Perceptions And Preparedness: A Study On Lgbt Patient Care Among Medical And Allied Healthcare Students And Practitioners In India Using LGBT-DOCSS



Badri Vishal1*, Prof. (Dr.) Deepak Raghav2, Prof. (Dr.) Amit Dwivedi3

^{1*}PhD Scholar, Department of Orthopedics (Physiotherapy), Santosh Deemed to be University, Ghaziabad

²Guide, Professor, Principal, Department of Physiotherapy (Orthopedics), Santosh Medical College, Santosh Deemed to be University Ghaziabad

³Co-Guide, HOD, Dept. of Orthopedics Santosh Hospital, Ghaziabad

ABSTRACT

Introduction: LGBTQ+ individuals often have unique healthcare needs, but they also face significant barriers that make it harder for them to access the care and support they deserve. They continue to face challenges when accessing healthcare, particularly in countries like India, where social stigma and lack of adequate training among healthcare providers contribute to unequal care. [1] There is a lack of comprehensive education on LGBTQ+ healthcare, and students' understanding of these issues is not well-documented. This study explored the knowledge and attitudes toward LGBTQ+ healthcare among medical, allied health students, and practitioners in India.

Methods: This study used an online self-report survey to collect information on participants' personal and academic backgrounds, as well as their experiences with LGBT-related education during their medical and allied health studies and clinical practice. The total scores from the LGBT-DOCSS, along with the individual scores for the three subscales—clinical preparedness, knowledge, and attitudes—were analysed and compared against international standards.

Results: The sample comprised of 200 respondents, all of the respondents reported a lack of LGBT community-related courses during their studies and clinical practice. The total score on the LGBT-DOCSS was 4.291 ± 0.717 out of 7, indicating a relatively low level of clinical competence. The highest mean score was in the attitude subscale (4.842 ± 1.059) , which was significantly higher than the scores for the knowledge subscale (4.323 ± 1.419) and the clinical preparedness subscale (3.722 ± 1.349) . Men reported higher levels of knowledge and clinical preparedness, but also showed more negative attitudes compared to women. On comparison with the scores of other countries like Israel, USA and Canada, India was lagging behind significantly in LGBT healthcare training due to Attitude of the people which was significantly lower when compared to other countries leading to such a significant difference in study.

Conclusion: The participants reported low levels of clinical competency, especially in self-reported knowledge and clinical preparedness, but generally had positive attitudes toward the LGBT community. This highlights a crucial need for LGBT-inclusive education in medical and allied healthcare programs in India. The low levels of preparedness among students and clinicians stress the importance of incorporating LGBT-focused training to ensure healthcare providers are better equipped to offer inclusive and culturally competent care. Future studies should assess the long-term impact of such training on patient outcomes and healthcare delivery.

Keywords: LGBTQ+, Medical Education, Curriculum, Attitudes, Clinical Competence

INTRODUCTION:

In recent years, there has been an increasing recognition of the importance of providing healthcare that genuinely addresses the needs of marginalized communities, including the lesbian, gay, bisexual, transgender, and queer (LGBTQ+) population. Studies from around the world have shown that LGBTQ+ individuals often face major hurdles in accessing healthcare, whether it's discrimination from healthcare providers, a lack of understanding about their unique health needs, or simply being made to feel uncomfortable or unwelcome [2]. In India, where LGBTQ+ people have faced a long history of legal and social discrimination, these challenges are even more pronounced [3].

The decriminalization of homosexuality in India in 2018 was a landmark moment for the LGBTQ+community. The Indian Supreme Court's ruling, which struck down Section 377 of the Indian Penal Code, was a major step forward for equality [4]. But even after this legal victory, many LGBTQ+individuals still struggle to find acceptance in everyday life — and healthcare is no exception. [3]. So, it's really important to make sure healthcare providers are culturally competent when caring for people who identify as lesbian, gay, bisexual, transgender, queer, or belong to other sexual and gender diverse communities (LGBTQ+). [5].

Clinical competence refers to the knowledge, skills, and abilities required to provide safe and effective healthcare services. [6]. Healthcare professionals

should incorporate cultural knowledge, awareness, and skills into their practice, ensuring they respect the diverse needs and values of their patients [7] [8]. Medical students are the future of healthcare, yet many lack the knowledge, skills, and confidence needed to treat LGBTQ+ patients with respect and understanding. Studies have shown that LGBTQ+ topics are often not covered in depth in medical curricula, leaving students unprepared to meet the needs of this community [9]. As a result, many healthcare students report feeling uncomfortable or uncertain when it comes to providing care to LGBTQ+ patients, which can lead to poor health outcomes for these individuals [3] [9].

There's no clear agreement in the research about how healthcare professionals feel or behave toward sexual minorities. While some studies show that healthcare workers have positive and accepting attitudes toward LGBTI individuals, others suggest a mix of responses, ranging from supportive to uncomfortable. [10] [11] However, most studies indicate that healthcare professionals—such as physicians [12], nurses [12], dentists, mental health professionals [11] [12], athletic trainers [13], and social workers [12] —often exhibit varying degrees of sexual prejudice, negative attitudes, and biased care toward sexual minority patients.

This paper aims to explore how well healthcare students and clinicians in India are prepared to care for LGBTQ+ patients. By looking at their knowledge, attitudes, and readiness to provide LGBTQ+inclusive care, we will examine the gaps in their education and the factors that influence their competence. The central argument of this paper is that, despite growing awareness about LGBTQ+rights in India, healthcare students and clinicians are not sufficiently prepared to offer culturally competent care to LGBTQ+ patients. This is largely due to gaps in medical training, societal stigma, and broader cultural influences.

The aim of this study is to evaluate how prepared medical and allied healthcare students and clinicians in India are to provide inclusive care for LGBT individuals. Using the LGBT-DOCSS (LGBT Doctoral Competency Self-Assessment Scale), this research aims to evaluate students and clinicians' knowledge, attitudes, and comfort in delivering care to LGBT patients and to explore how previous exposure to LGBT-related training influences these competencies.

Literature Review

LGBT Healthcare Disparities and Barriers to Care LGBT individuals experience a range of health challenges, including higher rates of mental health

challenges, including higher rates of mental health issues, substance abuse, and HIV/AIDS. They also often face significant barriers in accessing healthcare

that is competent and sensitive to their unique needs [14]. Discrimination within healthcare systems is a well-documented issue, with LGBT patients often experiencing stigmatization, neglect, and refusal of care [15]. Research from Western countries has shown that many healthcare professionals don't have the right knowledge or training to meet the health needs of LGBT individuals. This can create awkward or uncomfortable interactions and, in some cases, even lead to unintentional harm [2]. These findings are mirrored in India, where the stigma surrounding sexual and gender minorities is compounded by conservative cultural norms, making it difficult for LGBT individuals to access appropriate healthcare [16].

Preparedness of Healthcare Providers in LGBT Care

A lot of research around the world has focused on how prepared healthcare providers are to give good care to LGBT patients, with the goal of making sure they have the knowledge and skills to meet their specific needs. A study by Srinivasan, Goldhammer, Charlton, McKenney, and Keuroghlian (2024) looked at healthcare students' knowledge and attitudes toward LGBT health. The study found that while many students were committed to providing inclusive care, they felt unprepared to do so effectively. [17]. Similarly, a 2023 study by Yu, Flores, Bonett, and Bauermeister found that healthcare professionals reported having limited training in LGBT-specific healthcare needs, which led to lower comfort levels when treating LGBT patients [18]. In India, few studies have explored the preparedness of medical students regarding LGBT health, though available research suggests a need for improved training [9]. One of the key findings across international studies is that healthcare providers' comfort levels and attitudes toward LGBT patients can be significantly improved through formal education and exposure to LGBT health issues during training [17].

LGBT Training in Medical Curricula

Medical education has long neglected LGBT health, with very few programs covering the specific healthcare needs of LGBT individuals. A review by Sekoni, Gale, Manga-Atangana, Bhadhuri, and Jolly (2017) found that while some medical schools have started teaching LGBT health topics, many still don't do enough to prepare students for the real-life challenges of caring for LGBT individuals. [20]. In India, there is an emerging but insufficient focus on LGBT health education in medical and allied health programs [9]. While some institutions have begun to integrate LGBT health training into their curricula, this is not widespread, and much of the content is often minimal or not standardized across

institutions. As a result, many students graduate without the knowledge or confidence needed to effectively care for LGBT patients [18]

Research Gaps and the Need for This Study

While international literature has explored the relationship between LGBT-inclusive education and healthcare providers' preparedness, there remains a notable lack of research in the Indian context, particularly regarding the preparedness of medical and allied healthcare students. Existing studies suggest that exposure to LGBT-related coursework can improve students' competence in providing care, but Indian research on this topic is sparse [19]. Furthermore, the use of structured assessment tools like the LGBT-DOCSS in evaluating student preparedness is rare in India, highlighting a critical gap in both research and practice. This study aims to fill these gaps by looking at how well medical and allied healthcare students in India are prepared to provide inclusive care for LGBT patients. It will focus on how their exposure to LGBT-related training affects their understanding, comfort, and attitudes toward caring for LGBT individuals.

Methodology:

1. Study Design

Cross-sectional design, This approach will help us gather a snapshot of how ready and knowledgeable participants are regarding LGBT healthcare issues.

2. Participants

Two main groups of participants were taken in this study:

- a. **Healthcare Students**: PhD Scholars, PG and Final Year and Interns from Medical and allied health courses (like MBBS, Nursing, Physiotherapy students) from different institutions across India.
- b. **Clinicians**: Healthcare professionals (such as doctors, nurses, and physiotherapists) who are currently working in India.

3. Inclusion Criteria:

- a. **Healthcare students** enrolled in recognized medical or allied health programs in recognised colleges and universities.
- b. **Clinicians** with at least one year of experience in the field.

4. Exclusion Criteria:

a. Participants who have **never had exposure to LGBT-related training** will be excluded from the study.

5. Sampling Method

Convenience sampling method was used. This allowed us to include a diverse range of participants,

though it doesn't necessarily represent the full population of healthcare workers and students.

6. Data Collection Tool

LGBT-DOCSS (Lesbian, Gay, Bisexual, and Transgender Diversity and Competency Self-Assessment Scale).

The LGBT-DOCSS is a self-assessment tool designed to measure healthcare providers' clinical competence when working with LGBT patients. It includes 18 statements, each rated on a 7-point Likert scale (1 = strongly disagree, 4 = somewhat agree/disagree, 7 = strongly agree). Among these, eight items are reverse scored. The scale is divided into three subscales:

- **a. Clinical Preparedness** (e.g., "I have received adequate clinical training and supervision to work with transgender clients/patients")
- **b. Knowledge** (e.g., "I am aware of research indicating that LGB individuals are more likely to be diagnosed with mental illnesses than heterosexual individuals")
- **c. Attitudes** (reverse scored items, such as "The lifestyle of an LGB individual is unnatural or immoral")

In addition to the LGBT-DOCSS, we collected some demographic information through a short questionnaire.

7. Data Collection Procedure

Participants completed the LGBT-DOCSS either **online or in person**, depending on their preference. Before starting, they'll be asked to give **informed consent**, ensuring they understand their participation is voluntary and that their responses will be kept confidential and anonymous.

8. Data Analysis

For the quantitative data:

a. To calculate the total score on the LGBT-DOCSS, the averages of all the items are taken, which is referred to as the total score. Additionally, individual subscale scores are derived by averaging specific sets of items. The clinical preparedness subscale is based on seven items, the attitudes subscale (which is reverse scored) includes seven items, and the knowledge subscale consists of four items. Higher scores on each subscale reflect a higher level of clinical preparedness, greater knowledge, and more positive attitudes toward LGBT patients, indicating that the healthcare provider is better equipped to deliver inclusive and culturally competent care [20]. Based on a previous study that didn't set specific benchmarks for competency levels, the scores were divided into three groups: scores of 6 or higher were considered "high" competency, scores between 5 and 6 were classified as "moderate" competency, and scores below 5 were labeled "low"

competency. This approach helps to clearly identify how well healthcare providers are equipped in terms of knowledge, preparedness, and attitudes when it comes to delivering care to LGBT patients, highlighting areas that may need further attention or improvement [21].

b. To explore any differences between LGBT-DOCSS results of other countries, **inferential statistics** was used including One tailed t-tests. The analysis was done using Microsoft Excel for organizing the data and R Project for Statistical Computing to run the statistical tests.

RESULTS:

The system's records indicate that there were 218 logins to the survey, with 201 participants successfully completing the questionnaire. This resulted in a final sample of 201 healthcare students and clinicians from various educational institutions

and states across India. The sample size met the criteria outlined by the COSMIN (Consensus-based Standards for the Selection of Health Measurement Instruments) guidelines, which recommend including at least 100 participants for studies focused on developing patient-reported outcome measures. On average, participants took around 15 minutes to complete the questionnaire. [22]. The background characteristics of the students are detailed in *Table 1*. The sample included students from all levels of training, i.e., years one through four, with 61.7% of the students being 4th-year UG students, 30.3% were from Masters/PG students and rest were PhD Scholars/PhD awarded professionals. All students and professionals (100%) reported that they had not received any courses related to the LGBTQ+ community during their undergraduate studies.

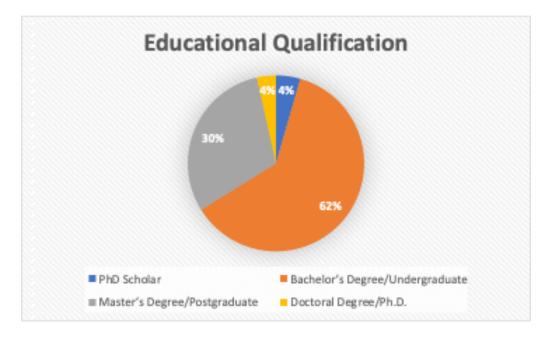
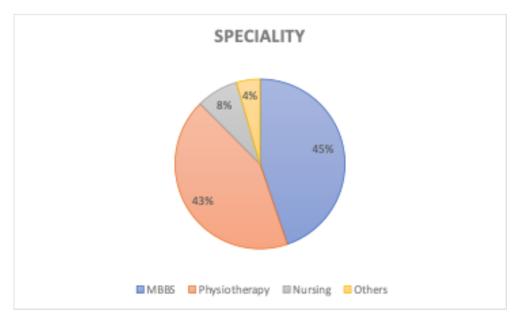


Table 1: Participants' background characteristics (N = 201)

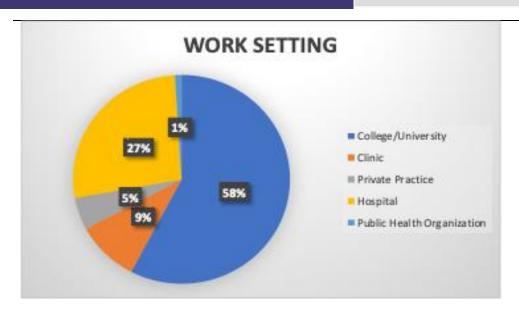
1. Educational Qualification	N	%
PhD Scholar	9	4.5
Bachelor's Degree/Undergraduate	124	61.7
Master's Degree/Postgraduate	61	30.3
Doctoral Degree/Ph.D.	7	3.5



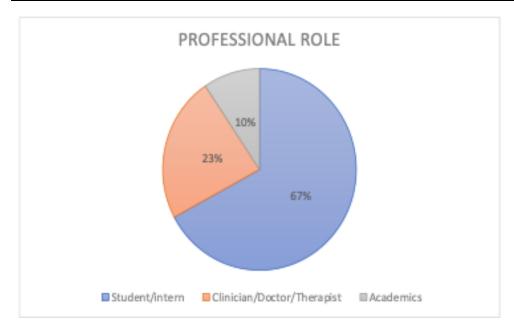
2. Experience	N	%
1 year	53	26.4
1-3 years	83	41.3
4-6 years	31	15.4
7-10 years	9	4.5
10 Years+	25	12.4



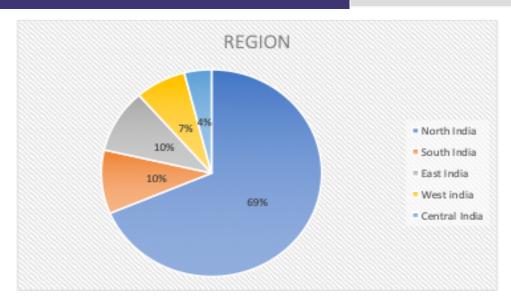
3. SPECIALITY	N	%
MBBS	90	44.8
Physiotherapy	86	42.8
Nursing	16	8.0
Others	9	4.5



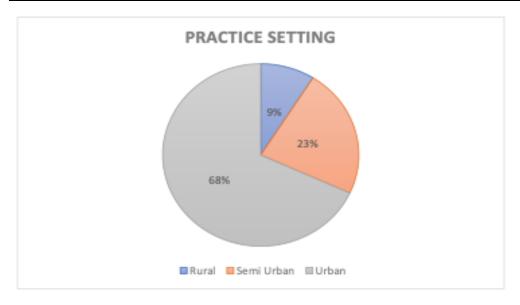
4. Work Setting	N	%
College/University	116	57.7
Clinic	19	9.5
Private Practice	10	5.0
Hospital	54	26.9
Public Health Organization	2	1.0



5. Professional Role	N	%
Student/intern	135	67.2
Clinician/Doctor/Therapist	47	23.4
Academics	19	9.5



6. Region	N	%
North India	138	68.7
South India	20	10.0
East India	20	10.0
West India	15	7.5
Central India	8	4.0



7. Practice Setting	N	%
Rural	18	9.0
Semi Urban	46	22.9
Urban	137	68.2

8. Pervious education on LGBTQ + issues,	N	%
Yes	0	0
No	201	100

LGBT clinical competency: The average total score on the **LGBT-DOCSS** was 4.29 ± 0.72 , indicating a relatively low level of overall competency. The **Attitudes Subscale** had the highest mean score (4.84 ± 1.06) , significantly higher than both the **Knowledge Subscale** (4.32 ± 1.42) and the **Clinical**

Preparedness Subscale (3.72 \pm 1.35). For further details, see *Table 2*. These findings highlight that while students and professionals generally had positive attitudes toward the LGBT community, their understanding and readiness to provide competent care were notably insufficient.

Table 2: Results of the LGBT-DOCSS (Mean, Standard Deviation; N = 201)

Clinical Preparedness	Mean + SD	Attitude Subscale	Mean + SD	Knowledge Subscale	Mean SD	+
I would feel unprepared talking with an LGBT client/patient about issues related to their sexual orientation and/or gender identity.*	4.86 + 1.96	I think being transgender is a mental disorder.*	5.68 + 1.86	I am aware of institutional barriers that may inhibit transgender people from using healthcare services.	4.28 1.84	+
I have received adequate clinical training and supervision to work with transgender clients/patients.	3.34 + 1.99	A same sex relationship between 2 men or 2 women is not as strong and committed as one between a man and a woman.*	4.78 + 1.90	I am aware of institutional barriers that may inhibit LGB people from using healthcare services.	4.19 1.80	+
I have received adequate clinical training and supervision to work with lesbian, gay, and bisexual (LGB) clients/patients.	3.35 + 1.99	LGB individuals must be discreet about their sexual orientation around children.*	4.46 + 1.80	I am aware of research indicating that LGB individuals experience disproportionate levels of health and mental health problems compared to heterosexual individuals.	4.43 1.72	+
I have experience working with LGB clients/patients.	3.05 + 2.03	When it comes to transgender individuals, I believe they are morally deviant.*	3.32 + 1.89	I am aware of research indicating that transgender individual experience disproportionate levels of health and mental problems compared to cisgender individuals.	4.39 1.72	+
I feel competent to assess a person who is LGB in a therapeutic setting.	4.25 + 1.97	The lifestyle of an LGB individual is unnatural or immoral.*	5.31 + 1.87			
I have experience working with transgender clients/patients.	3.05 + 1.97	People who dress opposite to their biological sex have a perversion.*	4.94 + 1.75			
I feel competent to assess a person who is Transgender in a therapeutic setting.	4.15 + 1.93	I would be morally uncomfortable working with an LGBT client/patient.*	5.50 + 1.75			
TOTAL	3.72 + 1.35		4.84 + 1.06		4.32 1.42	+
LGBT-DOCSS SCORE	4.29 + 0.7	2				

^{&#}x27;*' - reverse scored

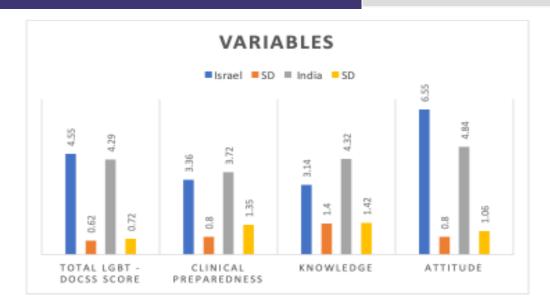
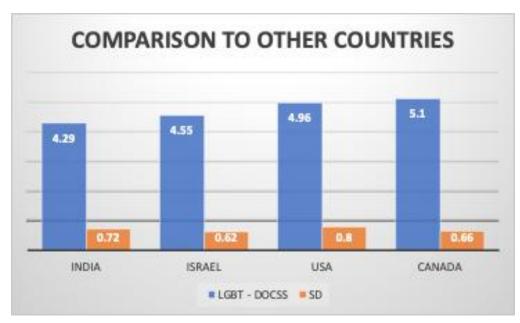


TABLE 3: Comparison of LGBT-DOCSS and Subscales with Scores from a Similar Study Conducted in Israel

VARIABLE (Mean + SD)	Israel	India	F(df), p value
Total LGBT - DOCSS Score	4.55 + 0.61	4.29 + 0.72	F(200)=26.17, p<0.0001
Clinical Preparedness	3.36 ± 0.8	3.72 + 1.35	F(200)=14.47, p<0.0001
Knowledge	3.14 ± 1.4	4.32 + 1.42	F(200)=139.70, p=0
Attitude	6.55 ± 0.8	4.84 + 1.06	F(200)=523.45, p=0



DISCUSSION:

The overall total score on the **LGBT-DOCSS** was **4.29 ± 0.72**, indicating a relatively low level of competence and underscoring a significant opportunity for improvement—especially in knowledge and clinical preparedness.

The **Attitudes Subscale** had the highest score of 4.84 ± 1.06 , which means that most people have a positive attitude toward the LGBT community. However, the scores for **Knowledge** (4.32 ± 1.42) and **Clinical Preparedness** (3.72 ± 1.35) were

lower. This shows that while people are supportive, they don't always feel confident or prepared when it comes to actually caring for LGBT individuals in a healthcare setting. Having a positive attitude is important, but feeling truly prepared to help when it counts is a whole different matter [23]. Previous studies [23] [24] [25] have examined clinical competency in working with LGBT individuals among healthcare students, employing the same LGBT-DOCSS tool used in this study. These studies have helped to highlight key gaps in training and

preparedness, shedding light on the challenges healthcare professionals face when delivering care to LGBT patients.. Elboim-Gabyzon & Klein (2024) assessed the clinical competence of physiotherapy students in Israel regarding care for lesbian, gay, bisexual, and transgender individuals. Their study included a sample of 251 physical therapy students [23] and found that physiotherapy students in Israel reported low levels of clinical competency in areas such as self-reported knowledge and clinical preparedness, despite holding positive attitudes toward the LGBT community. This finding mirrors the results of our study, where students showed a similar lack of clinical skills in providing care for LGBT patients. In their study, the average LGBT-DOCSS score was 4.55 ± 0.61 out of 7, while in our study, it was 4.29 ± 0.72 out of 7. Both scores are considerably lower than international benchmarks, pointing to a significant gap in competency levels compared to what is expected globally for healthcare providers working with LGBT patients. Nowaskie et al. [24] also evaluated clinical competence related to LGBT issues among students in various healthcare disciplines across the USA, with a large sample of 1,701 healthcare professional students. The findings from this study are similar to those of our own, revealing that students showed a low level of preparedness. In their study, the LGBT-DOCSS scores averaged 4.96 ± 0.8, which, although higher than our study's average of 4.29 ± 0.72, still indicates a significant gap in clinical competence. This comparison highlights a shared challenge in training healthcare students to be adequately prepared to address the specific needs of LGBT patients, underscoring the need for more focused education and resources in this area. Primeau et al. [25] n their study, a moderate level of competency was found among 15 physical therapy students (PTS) in Canada, with a total LGBT-DOCSS score of 5.10 ± 0.66 out of 7. This score reflects a higher level of preparedness than what we observed in our study, where the average score was 4.29 ± 0.72. While this indicates some progress in Canadian healthcare education, it also underscores that, even with moderate competency, there is still a long way to go in adequately preparing healthcare professionals to meet the needs of LGBT patients. The variation in scores between our study and others highlights the ongoing need for more comprehensive LGBTinclusive training across different regions.

When healthcare providers are not properly trained, it can lead to unfair treatment and make it harder for LGBT people to get the care they need. This creates bigger health problems and causes mistrust. It's important to close these gaps so that everyone, regardless of their identity, gets the care they deserve [26] [27]. Ross and Setchell [28] have reported that LGBTQ patients may experience

discomfort or even discrimination when receiving treatment from physiotherapists due to a lack of understanding of their specific health needs. This lack of knowledge can create negative experiences, where biases and stereotypes come into play, leading to a less supportive and sometimes harmful healthcare environment for LGBTQ individuals. These issues highlight the importance of proper training to ensure that all patients feel safe, respected, and understood.

The knowledge score of 4.32 ± 1.42 shows that while there is some understanding of LGBT-related issues, it's not enough to offer fully competent care. Professionals who lack enough knowledge may unintentionally create barriers or fail to support LGBT patients in the way they need. In this study, all the participants (100%) reported that they had not received any courses related to the LGBTQ+ community during their undergraduate studies. This finding reflects the concerns raised in the position paper by Copti et al in 2016., emphasizing the lack of LGBTQ+ focused education in healthcare programs [29] and Primeau et al. [30] in 2022, highlighted the need to improve physiotherapists' understanding of the LGBTQ+ community to help them provide better care. It stressed that focusing on three areasknowledge, skills, and attitudes—is key to building the competence needed to treat LGBTQ+ patients with respect and sensitivity [31].

The clinical preparedness score of 3.72 ± 1.35 is even more concerning. It indicates that, despite positive attitudes and some knowledge, there's a big gap when it comes to feeling ready to apply that knowledge in real-life healthcare situations. This means that even if someone understands LGBT issues, they might not know how to translate that understanding into action or support during patient care. Janssen and Scheepers [32] reported that people who believe their religion is the only true one are often more involved in their religious communities and follow traditional gender roles. As a result, they tend to have more negative views toward homosexuality. This connection between religious beliefs and negative attitudes towards LGBT individuals is also seen among healthcare professionals, making them feel uncomfortable when treating LGBT patients. [33] [34] [25] [35].

CONCLUSION:

To conclude, we can say while it is great to see positive attitudes toward the LGBT community, there is a real need for better training in knowledge and clinical skills to help healthcare professionals offer more inclusive and effective care. It is important that healthcare professionals aren't just supportive but also truly prepared with the knowledge and skills to offer the best care to LGBT patients. The LGBT-DOCSS provides an effective way to assess and

improve healthcare providers' competence, but its use in India is still in its early stages. Bridging these gaps through more inclusive and culturally sensitive medical curricula is crucial to improving the healthcare experiences of LGBTQ+ individuals in India.

This study highlights the importance of including more education about LGBT issues in healthcare training and making sure professionals are ready to apply that knowledge in practice. Ongoing training and development are crucial for helping healthcare providers stay current and feel confident in their ability to support LGBT individuals in a clinical setting. Further research could look into how we can improve training to close the gap between good intentions and practical skills.

Bibliography

- H. C. Karpel, A. Sampson, M. Charifson, L. A. Fein, D. Murphy, M. Sutter, C. L. Tamargo, G. P. Quinn and M. B. Schabath, "Assessing Medical Students' Attitudes and Knowledge Regarding LGBTQ Health Needs Across the United States," *Journal of Primary Care & Community Health*, vol. 14, pp. 1-13, 2023. [2]
- S. L. Budge, J. L. Adelson and K. A. S. Howard, "Anxiety and depression in transgender individuals: The roles of transition status, loss, social support, and coping.," *Journal of Consulting* and Clinical Psychology, vol. III, no. 81, p. 545– 557., 2013. [3]
- 3. L. Arora, P. M. Bhujang and M. Sivakami, "Understanding discrimination against LGBTQIA+ patients in Indian hospitals using a human rights perspective: an exploratory qualitative study," *Sexual and Reproductive Health Matters*, vol. 29, no. 2, pp. 1-17, 2022.
- 4. Indian Penal Code, 2018.
- 5. R. Klein and M. Elboim-Gabyzon, "Attitudes of registered physiotherapists in Israel toward people identifying as lesbian, gay, and bisexual: a cross-sectional survey," *BMC Medical Education*, vol. 21, no. 1, p. 581, 2021.
- S. Peterson, M. Shepherd, J. Farrell and D. I. Rhon, "The Blind Men, the Elephant, and the Continuing Education Course: Why Higher Standards Are Needed in Physical Therapist Professional Development," Journal of Orthopaedic & Sports Physical Therapy, vol. X, no. 52, pp. 642-646, July 2022
- 7. T. Dickson, T. Wilkinson, E. J. Hegedus and A. S. Gisselman, "Transforming the Patient Experience: Moving Beyond Cultural Competence to Cultural Safety," *Physical Therapy*, vol. 102, no. 6, June 2022.
- 8. D. J. Bolding, V. Rodriquez, H. Nguyen and L. A. Drabble, "Survey of Occupational Therapy Students' Attitudes, Knowledge and Preparedness

- for Treating LGBT Clients," *Journal of Occupational Therapy Education*, vol. 4, no. 2, 2020.
- 9. Agarwal and A. Thiyam, "Healthcare, culture & curriculum: addressing the need for LGBT+ inclusive medical education in India," *The Lancet RegionalHealth Southeast Asia*, vol. 8, pp. 1-3, 2022.
- 10.S. Dinkel, B. Patzel, M. J. McGuire, E. Rolfs and K. Purcell, "Measures of homophobia among nursing students and faculty: a Midwestern perspective," *International Journal of Nursing Education Scholarship*, 2007.
- 11.D. B. Kissinger, S. M. Lee, L. Twitty and H. Kisner, "Impact of Family Environment on Future Mental Health Professionals' Attitudes Toward Lesbians and Gay Men," *Journal of Homosexuality*, pp. 894-920, 2009.
- 12. J. A. Sabin, R. G. Riskind and B. A. Nosek, "Health Care Providers' Implicit and Explicit Attitudes Toward Lesbian Women and Gay Men," *American Journal of Public Health*, vol. 105, no. 9, pp. 1831-1841, September 2015.
- 13. K. A. Ensign, A. Yiamouyiannis, K. M. White and B. D. Ridpath, "Athletic Trainers' Attitudes Toward Lesbian, Gay, and Bisexual National Collegiate Athletic Association Student-Athletes," *Journal of Athletic Training*, vol. 46, no. 1, 2011.
- 14. H. Meyer, "Prejudice, Social Stress, and Mental Health in Lesbian, Gay, and Bisexual Populations: Conceptual Issues and Research Evidence," *Psychological Bulletin*, vol. 129, no. 5, p. 674–697., September 2003.
- 15. C. H. B. Ayhan, H. Bilgin, O. T. Uluman, O. Sukut, S. Yilmaz and a. S. Buzlu, "A Systematic Review of the Discrimination Against Sexual and Gender Minority in Health Care Settings," *International Journal of Health Services*, vol. 50, no. 1, pp. 44-61, 2020.
- 16.T. K. Ahuja, A. D. Goel, M. K. Gupta, N. Joshi, A. Choudhary, S. Suman, K. Taluja, M. Mittal, N. K. Ghuman and N. S. a. P. Bhardwaj, "Health care needs and barriers to care among the transgender population: a study from western Rajasthan," BMC Health Services Research, vol. 24, 2024.
- 17.B. A. Caceres, J. Travers, J. E. Primiano, R. E. Luscombe and C. Dorsen, "Provider and LGBT Individuals' Perspectives on LGBT Issues in Long-Term Care: A Systematic Review," *Gerontologist*, vol. 60, no. 3, pp. 169-183, February 2019.
- 18. Crowe, P. Hogan, C. Morrison, C. Meads and D. Bailey, "Towards inclusive healthcare: evaluating knowledge, confidence and awareness of LGBTQ + health among Internal Medicine Trainees in London," BMC Medical Education, 2024.
- 19. M. S. Minturn, E. I. Martinez, T. Le, N. Nokoff, C. E. L. Louis Fitch and R. S. Lee, "Early Intervention for LGBTQ Health: A 10-Hour Curriculum for

- Preclinical Health Professions Students," *The AAMC Journal of Teaching and Learning Resources*, vol. 17, pp. 1-9, 2021.
- 20.M. P. Bidell, "The Lesbian, Gay, Bisexual, and Transgender Development of Clinical Skills Scale (LGBT-DOCSS): Establishing a New Interdisciplinary Self-Assessment for Health Providers," *JOURNAL OF HOMOSEXUALITY*, vol. 64, no. 10, pp. 1432-1460, 2017.
- 21. D. Z. Nowaskie and A. U. Patel, "How much is needed? Patient exposure and curricular education on medical students' LGBT cultural competency," *BMC Medical Education*, vol. 20, 2020.
- 22. L. B. Mokkink, C. A. C. Prinsen, L. M. Bouter, H. C. W. d. Vet and C. B. Terwee, "The Consensus-based Standards for the selection of health Measurement Instruments (COSMIN) and how to select an outcome measurement instrument," *Brazilian Journal of Physical Therapy*, vol. 20, no. 2, pp. 105-113, 2016.
- 23.M. Elboim-Gabyzon and R. Klein, "Lesbian, gay, bisexual, and transgender clinical competence of physiotherapy students in Israel," *BMC Medical Education*, vol. 24, 2024.
- 24. D. Z. Nowaskie, A. U. Patel and R. C. Fang, "A multicenter, multidisciplinary evaluation of 1701 healthcare professional students' LGBT cultural competency: Comparisons between dental, medical, occupational therapy, pharmacy, physical therapy, physician assistant, and social work students," *PLOS ONE*, vol. 15, no. 8, 2020.
- 25. C. A. Primeau, H. T. Philpott, K. Vader, J. Unger, C. Y. Le, T. B. Birmingham and J. C. MacDermid, "Students' attitudes, beliefs and perceptions surrounding 2SLGBTQIA + health education and inclusiveness in Canadian physiotherapy programs," *BMC Public Health*, vol. 23, p. 1661, 2023.
- 26. L. Zeeman, N. Sherriff, K. Browne, N. McGlynn, M. Mirandola, L. Gios, R. Davis, J. Sanchez-Lambert, S. Aujean, N. Pinto, F. Farinella, V. Donisi, M. Niedz'wiedzka-Stadnik and M. Rosinska, "A review of lesbian, gay, bisexual, trans and intersex (LGBTI) health and healthcare inequalities," *European Journal of Public Health*, vol. 29, no. 5, pp. 974-980, october 2018.
- 27. Burch, "Health Care Providers' Knowledge, Attitudes, and Self-efficacy for Working With Patients With Spinal Cord Injury Who Have Diverse Sexual Orientations," *Physical Therapy*, vol. 88, no. 2, p. 191–198, February 2008.
- 28. M. H. Ross and J. Setchell, "People who identify as LGBTIQ+ can experience assumptions, discomfort, some discrimination, and a lack of knowledge while attending physiotherapy: a survey," *Journal of Physiotherapy*, vol. 65, no. 2, pp. 99-105, April 2019.

- 29. N. Copti, R. Shahriari, L. Wanek and A. Fitzsimmons, "Lesbian, Gay, Bisexual, and Transgender Inclusion in Physical Therapy: Advocating for Cultural Competency in Physical Therapist Education Across the United States," *Journal of Physical Therapy Education*, vol. 4, no. 30, pp. 11-16, 2016.
- 30. C. A. Primeau, K. Vader, H. T. Philpott and Y. Xiong, "A N eed for Greater Emphasis on 2SLGBTQIA+ Health Among Physiotherapists in Canada," *Physiotherapy Canada*, vol. 74, no. 2, pp. 117-120, 2022.
- 31.R. Pynor, P. Weerakoon and M. K. Jones, "A preliminary investigation of physiotherapy students' attitudes towards issues of sexuality in clinical practice," *Physiotherapy*, vol. 91, no. 1, pp. 42-48, March 2005.
- 32. D.-J. Janssen and P. Scheepers, "How religiosity shapes rejection of homosexuality across the globe," *JOURNAL OF HOMOSEXUALITY*, vol. 66, no. 14, pp. 1974-2001, 2019.
- 33. H. Watson, D. Harrop, E. Walton, A. Young and H. Soltani, "A systematic review of ethnic minority women's experiences of perinatal mental health conditions and services in Europe," *PLoS ONE*, vol. 14, no. 1, 2019.
- 34.M. Ross and J. Setchell, "Physiotherapists' knowledge regarding and experience working with clients who identify as LGBTQIA+," *Journal of Science and Medicine in Sport*, pp. 39-40, 2019.
- 35. Fisher, G. Castellini, J. Ristori, H. Casale, G. Giovanardi, N. Carone, E. Fanni, M. Mosconi, G. Ciocca, E. Jannini, Ricca, Lingiardi and M. Maggi, "Who has the worst attitudes toward sexual minorities? Comparison of transphobia and homophobia levels in gender dysphoric individuals, the general population and health care providers," *Journal of Endocrinological Investigation*, 2017.
- 36. S. Srinivasan, H. Goldhammer, B. M. Charlton, T. McKenney and a. A. S. Keuroghlian, "Addressing Gaps in Access to LGBTQIA + Health Education Resources: A Novel E-Learning Platform," *Journal of Medical Education and Curricular Development*, vol. 11, pp. 1-9, 2024.
 - H. Yu, D. D. Flores, S. Bonett and J. A. Bauermeister, "LGBTQ + cultural competency training for health professionals: a systematic review," *BMC Medical Education*, vol. 23, pp. 1-83, 2023.
- 37.0. Sekoni, N. K. Gale, B. Manga-Atangana, A. Bhadhuri and K. Jolly, "The effects of educational curricula and training on LGBT-specific health issues for healthcare students and professionals: a mixed-method systematic review," *Journal of the International AIDS Society*, vol. 20, 2017.