



REVIEW ARTICLE

BEYOND THE BINARY: EXPLORING GENDER DYSPHORIA, MEDICAL INTERVENTIONS, AND SOCIETAL SHIFTS IN INDIA AND GLOBALLY

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ARTICLE INFO

Article History:

Received 20th December, 2024
Received in revised form
19th January, 2025
Accepted 26th February, 2025
Published online 30th March, 2025

Key words:

Gender Dysphoria, Transgender Healthcare, Gender-Affirming Interventions, Inclusivity in India.

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Citation: Tanish Gupta, Dr. Umang Kothari, Dr. Adarsh Keshari and Dr. Pooja Sharma. 2025. "Beyond the Binary: Exploring Gender Dysphoria, Medical Interventions, and Societal Shifts in India and Globally". *International Journal of Current Research*, 17, (03), 32138-32141.

ABSTRACT

Purpose: This review explores Gender Dysphoria (GD), previously referred to as Gender Identity Disorder, by examining its medical, psychological, and social dimensions. It assesses the current landscape of transgender healthcare in India, compares it with global trends, and highlights the role of plastic surgery and emerging medical innovations in shaping gender-affirming care. **Methods:** A systematic literature review was conducted using PubMed, Google Scholar, Scopus, and ResearchGate. Search terms included "Gender Dysphoria," "Transgender Healthcare," "Gender-Affirming Surgery," and "Mental Health and Transgender Individuals." Only peer-reviewed articles published between 2000 and 2025 were included. Selection criteria prioritized methodological rigor, inclusion of both Indian and global perspectives, and relevance to the medical and psychological aspects of Gender Dysphoria. **Results:** Global prevalence rates of Gender Dysphoria range from 0.3% to 1.3%, whereas India reports a lower recorded prevalence of 0.04%, likely due to underreporting and societal stigma. Gender-affirming surgeries (GAS) have seen a significant global increase, and India has witnessed a growing demand, driven by affordability, medical tourism, and rising social acceptance. However, barriers such as inadequate insurance coverage, lack of trained professionals, and healthcare discrimination continue to limit access for transgender individuals. **Conclusion:** India is emerging as a prominent hub for gender-affirming care, but systemic challenges such as social stigma, inadequate professional training, and limited insurance coverage persist. Future research should focus on evaluating the long-term psychological and surgical outcomes, expanding insurance policies, and enhancing specialized medical training to ensure equitable access to transgender healthcare.

INTRODUCTION

The Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, Text Revision (DSM-5-TR) defines Gender Dysphoria (GD) as a marked incongruence between an individual's experienced or expressed gender and their assigned gender, persisting for at least six months (American Psychiatric Association, 2022). In a typically developing individual, physical sex and gender identity are congruent. However, those with Gender Dysphoria may experience significant distress and seek to modify their primary or secondary sexual characteristics to align with their gender identity. This often includes medical interventions such as hormone therapy and gender-affirming surgeries (Zucker *et al.*, 2016). Individuals transitioning from male to female (MtF) are termed transwomen, while those transitioning from female to male (FtM) are termed transmen (Ashley, 2021). Despite being

a recognized medical condition, Gender Dysphoria remains a relatively new and often misunderstood concept, leading to social stigma and barriers to medical care. Many individuals struggle with "coming out" to family and friends, fearing discrimination and rejection (Bhuyan & Konwar, 2023). This is particularly evident in India, where discussions on sexuality and mental health have traditionally been reserved, further complicating access to support systems and medical care (Gupta, 2021). However, with growing awareness and advocacy, societal attitudes toward Gender Dysphoria are shifting, leading to better acceptance and improved access to healthcare. This shift has contributed to a rise in gender-affirming procedures, including plastic surgery interventions designed to help transgender individuals achieve physical characteristics that align with their gender identity (McNeil *et al.*, 2021). The increasing demand for these procedures underscores the importance of addressing the psychological,

medical, and societal challenges faced by individuals with Gender Dysphoria, particularly in India. This review aims to explore the prevalence rates, psychosocial challenges, medical advancements, and global comparisons to provide a holistic view of the evolving landscape of Gender Dysphoria and medical interventions in India and beyond.

METHODOLOGY

A systematic literature review was conducted to explore the prevalence, psychosocial impact, and medical interventions related to Gender Dysphoria. PubMed, Google Scholar, Scopus, and ResearchGate were searched for relevant peer-reviewed articles published between 2000 and 2024. The search terms included “Gender Dysphoria,” “Gender Identity Disorder,” “Transgender Healthcare,” “Gender-Affirming Surgery,” and “Mental Health and Transgender Individuals.” Studies were selected based on predefined inclusion criteria, such as peer-reviewed status, relevance to medical and psychological aspects, and specific focus on India and global comparisons. Exclusion criteria included non-peer-reviewed sources, anecdotal reports, and studies with small sample sizes. Extracted data were categorized into themes, including prevalence rates, social and psychological impact, medical and surgical treatments, and healthcare challenges in India. A comparative analysis of global and Indian contexts was conducted to highlight key gaps and future research needs.

RESULTS

The findings of this review highlight the significant disparities in the prevalence, psychosocial challenges, medical interventions, and healthcare policies surrounding Gender Dysphoria. Table 1 provides a structured summary of the key findings across various dimensions. The table illustrates the increasing prevalence of Gender Dysphoria and the disparities between different countries. While global estimates suggest a significant proportion of individuals experience gender incongruence, underreporting and societal stigma contribute to much lower documented cases in India. The impact of social rejection and mental health challenges further exacerbates difficulties in accessing necessary medical interventions. Additionally, the rapid increase in gender-affirming surgeries underscores the growing acceptance of transgender healthcare, although accessibility remains a challenge. While legal policies such as the Transgender Persons (Protection of Rights) Act, 2019 have improved recognition, the lack of trained professionals and healthcare infrastructure still pose significant barriers to equitable care. Future directions should focus on expanding mental health support, medical training, and inclusive healthcare policies to address these gaps effectively.

DISCUSSION

The prevalence of Gender Dysphoria varies significantly across countries, influenced by cultural, demographic, and socioeconomic factors. While global prevalence rates range from 0.3% to 1.3% (Zucker *et al.*, 2016), India's recorded prevalence remains notably lower at 0.04% (Bhuyan & Konwar, 2023). This disparity is likely attributed to underreporting, stigma, and a lack of awareness, as cultural taboos discourage individuals from seeking formal diagnosis and treatment (Gupta, 2021). Psychiatric comorbidities are

commonly associated with Gender Dysphoria, with studies indicating that up to 75% of affected individuals also suffer from mental health disorders, including schizophrenia, depression, and anxiety (Kaltiala-Heino *et al.*, 2018). Limited familial and societal support exacerbates these struggles, particularly in India, where only 11% of transgender individuals receive family acceptance (Hossain, 2023). The lack of gender-sensitive mental health professionals further restrict access to psychological care (Ashley, 2021). However, recent strides have been made to expand mental health services and gender-sensitive care. The National Transgender Health Portal, launched in 2020, offers a range of services, including mental health counselling, hormone therapy, and access to medical transition procedures, thus empowering transgender individuals to seek care with greater ease (Ministry of Social Justice and Empowerment, 2023). Medical interventions, particularly gender-affirming surgeries, have seen exponential growth worldwide. While India remains a culturally conservative society, it has emerged as a global leader in providing affordable and accessible gender-affirming care. Tamil Nadu was the first Indian state to pioneer free transgender clinics, operational since 2014, offering a wide range of healthcare services tailored to the needs of transgender (Government of Tamil Nadu, 2020).

Similarly, The Plastic Surgery Department at Lokmanya Tilak Medical College (LTMC) and Sion Hospital, Mumbai, with extensive experience in gender-affirming surgeries has also taken progressive steps toward inclusive healthcare. KEM Hospital has become the first Brihanmumbai Municipal Corporation (BMC) hospital to introduce a dedicated weekly outpatient department (OPD) for transgender persons, offering specialized medical and mental health services (Times of India, 2024). Additionally, Kerala's state government offers reimbursement schemes for gender-affirming procedures, significantly reducing financial burdens for transgender individuals (Government of Kerala, 2021). In the private sector, notable strides have been made in ensuring corporate inclusivity. Leading corporation Tata Steel has emerged as a pioneer in promoting LGBTQ+ inclusivity by introducing comprehensive insurance policies that cover gender-affirming procedures, including psychological counselling, hormone therapy, and surgeries. Their efforts have set a benchmark for corporate inclusivity in India, ensuring financial security and fostering a more inclusive workplace (Bharadwaj & Singh, 2021). Interestingly, India's advancements in gender-affirming care contrast with challenges faced by developed nations. The United States has witnessed increasing political and legislative restrictions on transgender healthcare. Notably, the current U.S. President, Donald Trump, has repeatedly stated that there are only two genders, biologically determined at birth. (Trump, 2025). His administration previously banned transgender individuals from serving in the military and worked to roll back healthcare protections for transgender people (Kelleher, 2020). More recently, Legislative restrictions in the U.S., particularly policies restricting access to gender-affirming care, contrast with India's growing inclusivity in transgender healthcare (Human Rights Campaign, 2024; NHS England, 2023). Meanwhile, in the United Kingdom, long waiting lists often result in individuals waiting several years to access gender-affirming services. Moreover, innovative surgical techniques are not easily adopted within the NHS system. (NHS England, 2023). Similarly, many Middle Eastern nations prohibit gender-affirming surgeries due to legal and religious constraints (El-Feky, 2021). Social media plays a critical role in shaping perceptions and demand for gender-affirming procedures. Since 2012, there has been a substantial rise in online searches for facial feminization, rhinoplasty, breast

Table 1. Key Findings on Gender Dysphoria, Medical Interventions, and Societal Impact

Category	Key Findings
Prevalence of Gender Dysphoria	Global prevalence: 0.3%–1.3% (Zucker <i>et al.</i> , 2016). In India: 4.88 million transgender individuals (0.04%) (Bhuyan & Konwar, 2023). European prevalence: 1 in 11,000 natal males, 1 in 30,000 natal females (Gupta, 2021).
Psychosocial Challenges & Mental Health	High rates of depression, anxiety, and suicidal ideation (McNeil <i>et al.</i> , 2021). Only 11% of transgender individuals in India receive family support (Hossain, 2023). Unsafe gender-affirming procedures due to healthcare inaccessibility (Winter <i>et al.</i> , 2018).
Medical & Surgical Interventions	Increasing rates of gender-affirming surgeries (Kadam, 2024). The demand for gender-affirming surgeries has increased exponentially, with a 152-fold rise in procedures between 2010 and 2018 in the United States. (ACS NSQIP, 2018). While specific data on India's percentage increase in gender-affirming surgeries is unavailable, studies indicate a significant rise in procedures due to affordability and medical tourism (Kadam, 2024). Medical tourism & social media influence the demand (Thawanyarat <i>et al.</i> , 2023).
Healthcare & Legal Landscape	The Transgender Persons (Protection of Rights) Act, 2019 improved recognition, but access to healthcare remains a challenge (Gupta, 2021). Limited number of gender-sensitive healthcare professionals (Ashley, 2021). Countries with better legal protections show improved transgender healthcare outcomes (Reisner <i>et al.</i> , 2016).
Emerging Trends & Future Directions	Telehealth and mental health services for transgender individuals expanding (McNeil <i>et al.</i> , 2021). More research needed on long-term psychological impacts of gender-affirming care (Winter <i>et al.</i> , 2018).

augmentation, and body contouring procedures (Thawanyarat *et al.*, 2023). Additionally, medical tourism has positioned India as a leading hub for cost-effective gender-affirming care, attracting patients globally (Kadam, 2024). Some studies also indicate that India's affordable surgery costs have increased global patient inflow, attracting individuals from countries where GAS is either inaccessible or prohibitively expensive (Jain *et al.*, 2023). India's comparatively inclusive approach, facilitated by public and private sector collaboration, reflects a growing commitment to improving the quality of life for transgender individuals. Legal recognition of transgender rights remains inconsistent across different regions. The Transgender Persons (Protection of Rights) Act, 2019 marked a significant milestone in protecting the rights of transgender individuals in India. However, gaps remain in its implementation, and challenges related to employment discrimination, healthcare inequities, and social exclusion persist (Gupta, 2021). Nevertheless, progressive policies and growing public awareness signal a promising trajectory toward reducing systemic barriers and fostering inclusivity.

Comparative studies suggest that countries with comprehensive legal protections and insurance coverage for gender-affirming care report better mental health outcomes and overall quality of life for transgender individuals (Reisner *et al.*, 2016). Moving forward, future research must focus on long-term studies assessing the psychological and physiological outcomes of gender-affirming interventions. Additionally, expanding mental health programs, developing gender-affirming clinical training, and implementing inclusive healthcare policies will be critical to ensuring equitable access to transgender healthcare services (McNeil *et al.*, 2021).

CONCLUSION

India has made remarkable strides in advancing transgender healthcare and promoting inclusivity, positioning itself ahead of several developed nations in key areas. Tamil Nadu's pioneering free transgender clinics, Mumbai's Lokmanya Tilak Medical College (LTMC) and Sion Hospital, KEM Hospital's specialized OPD services, Kerala's reimbursement schemes, and the National Transgender Health Portal have collectively improved healthcare accessibility for transgender individuals. Additionally, Tata Steel's comprehensive insurance coverage

for gender-affirming procedures reflects a growing trend of corporate inclusivity, setting a positive precedent for other organizations. While systemic barriers such as limited gender-sensitive medical training and social stigma persist, India's progressive approach signals a transformative shift toward equity and dignity in transgender healthcare. Moving forward, sustained efforts to expand mental health support, include gender-affirming care in medical curricula, and evaluate long-term outcomes of gender-affirming interventions will be essential. With continued collaboration between policymakers, healthcare providers, and advocacy groups, India is well-positioned to serve as a global model for inclusive transgender healthcare.

ACKNOWLEDGEMENTS

The authors would like to acknowledge TEAM APAR Health for the support and guidance. (SPARK Program)

Funding Sources (if applicable): None

Declaration of conflicts of interest statement (if applicable): Authors declare no conflict of interests.

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