



The Third Gender in a Third World Country: Major Concerns and the “AIIMS Initiative”

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Abstract

With a population dividend of around 1.3 billion, India is the largest democracy in the world that encompasses “unity in diversity”. The kaleidoscope of the socio-cultural fabric comprises the transgender population too, which has a historical context dating back millennia and also plays a vital role as described in Hindu scriptures. The Indian transgender person’s community shows a variety of gender identities and sexual orientations, which is unlikely from the West, forming a culturally unique gender group. In India, transgender persons were recognised as the ‘third gender’ in 2014. The third gender population of India is marginalised to a great extent in every sector. Often, transgender persons have been the subjects of sociology, psychology, and health issues. There was a dearth of data regarding their major health problems including bone health, which has not been reported in India and elsewhere before this study. Through a prospective cross-sectional study design, we aimed to determine the current health status of transgender persons with a special emphasis on bone health. Descriptive statistics were used for data analysis. The preliminary results of the study show poor bone health in the transgender population of India. The majority of transgender persons have low bone mineral density (BMD) at a much young age, even before the achievement of their peak bone mass. The health status of the transgender population in India is poor overall. Transgender persons have many impediments to optimal healthcare that requires holistic care. This study presents the current health challenges of the transgender population with a special emphasis on their bone health status as ‘AIIMS initiative’. This study also shows transgender persons human rights needs to be explicitly discussed. The stakeholders of social policies require an urgent attention to unfold the major concerns encompassing transgender persons.

Keywords Transgender persons · Socioeconomic and significant health issues · Bone health · AIIMS initiative

Introduction

The existence of the third gender has been a part of Hindu Vedic literature for aeons (Kalra et al., 2016; Singh & Kumar, 2020). The transgender population is heterogeneous and thus forms a unique gender group with diverse gender identities. Research studies indicate that transgender persons are one of the most vulnerable populations in the world and

therefore, India is no longer an exception (Chakrapani et al., 2021). Despite all-round of support and social recognition, the fundamental rights of transgender persons are yet to be protected in India and elsewhere (Ayoub, 2016; Kollman & Waites, 2009; Susan & Indira, 2022). In India, the attitude toward this population is still prosecutorial. This population is exposed to ridicule, harassment, and bullying from a very young age. As per Indian law, *Section 377* and the *Transgender Person’s Bill* in 2019 advocates to give equal rights and protection against discrimination, for human rights (Arvind et al., 2021; Chakrapani et al., 2021; Khatun, 2018).

While the transgender population is deeply entrenched in India, the mainstream population is surprisingly less aware of the transgender community and their health status (Srinivasan & Chandrasekaran, 2020). Before the 2011 census, there was no population record of transgender people in India. Still, the total population of transgender people was estimated at around 0.49

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million (Census of India, 2011). In India, the transgender population is a marginalised group of society and has created their own way of developing their community. As per the national census data, this community has low literacy levels. Around 43% of transgender people are literate, compared to the 74% literacy rate in the general population (Saraswathi & Praveen, 2015). This group also faces many social, cultural, legal, and economic hurdles and are targeted for violence and harassment (Boyce, 2012; Saraswathi & Praveen, 2015). Poverty and economic exclusion have led to livelihood deprivation and prevented access to healthcare facilities. Adding to these, gender discrimination in the community, particularly at the hospitals, is bringing their morale down. Because of this, about 20% of the transgender community has specific healthcare needs that are not being met (Chettair, 2015; Khan, 2009).

The "trans" health

Transgender people experience health disparities and barriers to good healthcare services in India and worldwide. (Koken et al., 2009). They lack proper healthcare facilities due to social intolerance and stigmatisation. Being socially reticent has led to a widening gap between the transgender community and the conventional healthcare system; however, a lot is yet to be done in India to improve the healthcare accessibility of transgender community's. Undoubtedly, due to media attention there is increased awareness of transgender person issues, but the lives of many transgender persons are still filled with hardships.

The suicide rate in India for the transgender population is a staggering 31%. About half of these have attempted suicide before the age of 20 (Virupaksha et al., 2016). 46.3% of transgender people have a lifetime presence of non-suicidal self-injury (NSSI), and 28.73% reported themselves to be currently engaging in NSSI (Saraswathi & Praveen, 2015). This group faces family rejection, unemployment, mental abuse, workplace discrimination. Due to fear of parental rejection, transgender people, leave their homes, which increases the risk of being alone and living their lives in poverty (Pisani et al., 2004).

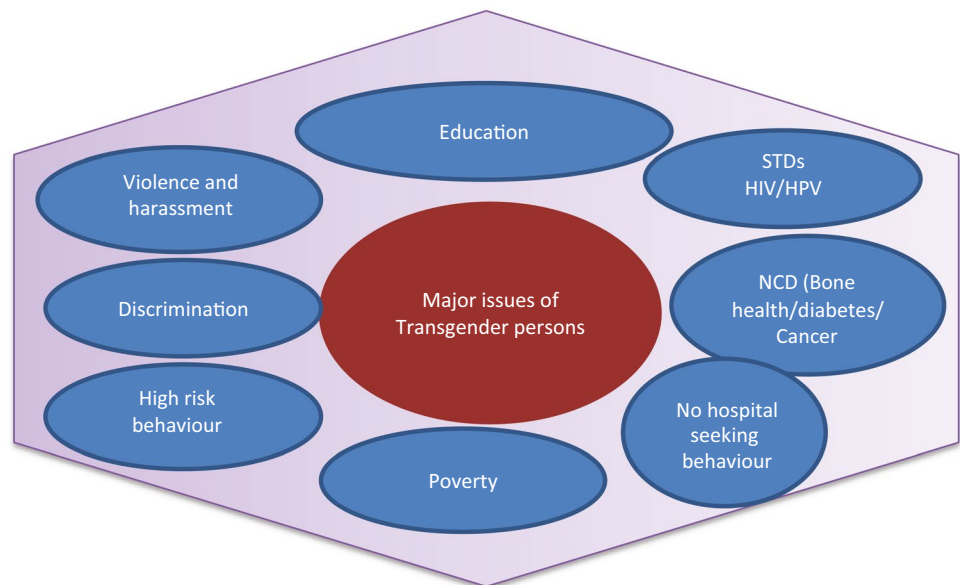
Transgender persons are more at risk of HIV, which is found to be 49 times more prevalent in them than in the general population (Pisani et al., 2004). There are two evident barriers to accessing the treatment of HIV, which are stigma and transphobia. There are at least three factors responsible for transgender persons engaging in sex work, including social exclusion, economic vulnerability, and a lack of employment opportunities. Re-use of needles and unprotected intercourses are the main reasons for the high

prevalence of HIV (Hatzenbuehler, 2008). For HIV prevalence, data substantiates that 27% of transgender persons are engaged in sex work, and 15% of people are not involved in the same. It is seen that HIV prevalence is nine times higher among transgender sex workers when compared to non-transgender female sex workers (Chettiar, 2015; Somasundaram, 2009; Virupaksha et al., 2016). Pisani et al. (2004) describe the selected infectious diseases that affect men who have sex with men (MSM) unevenly. Sexually Transmitted Diseases (STDs) are most likely to develop in sexual minorities, further leading to emotional disorders later in their life (Hatzenbuehler, 2008).

According to research, 48% of transgender persons suffered from psychiatric disorders, but none received psychiatric consultation for these issues (Hatzenbuehler et al., 2008; Somasundaram, 2009). Tobacco and alcohol consumption is higher in lesbian, gay, bisexual, and transgender (LGBT) individuals than in heterosexual individuals (Yeung et al., 2019). Higher rates of Human Papilloma Virus (HPV) infection have been found in gay individuals, When combined with tobacco use, resulted as higher risk of anal and other cancers (Pisani et al., 2004). Transgender persons often hide their illness from society and thus attempt self treatment. Due to a lack of awareness and education, most transgender people prefer to receive treatment from unprofessional quacks. These quacks even perform surgeries including removing genitalia which puts their lives at risk. (Singh et al., 2014). A study from southern part shows that certain risk factors for non-communicable diseases (NCDs) are more common in transgender people than in the general population in, (Madhavan et al., 2020).

Other than STDs, several health issues involve bone health (see Fig. 1) (Unger, 2016). Metabolic bone diseases are often silent until they are forcefully revealed by a fracture. Gonadal sex steroids play a vital role in bone health (Davidge-Pitts & Clarke, 2019). In order to change gender, transgender persons often take unregulated amounts of hormonal therapy as a part of self-treatment, which impact their bone health negatively. A study shows that skeletal changes among adolescents and adults are a result of medical and surgical therapies for gender dysphoria (Cartya & Lopez, 2018; Rothman & Iwamoto, 2019; Stevenson & Tangpricha, 2019). Therefore, amidst the lack of basic healthcare facilities and awareness, transgender people in India often prefer self-treatment and mostly follow their group leader's advice. High-risk behaviour and self-chance therapies in unregulated amounts led to secondary osteoporosis and osteopenia at an early stage of their life than rest of population.

Fig. 1 Major Social and health issues of transgender persons(TG)



Transgender people's health in the COVID Era

Transgender persons' high-risk behaviour and ghettoization in India make them more susceptible to infections, including on-going COVID-19. Amidst COVID-19, an outbreak of the disease in their ghettos has seldom been reported. It may be that transgender persons often hide their illnesses. To the best of knowledge no reports about COVID-19 infection or hospitalisation have been noticed during the pandemic. However, the Health Ministry intensively observed this group during the COVID-19. As a part of their care, the Government of India has offered the transgender population considerable financial support during COVID time. Efforts are also being made to create awareness among them to adopt COVID-appropriate behaviours and also to ensure their vaccination. A good step has been taken by the Kerala State to start the "Integrity Clinic," which was the first multidisciplinary clinic for transgender health' in India (Sukumar et al., 2020).

Methodology

This was a prospective cross-sectional study conducted between October 2018 and September 2021 in the department of orthopaedics at the All India Institute of Medical Sciences, New Delhi, India. Ethical approval was obtained from the Institute Ethics Committee (IEC) prior to the study. Financial support was received from the Indian Council of Medical Research (ICMR), New Delhi. The Study was carried out by the department of Orthopedics, the All India Institute of Medical Science, New Delhi (AIIMS). Transgender persons were approached from their ghettos in Delhi

and national capital regions after mapping of the habitats. A trained team healthworkers including a Scientist, female social worker, field worker and nursing staff interacted with group leaders of transgender community and concerned NGO's. Through a health camp cum community interaction, transgender persons were given a presentation about the importance of bone health in life and common health issues in transgender population. A brief about the study was also described for their understanding. Transgender persons were recruited after obtaining their written consent. 10 ml of fasting blood sample was drawn for the routine biochemical investigations and selected hormonal assessment. Blood samples were carefully transported from the site to hospital. Samples were processed and serum samples were stored in -20 refrigerator. Transgender persons were abreast about their blood investigations and were also requested to get their BMD assessment at AIIMS institute. The parts of the data set were BMD (spine and hip region) through dual energy X-ray absorptiometry (DXA scan) and parameters of bone mineral homeostasis, such as vitamin D, calcium, phosphorous, and alkaline phosphatase (ALP). All reports were discussed with experts and advised the standard treatment whenever required. All records were entered in a dedicated computer and confidentiality was maintained throughout the study.

Rationale

The findings of this study will help us compare the BMD data of the third gender with the existing data of the rest of the population. This initiative will also be helpful to draw attention towards the unmet needs for social justice and healthcare for the transgender population of India.

Objective, Research Question, and Hypothesis

Since the status of bone health in the transgender population has not been known, we aim to evaluate bone health among the transgender population of India. We hypothesised a low bone mineral density (BMD) in the transgender population of India. The objective of this study was not only to determine the bone health status of the transgender population of India but also to study the common health issues among this population as well. Additionally, this initiative will be of help to create awareness among the stakeholders, including the transgender population.

Preliminary Findings

Descriptive statistics were used—mean, standard deviation (SD), frequency, and percentage. The mean age, BMI, vitamin D, calcium, phosphorous, and ALP were 25.5 ± 6.5 years, 21.8 ± 4.1 kg/m², 13.38 ± 7.9 ng/ml, 9.86 ± 0.86 mg/dl, 3.93 ± 2.17 mg/dl, and 186.4 ± 125.3 U/l, respectively. The major finding of the study was that out of 172 recruited subjects, 84.3% had vitamin D insufficiency (<20 ng/ml) (Table 1). Importantly, a past history of fracture was noted in 35 transgender persons (20%).

The BMD was estimated in only 75 subjects, as the majority of transgender subjects did not opt to visit the hospital for BMD evaluation. The mean *T* scores in the spine and hip regions were -1.5 ± 0.9 and -0.72 ± 0.9 respectively. In the spine region, 50 subjects had a *T* score < -1.5 (osteopenia range), while 10 subjects had one in the hip region (Table 1). Keeping in view the alarming bone health status of the transgender population, further comprehensive analysis, including hormonal, glycaemic, nutritional, and mental health findings, is under study, which would shed more light on the overall health status of the transgender population in totality.

Table 1 Preliminary findings of the study

Vitamin D values (ng/ml)		
Biochemical level	Number of patients (%)	Category
< 10 ng/ml	66 (38.37%)	Severe insufficiency
10–20 ng/ml	79 (45.93%)	Insufficiency
20–30 ng/ml	21 (12.20%)	Deficiency
> 30 ng/ml	06(3.4%)	Optimal
Bone mineral density (g/cm ²)		
<i>T</i> score	Mean	SD
Spine	-1.51	± 0.9
Hip	-0.72	± 0.9

Discussion

This paper provides the current health challenges of the transgender population with a special emphasis on their bone health status as ‘AIIMS initiative’ on the path of social justice. The preliminary data is suggestive that our hypothesis is accepted that transgender persons have a low bone mineral density. Additionally, it could be inferred that after sex reassignment surgery (SRS), the mineral levels and hormonal levels got disrupted. Transgender persons need a comprehensive population health policy to enforce their constitutional rights in India. Similar efforts like the ‘AIIMS initiative’ are required from other centres to extend their services for transgender healthcare. It is predicted that this study will be the benchmark for the health governance of transgender persons. This study can be seen as a healthcare delivery model for transgender people. To the best of our knowledge, this is the first initiative taken for recording and analysing the health status of transgender people with a special focus on their bone health by any Indian association. BMD was assessed in only 75 subjects, which was the only limitation of the study. This study encourages health care workers to be accountable for such groups and provide the utmost help. Much needs to be done to bring the transgender population to the level of well-being that meets the Millennium Development Goal of “Health for All.” Leveraging the insights gained when recording data and the health status of the transgender population, the steps discussed throughout the script are required to provide the health equity for transgender persons. Nonetheless, such initiatives are required for transgender human rights and social work.

Conclusion

The majority of the transgender population of India has poor bone health status. A lot is yet to be done to restore the overall health of the transgender population on the path of human rights, social justice, and empowerment of the transgender population of India.

Prayer: The “third gender” in a third-world country shouldn’t be treated as “third class!”.

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Data Availability Yes.

Declarations

Conflict of Interest The authors declare no competing interests.

Ethical Approval Yes.

Patient and Public Involvement Done as per standard methods.

Disclaimer The lead author affirms that the manuscript is an honest, accurate, and transparent account of the study being reported; that no important aspects of the study have been omitted; and that any discrepancies from the study as planned (and, if relevant, registered) have been explained. We have reported whether we plan to disseminate the results to study participants and or patient organisations OR stated that dissemination to these groups is not possible/applicable.

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