

Research Article

# Transgender Healthcare and Indian Medical Students: Is Curricular Revamping the Need of the Hour?

Divya R<sup>1</sup>, Aparna Menon<sup>2</sup>

<sup>1</sup>Associate Professor, <sup>2</sup>Tutor, Department of Physiology, Dhanalakshmi Srinivasan Medical College and Hospital, Perambalur, Tamil Nadu, India.

DOI: <https://doi.org/10.24321/2278.2044.202204>

## I N F O

### Corresponding Author:

Aparna Menon, Department of Physiology, Dhanalakshmi Srinivasan Medical College and Hospital, Perambalur, Tamil Nadu, India.

### E-mail Id:

aparnamenon7@gmail.com

### Orcid Id:

<https://orcid.org/0000-0002-7250-5492>

### How to cite this article:

Divya R, Menon A. Transgender Healthcare and Indian Medical Students: Is Curricular Revamping the Need of the Hour? Chettinad Health City Med J. 2022;54(1):16-20.

Date of Submission: 2022-01-28

Date of Acceptance: 2022-02-13

## A B S T R A C T

**Introduction:** Transgender health is a comparatively new area of medicine that has not been explored until the past few decades. In India, the doctors still do not have much knowledge in this area. This highly influences the quality of medical services available for the transgender population. The undergraduate medical curriculum does not include enough information regarding transgender health care.

**Methodology:** 214 participants were included in the study. A questionnaire containing 39 questions was provided to them in order to assess their knowledge regarding the medical and social problems related to transgender health. The questions were in yes or no format and scores were given to each answer. Questions were in 3 sections: general social awareness, medical experience, and knowledge and perception of issues.

**Result:** The median score was 22 out of 39, with a maximum score of 35. Chi-square test showed better scores on general awareness and perception of issues while poorer scores in medical knowledge of transgender health among medical students.

**Conclusion:** The study shows that there is a huge deficit in medical knowledge on transgender health among medical students even though they may be aware of the social aspects and issues in the area. There is a need for improvement of undergraduate medical curriculum to include topics of transgender health so as to better prepare the medical students to care for trans patients.

**Keywords:** Transgender Health, LGBTQ healthcare, Indian Medical Graduates, Medical Curriculum

## Introduction

Competency-Based Undergraduate Curriculum for the Indian Medical Graduate, 2018 states "The Medical Council of India visualised that the Indian Medical Graduate, at

the end of the undergraduate training programme, should be able to recognise "health for all" as a national goal and should be able to fulfil his/ her societal obligations towards the realisation of this goal". According to a new

**Chettinad Health City Medical Journal (P-ISSN: 2277-8845 & E-ISSN: 2278-2044)**

Copyright (c) 2022: Author(s). Published by Advanced Research Publications



Competency-Based Medical Education (CBME) curriculum, an Indian Medical Graduate (IMG) must be competent enough to provide basic healthcare to the patients. The idea was to ensure that a doctor practising modern medicine should have all the necessary skills and knowledge to provide basic medical care to one and all.<sup>1</sup> When we say “health for all”, it is supposed to include every individual who needs medical care, but the fact remains that there are parts of the population that remain unseen in the healthcare system. One of such groups is the Lesbian, Gay, Bisexual, Transgender, Queer, + community (LGBTQ+).

The LGBTQ+ community was considered deviant or outside the normal spectrum of society until a few decades ago. The DSM criteria have only very recently recognised gender incongruence as a normal condition. In light of this, there has been a movement in the medical community globally to make new protocols and best practices to include gender minority individuals.<sup>2</sup> While multiple research has been done in this field, a lot of the physiology and pathology of the gender minority communities is unknown to the medical field. A major reason for this is the general reluctance of the LGBTQ+ communities to reach out to medical professionals in case of health issues due to fear of discrimination and humiliation. The reduced participation of the transgender community in availing hospital care is usually attributed to the lack of awareness regarding the basic facts about them among the hospital staff.<sup>3</sup>

Transgender health is a comparatively new area of medicine and has not been explored until the past few decades.<sup>4</sup> Multiple studies have been done abroad to analyse the awareness levels of different doctors as well as medical students regarding transgender health. Such studies help to find the lacunae in the doctors’ knowledge and help the medical faculty better train their students, the medical graduates, in the field of transgender health.<sup>5,6</sup> Even then, the doctors in India lack the required awareness on the subject which impacts the quality of medical services provided to the transgender population.

The present undergraduate medical curriculum in India does not include basic and essential information about transgender/ LGBTQ healthcare. This knowledge gap may affect the provision of proper healthcare for the transgender/ LGBTQ community.<sup>7</sup> In order to ensure that the Indian medical graduate is competent in the necessary skill and knowledge to provide medical care to the transgender community, it is necessary to understand the gaps in their current understanding of the field. This study hypothesises that the medical graduate students in India lack sufficient knowledge to be healthcare providers to the transgender community and the particular areas of lacunae need to be assessed.

## Objective

To assess the awareness regarding transgender health and related issues among medical students.

## Methodology

An observational study was conducted among the medical students at Dhanalakshmi Srinivasan Medical College Hospital, Perambalur, Tamil Nadu in November 2021 after obtaining clearance from the Institute Ethics Committee. 214 volunteers (medical students) were selected by convenient sampling and informed consent was taken from them. The medical students of all batches were included based on their age (more than 18 years). The exclusion was based on the unwillingness to give informed consent. They responded to a questionnaire containing 39 questions, which was framed by the investigators and was peer-reviewed. The questionnaire intended to assess the knowledge, awareness, and attitude of medical students regarding the social and medical issues related to transgender healthcare. All the questions were in ‘yes’ or ‘no’ format and scores were given to each answer. Based on the format of the question, 1 score was awarded for a positive response and 0 score for a negative response. Questions were in 3 sections: 1) general social awareness, 2) medical experience, and 3) knowledge and perception of issues. In the first part of the questionnaire containing questions related to the general awareness of transgender issues (Section A), 10 questions carried one point each on answering yes and 2 questions carried 1 mark each on answering no. In the second section regarding medical knowledge and experience, 10 questions carried 1 point each for answering yes while 5 questions carried 1 point each for answering no. In the third section (Section C), all 14 questions carried 1 point for answering yes. The total score came to 39 and the minimum score was zero. The net score of each participant was calculated and descriptive statistics were done for the same. Question wise analysis of scores was also done using the average score for each question as well as Chi-square test to assess the significance of higher scores in each question. Age-wise distribution of the net scores was compared using Kruskal Wallis Test. The statistical analyses were done using Microsoft Excel 2010 and SPSS 20. P value of less than 0.05 was considered significant.

## Result

The participants were classified based on their age with the maximum number of participants being in the 20-22 years age group (Table 1). The questionnaire validity was tested using Cronbach’s Alpha and was found to be valid (Table 2). Shapiro-Wilk test showed non-normal distribution, hence non-parametric tests were considered. The median score was 22 out of 39 for 214 participants, with a maximum

score of 35 (Table 3). The average score for each question showed significantly better results in section A (for general awareness) and in section C (for perception and attitude) as compared to Section B (for medical knowledge) (Table 4). Chi-square tests showed better scores on general awareness and perception of issues while poorer scores in medical knowledge of transgender health among medical students. Age group-wise analysis of median scores did not yield any significant difference.

**Table 1. Demographic Profile of Participants**

Age Group (Years)	Frequency (n)	Percentage (%)
17-19	37	17.3
20-22	148	69.2
23-25	26	12.1
Above 25	3	1.4
Total	214	100

**Table 2. Cronbach's Alpha Test for Questionnaire Reliability**

Cronbach's Alpha	Cronbach's Alpha based on Standardised Items	Number of Items
0.827	0.842	39

**Table 3. Mean and Median (Total score out of 39)**

Descriptive Statistics	Score
Mean	21.43
Median	22
Min	0
Max	35
75th percentile	25

**Table 4. Mean Scores for Each Question**

Question	Mean Score
A1	0.1028
A2	0.5047
A3	0.6075
A4	0.7991
A5	0.6589
A6	0.5701
A7	0.4813
A8	0.7757
A9	0.8458
A10	0.7991
A11	0.9486
A12	0.9206

B1	0.0701
B2	0.5794
B3	0.2664
B4	0.3224
B5	0.2430
B6	0.2196
B7	0.2804
B8	0.5981
B9	0.3551
B10	0.3972
B11	0.2523
B12	0.5654
B13	0.5561
B14	0.5514
B15	0.2710
C1	0.8598
C2	0.1542
C3	0.9159
C4	0.8645
C5	0.8692
C6	0.9065
C7	0.9346
C8	0.8925
C9	0.9206
C10	0.1636
C11	0.2523
C12	0.1589

## Discussion

The study showed that there is a huge deficit in medical knowledge on transgender health among medical students even though they may be aware of the social aspects and issues in the area. The average scores on each question from the three sections showed that the students' scores were significantly lower in the medical knowledge and experience section, with questions such as experience with history taking, examination of trans patients as well as medical knowledge of health issues concerning trans patients.

Similar studies conducted elsewhere found that while the attitude of medical students towards the LGBTQ community is positive, the awareness regarding health issues was low.<sup>7</sup> According to studies done in the UK and Europe, barriers to increased transgender health exposure include no curricular topics that directly addressed transgender health, sub-par

competence of faculty regarding the topics, low institutional support, and lack of updated textbooks.<sup>8,9</sup>

Teaching and training techniques used in the western world to improve transgender healthcare information in the undergraduate medical curriculum include awareness seminars, training and workshops on how to perform history taking and examination of a trans patient, intergroup exercises to improve the tolerance of students toward the community as well as improve their attitude and perception of these issues.<sup>10,11,12</sup> There is a lot of important information on transgender medicine starting from anatomy and physiology to the effects and complications of gender-affirming care and co-morbidities.<sup>13,14,15</sup> Although many groups and NGOs are aiming to provide the same in India, their reach is limited also due to the lack of support from the authorities. It has been proven that creating awareness among the teaching and healthcare staff at a medical college could help integrate the idea of gender inclusivity among students better than isolated training to the students.

The studies done among doctors have found that they are usually at a loss while trying to care for trans patients and aren't even sure of what type of treatment is available to the trans patients or where it is available.<sup>16</sup> So the need of the hour is to train and give awareness to the future doctors on the available knowledge in the field. This also amplifies the need for a national guideline for patient care for LGBTQ+/ Transgender community as well as the best practices for primary care for the gender minority community.<sup>17</sup>

Apart from these, there are specific issues in India alone such as the lack of updated information on transgender health in the Indian textbooks and not having included transgender-related topics in the first few years of the undergraduate curriculum. These have to be initiated at a larger scale at the topmost level in order to improve the knowledge of medical students who are future doctors who would be treating trans patients.

## Conclusion

There is a definite need for improvement/ revamping of undergraduate medical curriculum to include topics of transgender/ LGBTQ health so as to better prepare the medical students who are the future doctors of the country to provide the rightful healthcare for transgender/ LGBTQ patients.

## Acknowledgement

The authors are grateful to the students who participated in the study with enthusiasm and the colleagues who helped and supported in reviewing the questionnaire.

**Funding:** None

**Conflict of Interest:** None

## References

1. Dongre AR, Chacko TV. A critical review of new competency-based curriculum for community medicine using various curricular review frameworks. *Indian J Public Health.* 2019;63:362-6. [PubMed] [Google Scholar]
2. Lapinski J, Covas T, Perkins JM, Russell K, Adkins D, Coffigny MC, Hull S. Best practices in transgender health: a clinician's guide. *Prim Care.* 2018;45(4):687-703. [PubMed] [Google Scholar]
3. Gupta S, Imborek KL, Krasowski MD. Challenges in transgender healthcare: the pathology perspective. *Lab Med.* 2016;47(3):180-8.
4. Mayfield JJ, Ball EM, Tillery KA, Crandall C, Dexter J, Winer JM, Bosshardt ZM, Welch JH, Dolan E, Fancovic ER, Nañez AI, May HD, Finlay E, Lee SM, Streed CG, Ashraf K. Beyond men, women, or both: a comprehensive, LGBTQ-inclusive, implicit-bias-aware, standardized-patient-based sexual history taking curriculum. *MedEdPORTAL.* 2017 Sep;13:10634. [PubMed] [Google Scholar]
5. Markovic L, McDermott DT, Stefanac S, Seiler-Ramadas R, Iabloncisk D, Smith L, Yang L, Kirchheiner K, Crevenna R, Grabovac I. Experiences and interactions with the healthcare system in transgender and non-binary patients in Austria: an exploratory cross-sectional study. *Int J Environ Res Public Health.* 2021 Jun;18(13):6895. [PubMed] [Google Scholar]
6. Rowan SP, Lilly CL, Shapiro RE, Kidd KM, Elmo RM, Altobello RA, Vallejo MC. Knowledge and attitudes of health care providers toward transgender patients within a rural tertiary care center. *Transgend Health.* 2019;4(1):24-34. [PubMed] [Google Scholar]
7. Arthur S, Jamieson A, Cross H, Nambiar K, Llewellyn CD. Medical students' awareness of health issues, attitudes, and confidence about caring for lesbian, gay, bisexual and transgender patients: a cross-sectional survey. *BMC Med Educ.* 2021;21(1):56. [PubMed] [Google Scholar]
8. Morris M, Cooper RL, Ramesh A, Tabatabai M, Arcury TA, Shinn M, Im W, Juarez P, Matthews-Juarez P. Training to reduce LGBTQ-related bias among medical, nursing, and dental students and providers: a systematic review. *BMC Med Educ.* 2019;19(1):325. [PubMed]
9. Dubin SN, Nolan IT, Streed Jr CG, Greene RE, Radix AE, Morrison SD. Transgender health care: improving medical students' and residents' training and awareness. *Adv Med Educ Pract.* 2018 May;9:377-91. [PubMed] [Google Scholar]
10. White Hughto JM, Reisner SL, Pachankis JE. Transgender stigma and health: a critical review of stigma determinants, mechanisms, and interventions. *Soc Sci Med.* 2015 Dec;147:222-31. [PubMed] [Google Scholar]
11. Dart AM, Du XJ, Kingwell BA. Gender, sex hormones

- and autonomic nervous control of the cardiovascular system. *Cardiovasc Res.* 2002 Feb;53(3):678-87. [PubMed] [Google Scholar]
12. Andréen L, Nyberg S, Turkmen S, van Wingen G, Fernández G, Bäckström T. Sex steroid induced negative mood may be explained by the paradoxical effect mediated by GABAA modulators. *Psychoneuroendocrinology.* 2009 Sep;34(8):1121-32. [PubMed] [Google Scholar]
  13. Becker JB. Gender differences in dopaminergic function in striatum and nucleus accumbens. *Pharmacol Biochem Behav.* 1999 Dec;64(4):803-12. [PubMed] [Google Scholar]
  14. Defreyne J, Van de Bruaene LD, Rietzschel E, Van Schuylenbergh J, T'Sjoen GG. Effects of gender-affirming hormones on lipid, metabolic, and cardiac surrogate blood markers in transgender persons. *Clin Chem.* 2019 Jan;65(1):119-34. [PubMed] [Google Scholar]
  15. Nokoff NJ, Scarbro SL, Moreau KL, Zeitler P, Nadeau KJ, Juarez-Colunga E, Kelsey MM. Body composition and markers of cardiometabolic health in transgender youth compared with cisgender youth. *J Clin Endocrinol Metab.* 2020 Mar;105(3):e704-14. [PubMed] [Google Scholar]
  16. Snelgrove JW, Jasudavicius AM, Rowe BW, Head EM, Bauer GR. "Completely out-at-sea" with "two-gender medicine": a qualitative analysis of physician-side barriers to providing healthcare for transgender patients. *BMC Health Serv Res.* 2012;12:110. [PubMed] [Google Scholar]
  17. Ziegler E, Carroll B, Charnish E. Review and analysis of international transgender adult primary care guidelines. *Transgender Health.* 2021 Jun;6(3):139-47. [PubMed] [Google Scholar]