) and the National Policy on Workers' Health; the implementation of gender education policies targeting managers, HR professionals, workers, and the general population; the establishment of fair recruitment practices, equal opportunities for advancement and antidiscrimination measures in the workplace; the expansion of access to healthcare services, including psychological support; the promotion of education and professional training programs; and the encouragement of inclusive corporate practices through incentive-based policies. Together, these measures would represent a collective commitment by government, the private sector, and civil society to building more equitable and inclusive work environments.

National Health Conferences are key forums in Brazil, convened periodically to engage multiple sectors of society in evaluating public health conditions and shaping policy recommendations. These gatherings are instrumental in promoting civic engagement, upholding the right to health, addressing the population's needs, and reinforcing the principles and structure of the Unified Health System (SUS)⁵⁰.

Within the scope of workers' health, the National Health Conferences have emphasized the recognition of work and its conditions as critical determinants of health, affirming decent work as a cornerstone of citizenship. These conferences have also played a pivotal role in advancing and consolidating the National Policy on Workers' Health, while highlighting the ongoing demand for safe, inclusive, and non-discriminatory work environments⁵¹.

As a result of discussions held during the National Health Conferences, as well as debates led by the Ministry of Labor and Employment, particularly within the scope of Labor Inspection, significant regulatory updates have been introduced. These changes reflect social and technological transformations, shifts in labor relations, and the growing need to reorganize the world of work. Among these developments, one notable example is Ordinance No. 1,419 of August 2024, scheduled to take effect on May 26, 2025, which updates Regulatory Standard No. 1 (NR 1)52. This update incorporates, through item 1.5.3.1.4, the guidelines of Regulatory Standards NR 9 and NR 17, establishing that organizations must take into account the working conditions outlined in NR 17, including psychosocial risk factors associated with work activities52,53.

Certain psychosocial risks disproportionately affect transgender individuals, particularly those related to interpersonal conflicts, social exclusion, discrimination, moral harassment, and other forms of psychological violence in the workplace. The revised regulatory text underscores the urgency of implementing clear and effective institutional policies to address such practices, reaffirming a commitment to safer, more inclusive, and healthier work environments. Furthermore, factors such as underutilization of skills, lack of adequate training, social or physical isolation, and conflicts between professional demands and personal life are increasingly recognized as psychosocial risks requiring proper identification, assessment, and management. These elements should be incorporated into risk management programs through preventive actions and control strategies tailored to the organizational context and the specific needs of the individuals involved. These regulatory advancements align with the growing understanding that work is a social determinant of health, whose organization can either foster well-being or contribute to psychological distress. In this regard, worker health must be recognized as an integral component of public

health policies, with institutional acknowledgment of the subjective, collective, social, and contextual factors that permeate daily life and work processes⁵³.

To enable the social participation of the transgender population, it is essential to recognize the importance of education and implement public policies focused on gender education. These initiatives aim to raise societal awareness about the stigmas and stereotypes that perpetuate exclusion, thereby promoting the inclusion of transgender individuals across various social spheres, with particular emphasis on the formal labor market⁵⁴. Gender education, in this sense, is a fundamental tool for dismantling barriers and prejudices, ensuring equitable access to opportunities and full participation of this population in all aspects of social life.

This process of training, awareness-raising, and capacity-building on diversity and gender identity for employers and human resources teams is essential to fostering a safe and equitable environment for all individuals. Through this increased awareness, managers and the general population will begin to value workers for their productive capabilities rather than their gender identity⁵⁵.

However, the labor potential of transgender persons is hindered by the stigma and discrimination they face throughout their schooling, which increases their vulnerability. To foster more equitable conditions in the labor market, it is essential to invest in strategies that broaden access to education and professional training through inclusive educational policies that promote the appreciation of diversity and respect for gender identity within educational institutions. These are key strategies to address school dropout rates⁹.

Thus, beyond educational initiatives, an effective role of the State is essential, as it holds the responsibility to formulate and implement public policies that guarantee transgender individuals their rights, including the right to compete on equal terms with other citizens in accessing and remaining in formal

employment. Such actions are fundamental to promoting the dignity and substantive equality of this group, contributing to their socioeconomic inclusion and the reduction of structural inequalities¹⁶.

To make sure transgender individuals are truly included in the workforce in a lasting and meaningful way, it takes a shared effort from governments, businesses, and civil society. Beyond the development of individual skills and competencies, it is crucial to implement institutional mechanisms to secure equal opportunities and prevent discrimination. Only then will it be possible to have a truly inclusive professional environment—one in which all individuals can fully and dignifiedly exercise their citizenship^{16,22}.

Another essential need is a deeper and more committed focus on psychological support and healthcare for the transgender population. Strategies must be developed to make sure they have access to adequate healthcare services, ranging from therapy and mental health care to the transgender transition process^{17,32,56}. Furthermore, it is necessary to strengthen preventive efforts, which are often neglected, by promoting acceptance and respect for the specific needs of this segment of the population within health care systems.

Undergoing clinical and surgical procedures that support gender transition can significantly affirm a transgender person's identity, enhance their sense of dignity, and lead to better self-esteem and quality of life. These improvements play a key role in fostering greater autonomy, increasing opportunities for social connection, and lowering the barriers encountered in everyday environments 17,32,56. When institutions recognize gender identity, it strengthens the individual's sense of citizenship and helps pave the way for more stable and inclusive career paths 57,58.

Bitencourt and Oliveira⁵⁷ argue that the political narrative surrounding the socalled 'gender ideology' reflects a broader dispute over the meaning of human rights. In this context, inclusive public policies that acknowledge and respect gender diversity must be grounded in the real needs of the population and supported by scientific evidence that engages with civil society. It is essential that minority groups actively participate in shaping and implementing the policies that directly affect them. Moreover, education and awareness-raising around gender issues should be central to these policies, helping to dismantle heteronormative gender roles and avoiding ideological conflicts rooted in narrow worldviews or socially sanctioned ways of life.

Finally, it is essential to adopt strategies that encourage inclusive business practices by developing incentive policies for employers who hire and retain transgender individuals in their workforce. These incentives may include tax benefits, public recognition and visibility, as well as access to technical support^{8,9}.

Final considerations

Stigma and discrimination in the workplace must be addressed not only within companies but also more broadly across society. Tackling these issues requires ongoing education and awareness around prejudice, gender identity, social class, and the role each person plays in building a more inclusive and equitable society. Creating truly inclusive environments depends on continuous dialogue about the many forms of discrimination – especially those that impact trans individuals – so that these discussions translate into real structural change.

The greatest challenge lies in turning these discussions into concrete actions that not only ensure the inclusion of trans persons but also foster a more equitable society grounded in respect for human rights. Developing and implementing public policies that support both access to and retention in the labor market for trans individuals must be treated as a public health priority and a crucial step toward realizing human rights. These policies should focus on dismantling the structural

barriers that continue to restrict opportunities for inclusion and on creating work environments that are inclusive, fair, and healthy for everyone.

A coordinated effort among the government, businesses, civil society, and trans individuals themselves is essential to ensure more effective integration of this population into the workforce. Moreover, public policies aimed at the labor market must go beyond simply offering access – they must ensure that opportunities are genuinely equal for all and that workplaces are safe, respectful, and truly value diversity.

Despite significant advancements in the rights of LGBTQIAPN+ individuals, discrimination and prejudice persist as formidable obstacles to their access and sustained participation across various professional fields. Consequently, it is imperative that both public and private sectors implement inclusive hiring practices, enforce comprehensive anti-discrimination safeguards, and actively foster the appreciation of diversity within organizational cultures. The interpretation of rights must be both broad and equitable, without undermining the particular struggles faced by specific social groups. Thus, the promotion of labor rights for LGBTQIAPN+ persons should be understood not as a privilege but as an essential step toward guaranteeing that the rights of all individuals, without exception, are fully acknowledged and respected.

This article, while offering a comprehensive discussion on the inclusion and retention of transgender persons in the labor market, presents certain limitations. Firstly, the analysis is primarily centered on the Brazilian context, which constrains a broader understanding of how such policies operate across diverse global settings. Moreover, although international comparisons were included, they were limited to a few selected cases and do not reflect the full spectrum of possible realities. The research also relied predominantly on secondary sources, which may result in interpretations that are constrained by the availability and

currency of data at the time, potentially lacking ongoing updates or more nuanced insights.

Another important consideration is the wide diversity within the trans population, marked by varied experiences, trajectories, and needs. This study was unable to fully capture all these specificities, underscoring the importance of future research that delves more deeply into the multiple dimensions of transgender people's lives. Such research should examine the intersections of race/ethnicity, social class, and how these factors compound the challenges related to accessing employment and healthcare.

Ultimately, implementing the policies outlined in this study continues to face significant challenges in the Brazilian context, which limits the immediate effectiveness of the proposed measures. A major obstacle is the lack of reliable and comprehensive data on the employment of transgender individuals in the

formal labor market, an essential component for developing more effective and evidencebased strategies.

Collaborators

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References

- Motta JIJ. Sociedade, fobias e diferenças. Saúde debate. 2022;46(Esp 4):60-5. DOI: https://doi.org/10.1590/0103-11042022E404
- Presidência da República (BR). [Constituição 1988].
 Constituição da República Federativa do Brasil de 1988 [Internet]. Diário Oficial [da] República Federativa do Brasil. Brasília, DF. 1988 out 5 [acesso em 2025 mar 30]; Seção 1:1. Disponível em: https://www.planalto.gov.br/ccivil_03/Constituicao/Constituicao.htm
- Vasconcellos LCF, Gaze R, Guedes DT, et al. A saúde no trabalho é um direito humano. Saúde debate. 2025;49(145):e145ED. DOI: https://doi. org/10.1590/2358-28982025145ED-P
- 4. Bastos SP, Ferreira AP. A judicialização da saúde: uma atuação da magistratura na sinalização da necessidade de desenvolvimento e de implementação de políticas públicas na área da saúde. Saúde debate. 2019;43(Esp 4):48-60. DOI: https://doi.org/10.1590/0103-11042019S405
- Siqueira SAV, Fernandes FMB, Motta CT, et al. Acreditação Institucional de Ouvidorias do SUS: uma análise das experiências iniciais de avaliação externa. Saúde debate. 2022;46(Esp 4):131-40. DOI: https://doi.org/10.1590/0103-11042022E410
- Addor N, Knopik Ferraz MO, Villatore MAC. O trabalho da pessoa transgênera: políticas públicas de igualdade laboral alcances e possibilidades. Direito Justi-

^{*}Orcid (Open Researcher and Contributor ID).

- **ça. 2020;20(37):47-66. DOI:** https://doi.org/10.31512/rdj.v20i37.28
- Van de Cauter J, Van Schoorisse H, Van de Velde D, et al. Return to work of transgender people: A systematic review through the blender of occupational health. PLoS One. 2021 nov 1;16(11):e0259206. DOI: https://doi.org/10.1371/journal.pone.0259206
- Santos KMO, Oliveira-Silva LC. Marcadas pelo mercado: inserção profissional e carreira de mulheres transexuais e travestis. Cad Pagu. 2021;(62):e216221. DOI: https://doi.org/10.1590/18094449202100620021
- Silva MA, Luppi CG, Veras MASM. Work and health issues of the transgender population: factors associated with entering the labor market in the state of São Paulo, Brazil. Ciênc saúde coletiva. 2020;25(5):1723-34. DOI: http://dx.doi.org/10.1590/1413-81232020255.33082019
- 10. Centro de Estudos de Cultura Contemporânea. Mapeamento das Pessoas Trans na Cidade de São Paulo: relatório de pesquisa [Internet]. São Paulo: Cedec; 2021 [acesso em 2025 mar 30]. Disponível em: chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://drive.prefeitura.sp.gov.br/cidade/secretarias/upload/direitos_humanos/LGBT/AnexoB_Relatorio_Final_Mapeamento_Pessoas_Trans_Fase1.pdf
- 11. UNAIDS. HIV and transgender people Thematic briefing note — 2024 global AIDS update: The urgency of now: AIDS at a crossroads [Internet]. Geneva: UNAIDS; 2024 [acesso em 2025 jul 30]. Disponível em: https://www.unaids.org/en/resources/ documents/2024/2024-unaids-global-aids-update--transgender-people
- 12. Magno L, Silva LAV, Veras MA, et al. Estigma e discriminação relacionados à identidade de gênero e à vulnerabilidade ao HIV/aids entre mulheres transgênero: revisão sistemática. Cad Saúde Pública. 2019;35(4):e00112718. DOI: https://doi. org/10.1590/0102-311X00112718
- 13. Menezes L, Silva L, Murgo C, et al. Invisibilização e preconceitos velados. Rev Bras Med Fam Comunida-

- de. 2024;19(46):3961. DOI: https://doi.org/10.5712/rbmfc19(46)3961
- Neves ALM, Sívori HF. Political action in the health of transgender people in Manaus, Amazonas, Brazil. Ciênc saúde coletiva. 2024;29(1):e00642023. DOI http:// dx.doi.org/10.1590/1413-81232024291.00642023
- Pereira CR, Cruz MM, Cota VL. Sexualidade, sociabilidade, trabalho e prevenção do HIV entre populações vulneráveis na pandemia da Covid-19. Saúde debate. 2022;46(Esp 7):62-74. DOI: https://doi.org/10.1590/0103-11042022E704
- Almeida CB, Vasconcellos VA. Transexuais: transpondo barreiras no mercado de trabalho em São Paulo?
 Rev Direito GV. 2018;14(2):303-33. DOI: https://doi.org/10.1590/2317-6172201814
- Rocon PC, Sodré F, Rodrigues A, et al. Desafios enfrentados por pessoas trans para acessar o processo transexualizador do Sistema Único de Saúde. Interface (Botucatu). 2019;23:e180633. DOI: https://doi.org/10.1590/Interface.180633
- Bento B. Vista do Nome social para pessoas trans: cidadania precária e gambiarra legal. Contemporânea [Internet]. 2014 [acesso em 2025 mar 30];4(1):165-82. Disponível em: https://www.contemporanea.ufscar.br/index.php/contemporanea/ article/view/197/101
- Dourado I, Magno L, Leite BO, et al. Prevalência de infecção pelo vírus da imunodeficiência humana (HIV) em mulheres trans e travestis no Brasil: dados do estudo TransOdara. Rev Bras Epidemiol. 2024;27(Supl 1):e240004. DOI: https://doi.org/10.1590/1980-549720240004.supl.1.2
- Barroso BIL, Bassichetto KC, Vieira DL, et al. Mapeamento da população trans da Baixada Santista, 2023: estudo descritivo. Epidemiol Serv Saúde. 2025;33(Esp 1):e2024409. DOI: https://doi.org/10.1590/S2237-96222024v33e2024409
- 21. Ferreira FF, Ribeiro TMS, Brito WF. Percepção das pessoas Trans acerca do acesso ao mercado de tra-

- balho. Rev Psicol Divers Saúde. 2022;11:e3946. DOI: https://doi.org/10.17267/2317-3394rpds.2022.e3946
- 22. Amaral AJM, Capelari RS. Da imperiosa necessidade de alteração do art. 58 da Lei 6.015/1973: um registro público de respeito à transexualidade e o direito ao nome social sem a intervenção do Poder Judiciário. Rev Biodireito Direito dos Animais. 2015;1(1):139-64. DOI: https://doi.org/10.26668/IndexLawJournals/2525-9695/2015.v1i1.22
- 23. Conselho Nacional de Justiça (BR). Provimento nº 73, de 28 de junho de 2018. Dispõe sobre a averbação da alteração do prenome e do gênero nos assentos de nascimento e casamento de pessoa transgênero no Registro Civil das Pessoas Naturais (RCPN) [Internet]. Diário da Justiça Eletrônico, Brasília, DF. 2018 jun 29 [acesso em 2025 abr 14]; Edição 119:8. Disponível em: https://atos.cnj.jus.br/atos/detalhar/2623
- 24. Cerqueira TD, Denega AM, Padovani AS. A importância do nome social para autoaceitação e respeito das pessoas "trans". RF [Internet]. 2020 [acesso em 2025 mar 30];8(2):26-39. Disponível em: https://periodicos.ufba.br/index.php/feminismos/article/view/34894
- 25. Conselho Nacional de Justiça (BR). Provimento nº 73, de 28 de junho de 2018. Dispõe sobre a averbação da alteração do prenome e do gênero nos assentos de nascimento e casamento de pessoa transgênero no Registro Civil das Pessoas Naturais (RCPN) [Internet]. Diário da Justiça Eletrônico, Brasília, DF. 2018 jun 29 [acesso em 2025 abr 14]; Edição 119:8. Disponível em: https://atos.cnj.jus.br/atos/detalhar/2623
- Silva LKM, Silva ALMA, Coelho AA, et al. Uso do nome social no Sistema Único de Saúde: elementos para o debate sobre a assistência prestada a travestis e transexuais. Physis. 2017;27(3):835-46. DOI: https://doi.org/10.1590/S0103-73312017000300023
- Pedra CB, Souza EC, Rodrigues RVA, et al. Políticas públicas para inserção social de travestis e transexuais. Rev Ciênc Estado. 2018;3(1):170-99. DOI: https:// doi.org/10.35699/2525-8036.2018.5091

- Assis VLS, Arruda AS. Programa Transcidadania: uma revisão sistemática. RIPPMar. 2023;9(1):27-40. DOI: https://doi.org/10.36311/2447-780X.2023.n1.p27
- 29. Moquedace PS, Maciel EMGS. Itinerários de travestis e transexuais no acesso ao tratamento hormonal no Amig (RJ) e caracterização dos usuários do serviço. Saúde debate. 2023;47(Esp 1):e8969. DOI: https://doi.org/10.1590/2358-28982023E18969P
- 30. São Paulo (SP). Decreto nº 58.227, de 16 de maio de 2018 [Internet]. São Paulo: Governo do Estado de São Paulo; 2018 [acesso em 2025 jul 30]. Disponível em: https://app-plpconsulta-prd.azurewebsites. net/Forms/MostrarArquivo?ANO=2018&DOCUM ENTO=Atualizado&NUMERO=58227&TIPO=DEC &utm_source=chatgpt.com
- Costa LF, Hennington ÉA. Implementação da Política Nacional de Saúde Integral LGBT no município de Resende, Rio de Janeiro. Saúde debate. 2023;47(Esp 1):e9136. DOI: https://doi.org/10.1590/2358--28982023E19136P
- 32. Ministério da Saúde (BR), Gabinete do Ministro. Portaria nº 2.803, de 19 de novembro de 2013. Redefine e amplia o Processo Transexualizador no Sistema Único de Saúde (SUS). Diário Oficial da União [Internet], Brasília, DF. 2013 nov 21 [acesso em 2025 jun 30] Edição 226; Seção I:25. Disponível em: https://pesquisa.in.gov.br/imprensa/jsp/visualiza/index.jsp?data=21/11/2013&jornal=1&pagina=25&totalArquivos=104
- Reis AA, Carvalho HR. A Atenção Primária à Saúde no Brasil e a população LGBTI+: uma revisão integrativa. Saúde debate. 2023;47(Esp 1):e9135. DOI: https://doi.org/10.1590/2358-28982023E19135P
- 34. Souza CV, Goldschmidt R. O princípio da não discriminação e a inclusão socioeconômica da transexual no mercado formal de trabalho. Saber Hum. 2018;8(13):88-101. DOI: https://doi.org/10.18815/sh.2018v8n13.331
- Canadá (CA). Canadian Human Rights Act. Justice Laws Website [Internet]. 2024 [acesso em 2025 jun 30]. Disponível em: https://laws-lois.justice.gc.ca/eng/acts/h-6/

- 36. Silva PHA, Bastos DF. Políticas públicas, participação social e a comunidade trans: um debate acerca da centralidade do trabalho como fator de inclusão social digna no Brasil. Laborare. 2023 Sep 18;6(11):295-315.
- 37. Presidência da República (BR). Lei nº 9.029, de 13 de abril de 1995. Proíbe a exigência de atestados de gravidez e esterilização, e outras práticas discriminatórias, para efeitos admissionais ou de permanência da relação jurídica de trabalho, e dá outras providências [Internet]. Diário Oficial da União, Brasília, DF. 1995 abr 17 [acesso em 2025 jul 30]; Seção I:5361. Disponível em: https://www.planalto.gov.br/ccivil_03/leis/19029.htm
- United States of America (USA). Public Law 88-352.
 Civil Rights Act of 1964 [Internet]. Washington, D.C.:
 GovInfo; 1964 [acesso em 2025 jun 30]. Disponível em: https://www.govinfo.gov/content/pkg/STATUTE-78/pdf/STATUTE-78-Pg241.pdf
- United States of America (USA). Presidential Proclamation—LGBT Pride Month, 2014 [Internet]. Washington (DC): The White House; 2014 [acesso em 2025 jun 30]. Disponível em: https://www.govinfo.gov/app/details/DCPD-201400553
- European Union (EU). Council Directive of 27 November 2000 establishing a general framework for equal treatment in employment and occupation [Internet]. Brussels: EUR-Lex; 2000 [acesso em 2025 jun 30]. Disponível em: https://eur-lex.europa.eu/eli/dir/2000/78/oj
- 41. European Union (EU). Directive 2006/54/EC of the European Parliament and of the Council of 5 July 2006 on the implementation of the principle of equal opportunities and equal treatment of men and women in matters of employment and occupation [Internet]. Brussels: EUR-Lex; 2006 [acesso em 2025 jun 30]. Disponível em: https://eur-lex.europa.eu/eli/dir/2006/54/oj
- 42. Canadá. Canadian Human Rights Act. Justice laws Website [Internet]. 2024 [acesso em 2025 jun 30]. Disponível em: https://laws-lois.justice.gc.ca/eng/acts/h-6/

- 43. Walker J. Legislative Summary of Bill C-16: An Act to amend the Canadian Human Rights Act and the Criminal Code [Internet]. Ottawa, Canada: Library of Parliament; 2016 [acesso em 2025 jun 30]. Disponível em: https://lop.parl.ca/sites/PublicWebsite/default/en_CA/ResearchPublications/ LegislativeSummaries/421C16E
- 44. Argentina (AR). Ley N° 26.743 de Identidad de Género [Internet]. Buenos Aires: Gobierno de la Nación Argentina; 2012 [acesso em 2025 jun 30]. Disponível em: https://www.argentina.gob.ar/sites/default/files/ley-26.743-identidad-de-genero_0.pdf
- 45. India (IN). The Transgender Persons (Protection of Rights) Act, 2019 [Internet]. New Delhi: Government of India; 2019 [acesso em 2025 jun 30]. Disponível em: https://www.indiacode.nic.in/bitstream/123456789/13091/1/a2019-40.pdf
- 46. United Nations Development Programme Thailand. Legal Gender Recognition in Thailand: A Legal and Policy Review [Internet]. Bangkok: UNDP; 2018 [acesso em 2025 jun 30]. Disponível em: https://www.undp.org/sites/g/files/zskgke326/files/migration/th/legal-gender-recognition-in-thailand-2018.pdf
- 47. Uruguay (UY). Ley Nº 18.620, de 17 de octubre de 2009. Derecho a la identidad de género y al cambio de nombre y sexo en documentos identificatorios [Internet]. Montevideo: Diario Oficial; 2009 out 21 [acesso em 2025 jun 30]. Disponível em: https://www. impo.com.uy/bases/leyes-originales/18620-2009
- 48. España (ESP). Real Decreto-ley 3/2021, de 2 de febrero, por el que se adoptan medidas para la reducción de la brecha de género y otras materias en los ámbitos de la Seguridad Social y económico. Boletín Oficial del Estado [Internet] BOE-A-2021-1529, Madrid. 2021 fev 3 [acesso em 2025 jun 30]. Disponível em: https://www.boe.es/eli/es/rdl/2021/02/02/3/con
- 49. España (ESP). Ley 4/2023, de 28 de febrero, para la igualdad real y efectiva de las personas trans y para la garantía de los derechos de las personas LGT-

- BI [Internet]. Boletín Oficial del Estado [Internet] BOE-A-2023-5366, Madrid. 2023 mar 1 [acesso em 2025 jun 30]. Disponível em: https://www.boe.es/ eli/es/1/2023/02/28/4/con
- 50. Stedile NLR, Guimarães MCS, Ferla AA, et al. Contributions of national health conferences to the definition of public environmental and health information policy. Ciênc saúde coletiva. 2015;20(10):2957-71. DOI: http://dx.doi.org/10.1590/1413-812320152010.15142014
- Lacaz FA de C, Flório SMR. [Social Control, work world and the National Conferences of Health at the turn of the 20th century]. Ciênc saúde coletiva. 2009;14(6):2123-34. DOI: http://dx.doi.org/10.1590/ s1413-81232009000600019
- 52. Ministério do Trabalho e Emprego (BR), Gabinete do Ministro. Portaria MTE nº 1.419, de 27 de agosto de 2024. Aprova a nova redação do capítulo "1.5 Gerenciamento de riscos ocupacionais" e altera o "Anexo I Termos e definições" da Norma Regulamentadora nº 1 (NR-1) Disposições Gerais e Gerenciamento de Riscos Ocupacionais. Diário Oficial da União [Internet], Brasília, DF. 2024 ago 28 [acesso em 2025 abr 14]; Edição 166; Seção I:131. Disponível em: https://www.in.gov.br/en/web/dou/-/portaria-mte-n-1.419-de-27-de-agosto-de-2024-580778271
- 53. Ministério do Trabalho e Emprego (BR). Norma Regulamentadora No. 9 (NR-9). Gov.br [Internet]. 2020 out 22 [atualizado 2025 jan 8; acesso em 2025 abr 14]; 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-regulamentadora-no-9-nr-9

- 54. Moura RG. Vista do políticas públicas como ferramenta de equidade entre (trans) gêneros no mundo do trabalho. Cad UniFOA [Internet]. 2015 [acesso em 2025 mar 30];(29):77-87. Disponível em: https://revistas.unifoa.edu.br/cadernos/article/view/366/400
- 55. Hanauer OFD, Hemmi APA. Caminhos percorridos por transexuais: em busca pela transição de gênero. Saúde debate. 2019;43(Esp 8):91-106. DOI: https:// doi.org/10.1590/0103-11042019S807
- 56. Vieira VF, Bermúdez XPCD, Goldberg A. O processo transexualizador a partir das narrativas de pessoas trans, gestores e profissionais da saúde. Saúde debate. 2025;49(145):e10026. DOI: https://doi.org/10.1590/2358-2898202514510026P
- 57. Bitencourt LO, Oliveira MHB. 'Meninos vestem azul e meninas vestem rosa': Análise do Discurso Crítica sobre a 'ideologia de gênero' no Ministério da Mulher, Família e Direitos Humanos. Saúde debate. 2023;47(Esp 1):e9092. DOI: https://doi.org/10.1590/2358-28982023E19092P
- 58. Chohfi LMS, Melo JB, Souza PA. Da violência epistemológica a epistemologias próprias: experiências de narrativas com mulheres cis periféricas, mulheres trans e travestis. Saúde debate. 2021;45(Esp 1):27-38. DOI: https://doi.org/10.1590/0103-11042021E102

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