



Knowledge and Awareness Towards the LGBTQA+ Population among First and Final Year Medical Undergraduates-A Cross-Sectional Comparative Study

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ABSTRACT

Background: The people of the LGBT (lesbian, gay, bisexual and transgender) community are generally recognized as underprivileged in healthcare settings. Adequate Knowledge among doctors is needed to provide better health care. **Objective:** To study awareness and knowledge about the LGBTQA+ population among medical undergraduates. **Materials and Methods:** This Cross-sectional Study was done in the tertiary care hospital that includes first and final Year Undergraduate of both genders. A form containing Sociodemographic data as well as Riddle'sscale: Attitudes towards LGBT people was administered. P-value has been considered significant at a 5% level of significance for all comparisons. **Results:** Out of 298 students, 260 responded to the pre-intervention questionnaire. Based on the output of the study, medical students had a favorable attitude towards the LGBT community and a few lacunae of knowledge of LGBT healthcare needs. Male students had more hesitation in communicating with these patients than their female counterparts. **Conclusions:** It is concluded that the incorporation of lectures about how to care for LGBT in the medical curriculum will further enhance the knowledge of medical students which in turn helps the LGBT community to meet their healthcare needs.

Key Words: *LGBT, Medical Undergraduates, Awareness, Healthcare*



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INTRODUCTION

The Lesbian, Gay, Bisexual, Transgender, Queer, Intersex, Asexual [LGBTQIA+] Population is an umbrella term used for a spectrum of people with various sexualities and orientations. LGBT adolescents are vulnerable to poor health and social outcomes due to marginalization, stigma and normative pressure against sexual and gender minorities. They face many personal and interpersonal challenges that direct them to experience many difficulties in the process of exposing themselves to the public. They are less likely to get support from family and are considered vulnerable. There is also significant difficulty in getting healthcare needs addressed for the LGBTQA+ population[1].

Transgender individuals have problems with stigmatization, financial, and social issues, lack of awareness among healthcare workers to appropriately care for the said population. They also have the highest risk of comorbid substance use disorders[2]. Throughout medical grades from first-year to final-year students, they are noted to have insufficient knowledge about transgender issues[3]. LGBT adolescents experience greater psychological distress, poor body image, anxiety, depression, and eating disorders compared to the general adolescent population[4,5].

They are more prone as a group to encounter human-rights infractions, such as acts of aggression, torture, criminalization, and forced medical procedures. The WHO's "leave no one behind" 2030 strategy has reiterated the importance of comprehending and improving the health and welfare of LGBTQIA+ persons[6]. Suicide rates, homelessness and rejection from family among LGBTQA+ are greater than those general population. In daily life, they face discrimination and harassment from other people.

They are vulnerable to verbal and physical abuse as well. It is also a problem that marginalized people undergo sexual harassment on a daily basis[7].

Gender minorities remains a taboo-topics to discuss in India and it is quite common that even people who are educated to have a bias and disdain towards LGBTQIA+ Community. Their medical needs should be prioritized and treated as well. This study is done to know the awareness of medical students in the LGBTQIA+ community. Budding doctors of this era need to be more open-minded and tolerant and have empathy to treat patients belonging to this community without any prejudice, hence this study was undertaken.

MATERIALS AND METHODS

This was a Cross-sectional Observational Study, conducted from the period of February to March 2023. Ethics committee approval was given by the Ethical Committee of the institution. Medical undergraduates from Sri Devaraj Ur's medical college Kolar who were studying first and final Year have been recruited to be the study population. Participants were given handouts that contained informed consent, sociodemographic details, and Riddle's Scale: Attitudes Towards LGBT People Survey Scoring Guide. Both first and final Year Undergraduates were included in the study. A total of 298 samples were included in the present study. Participants who did not fill out the questions fully were excluded and people who were not willing to participate were excluded as well.

Data Collection and Procedure

Medical students who were in the pre-clinical phase were included after obtaining consent. The study was conducted by investigators going to their classes and handing out the forms individually explaining the study and are encouraged to ask questions if any. Final-year undergraduates who have attended clinical postings were also included and the same format followed. To protect their privacy and to encourage participation in the study, participants were given the option to enter the data anonymously as well. The participants' willingness to complete the survey is taken as consent. Data was collected with confidentiality and was maintained throughout the procedure. 260 participants sample were included in the study, twenty chose not to participate in the study, and eighteen participants did not complete the entire questionnaire. Hence these participants were excluded from the study.

Statistical Analysis

All the data were tabulated in Microsoft Excel and analyzed using SPSS software 20.0 version. Mean, frequencies and percentages were computed for the sociodemographic details. The Chi-square test was used for qualitative data. $P < 0.05$ was considered statistically significant.

RESULTS

Out of 298 medical students were approached and invited to participate, out of which 260 consented to participate and returned the filled questionnaires.

Table 1: Socio-demographic characteristics of study samples

PARAMETERS	NO OF PARTICIPANTS (%) (N=260)
AGE	
<=20 YEARS	100 (38.5%)
21-22 YEARS	77 (29.6%)
>22 YEARS	83 (31.9%)
GENDER	
MALE	109 (41.9%)
FEMALE	151 (58.1%)
RELIGION	
CHRISTIAN	10 (3.8%)
HINDU	232 (89.2%)
JAINISM	4 (1.5%)
MUSLIM	13 (5.0%)

SIKHISM	1 (0.4%)
YEAR	
FINAL	152 (58.5%)
FIRST	108 (41.5%)
DOMICILE	
RURAL	33 (12.7%)
URBAN	227 (87.3%)
FAMILY TYPE	
JOINT	42 (16.2%)
NUCLEAR	218 (83.8%)

Table 1 displays the sociodemographic profile of the study participants. Most of the students were below 20 years of age and females were predominant over males. Most of the study participants belong to the Hindu religion which represents 89.2%. Final-year students were more in number than first-year students and most of them belong to the nuclear family. Many students belonged to urban backgrounds.

Table 2: Participants with respect to homophobia

PARAMETERS	NO OF PARTICIPANTS (%)	
REPULSION	>=4	18 (6.9%)
	<4	242 (93.1%)
PITY	>=4	129 (49.6%)
	<4	131 (50.4%)
TOLERANCE	>=4	132 (50.8%)
	<4	128 (49.2%)
ACCEPTANCE	>=4	119 (45.8%)
	<4	141 (54.2%)
SUPPORT	>=4	133 (51.2%)
	<4	127 (48.8%)
ADMIRATION	>=4	194 (74.6%)
	<4	66 (25.4%)
APPRECIATION	>=4	177 (68.1%)
	<4	83 (31.9%)
NURTURANCE	>=4	163 (62.7%)
	<4	97 (37.3%)
Q1TOQ4	>=4	14 (5.4%)
	<4	246 (94.6%)
Q5TOQ8	>=4	107 (41.2%)
	<4	153 (58.8%)
Q9TOQ12	>=4	170 (65.4%)
	<4	90 (34.6%)
Q13TOQ16	>=4	157 (60.4%)
	<4	103 (39.6%)
TOTAL SCORE	<55	76 (29.2%)
	55-65	157 (60.4%)

	>65	27 (10.4%)
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Table 2 represents participants response to homophobia.

All the parameters assessed have shown positive attitude and impact towards LGBT community in the medical undergraduate students.

Table 3: Association of age, gender, religion, domicile and family type towards LGBTQIA+ persons

PARAMETERS	TOTAL SCORE			P-VALUE
	<55 (N=76)	55-65 (N=157)	>65 (N=27)	
AGE				
<=20 YEARS	32 (42.1%)	58 (36.9%)	10 (37.0%)	0.65
21-22 YEARS	25 (32.9%)	45 (28.7%)	7 (25.9%)	
>22 YEARS	19 (25.0%)	54 (34.4%)	10 (37.0%)	
GENDER				
MALE	42 (55.3%)	59 (37.6%)	8 (29.6%)	0.015*
FEMALE	34 (44.7%)	98 (62.4%)	19 (70.4%)	
RELIGION HINDU				
YES	71 (93.4%)	136 (86.6%)	25 (92.6%)	0.24
NO	5 (6.6%)	21 (13.4%)	2 (7.4%)	
YEAR				
FINAL	39 (51.3%)	96 (61.1%)	17 (63.0%)	0.32
FIRST	37 (48.7%)	61 (38.9%)	10 (37.0%)	
DOMICILE				
RURAL	12 (15.8%)	17 (10.8%)	4 (14.8%)	0.53
URBAN	64 (84.2%)	140 (89.2%)	23 (85.2%)	
FAMILY TYPE				
JOINT	15 (19.7%)	23 (14.6%)	4 (14.8%)	0.60
NUCLEAR	61 (80.3%)	134 (85.4%)	23 (85.2%)	

As mentioned in Table 3 females are dominant over males in communicating and understanding the LGBT community than males which is significant at $p < 0.05$.

Table 4: Association of all the tested parameters with respect to gender and year towards LGBTQIA+ persons

PARAMETER		GENDER		P-VALUE	YEAR		P-VALUE
		MALE (N=109)	FEMALE (N=151)		FINAL (N=152)	FIRST (N=108)	
REPULSION	≥4	9 (8.3%)	9 (6.0%)	0.47	9 (5.9%)	9 (8.3%)	0.45
	<4	100 (91.7%)	142 (94.0%)		143 (94.1%)	99 (91.7%)	
PITY	≥4	45 (41.3%)	84 (55.6%)	0.022	72 (47.4%)	57 (52.8%)	0.39
	<4	64 (58.7%)	67 (44.4%)		80 (52.6%)	51 (47.2%)	
TOLERANCE	≥4	55 (50.5%)	77 (51.0%)	0.93	91 (59.9%)	41 (38.0%)	<0.001*
	<4	54 (49.5%)	74 (49.0%)		61 (40.1%)	67 (62.0%)	
ACCEPTANCE	≥4	55 (50.5%)	64 (42.4%)	0.2	62 (40.8%)	57 (52.8%)	0.056
	<4	54 (49.5%)	87 (57.6%)		90 (59.2%)	51 (47.2%)	
SUPPORT	≥4	49 (45.0%)	84 (55.6%)	0.089	65 (42.8%)	68 (63.0%)	0.001*
	<4	60 (55.0%)	67 (44.4%)		87 (57.2%)	40 (37.0%)	
ADMIRATION	≥4	70 (64.2%)	124 (82.1%)	0.001*	114 (75.0%)	80 (74.1%)	0.87
	<4	39 (35.8%)	27 (17.9%)		38 (25.0%)	28 (25.9%)	
APPRECIATION	≥4	58 (53.2%)	119 (78.8%)	<0.001*	105 (69.1%)	72 (66.7%)	0.68
	<4	51 (46.8%)	32 (21.2%)		47 (30.9%)	36 (33.3%)	
NURTURANCE	≥4	53 (48.6%)	110 (72.8%)	<0.001*	94 (61.8%)	69 (63.9%)	0.74
	<4	56 (51.4%)	41 (27.2%)		58 (38.2%)	39 (36.1%)	
Q1TOQ4	≥4	5 (4.6%)	9 (6.0%)	0.63	10 (6.6%)	4 (3.7%)	0.31
	<4	104 (95.4%)	142 (94.0%)		142 (93.4%)	104 (96.3%)	
Q5TOQ8	≥4	43 (39.4%)	64 (42.4%)	0.64	61 (40.1%)	46 (42.6%)	0.69
	<4	66 (60.6%)	87 (57.6%)		91 (59.9%)	62 (57.4%)	
Q9TOQ12	≥4	61 (56.0%)	109 (72.2%)	0.007*	95 (62.5%)	75 (69.4%)	0.25
	<4	48 (44.0%)	42 (27.8%)		57 (37.5%)	33 (30.6%)	
Q13TOQ16	≥4	46 (42.2%)	111 (73.5%)	<0.001*	94 (61.8%)	63 (58.3%)	0.57
	<4	63 (57.8%)	40 (26.5%)		58 (38.2%)	45 (41.7%)	

Table 4 displays that, appreciation, admiration and nurturance was highly significant among medical students. Tolerance and support were high in final year students than in first year students which is significant at p<0.05.

Table 5: Medical students' response on questionnaire

Questions	Response Score		
	Mean (SD)	≥4	<4
Homosexuality is unnatural and immoral. Transgender individuals are strange and sick.	1.6 (1.1)	20 (7.7%)	240 (92.3%)

GLBT people should participate in reparative therapy or any other treatment available to them to fix their sexual orientation or gender identity disorder.	2.0 (1.2)	25 (9.6%)	235 (90.4%)
We should have compassion for GLBT people. They can't be blamed for how they were born.	4.2 (1.2)	205 (78.8%)	55 (21.2%)
GLBT people did not choose to be the way they are. If they could somehow, they would certainly choose to be heterosexual or identify as a traditional male or female.	3.0 (1.3)	71 (27.3%)	189 (72.7%)
Having same-sex attractions and showing non-gender conforming behaviors is a phase that many people go through and most people outgrow.	3.1 (1.2)	86 (33.1%)	174 (66.9%)
GLBT people need our support and guidance as they wrestle with the many difficult issues associated with being GLBT.	4.2 (1.1)	204 (78.5%)	56 (21.5%)
I have no problem with GLBT people, but see no need for them to flaunt their sexual orientation or transgender identity publicly.	2.9 (1.4)	91 (35.0%)	169 (65.0%)
What GLB people do in the privacy of their own bedroom is their business.	4.3 (1.1)	193 (74.2%)	67 (25.8%)
GLBT people deserve the same rights and privileges as everybody else.	4.5 (1.0)	216 (83.1%)	44 (16.9%)
Homophobia and heterosexism are wrong. Society needs to take a stand against anti-gay bias.	3.2 (1.6)	121 (46.5%)	139 (53.5%)
It takes strength and courage for GLBT people to be themselves in today's world.	4.3 (1.0)	205 (78.8%)	55 (21.2%)
It is important for me to examine my own attitudes so that I can actively support the struggle for equality that GLBT people have undertaken.	4.0 (1.0)	174 (66.9%)	86 (33.1%)
There is great value in our human diversity. GLBT people are an important part of that diversity.	4.1 (1.1)	189 (72.7%)	71 (27.3%)
It is important for me to stand up to those individuals who demonstrate homophobic attitudes.	3.7 (1.2)	142 (54.6%)	118 (45.4%)
GLBT people are an indispensable part of our society. They have contributed much to our world and there is much to be learned from their experiences.	4.1 (1.0)	176 (67.7%)	84 (32.3%)
I would be proud to be part of a GLBT or GLBT-ALLY organization, and to openly advocate for the full and equal inclusion of GLBT people at all levels of our society.	3.9 (1.1)	158 (60.8%)	102 (39.2%)

DISCUSSION

There is a dearth of Indian literature which has systematically investigated issues related to LGBTQIA+ persons. In this study, efforts are made to study the knowledge and attitude of medical students towards the same in an Indian setup. As per the results, medical students have higher knowledge of LGBT community which is in ordinance with the study by Kar A, Mukherjee S et al which was conducted in 2018 in Kolkata[8]. The attitude of students was found to be positive in this study which was contradictory to the study in Chinese university students who had a negative attitude towards LGBT people[9]. Positive attitude in students is due to the acceptance of transgender in our society since the precolonial era, awareness, increasing level of education and tolerance about LGBT right from the increasing use of social media. This was found to be proved by a study in the University of California by Kelly et al[10].

Though there is positive knowledge among medical students, students still feel uncomfortable in communicating with LGBT people which creates a gap to meet the healthcare needs of LGBT people[11]. This discomfort noted in students may be due to a lack of exposure to the LGBT community as proposed by Kelly et al which may be also due to religious and social orthodoxy in modern doctors in India. It is also noted that males are found to be more uncomfortable interacting with LGBT people than females. This rigid attitude in men to maintain male and female conformity and being

threatened by nonconformity is seen in the study performed by Winter in 2008 among undergraduate students in Hong Kong[12].

In the USA to bring awareness to medical students, the government has introduced 2.5 hours for teaching undergraduates in the medical curriculum [13]. Whereas in India there are no publications or formal reports regarding the introduction of teaching hours about the LGBT community in the medical curriculum. Only recently the National Medical Commission has brought out the document to sensitize both undergraduates and postgraduates during their medical training. General physicians all around the globe are of the opinion that education regarding the health of non-heterosexual people is the need for good communication and treatment of LGBT people[14].

Therefore, training medical students on LGBT issues is the best possible way to enhance the knowledge of their needs that contributes to the ultimate goal of improving the health of LGBT adolescents. This will provide a favorable impact on the different dimensions i.e., knowledge, attitude, judgement and experience towards LGBT people[15].

Using clinical vignettes, workshops elicit students' emotional response that is more effective in facilitating change in their attitudes and judgments as well as knowledge. A good patient-clinician alliance is characterized by an empathic and positive therapeutic relationship that improves the quality of care and health outcomes for sexual minorities, training students and practitioners in building communication skills and relationships between the patient and the clinician which is a key strategy[16].

This kind of endeavor will enable future physicians to be sensitive and informed about stigmatization, continued barriers to care and specific risk factors and health conditions facing LGBT adolescents. To assess the knowledge and attitudes toward LGBT adolescents further research is necessary among practicing general practitioners in India. A strong necessity in continuing education for primary care physicians.

CONCLUSION

This study concludes that there is positive knowledge and attitude noted in medical undergraduates. Discomfort with empathizing among medical undergraduates is a major issue that leads to poor communication and treatment of the LGBT community. Hence using medical teaching curriculum to sensitize future healthcare professionals to the needs of LGBT adolescents has the potential to improve healthcare outcomes among vulnerable populations.

LIMITATION

The study limitation was that this was a questionnaire-based study which could have elicited subjective bias. The Questionnaire had good psychometric properties like internal consistency and reliability was found to be satisfactory. The results reflect the attitudes of medical students of a medical teaching institute in India, and so cannot be extrapolated to the larger population of medical students of India.

Source of funding: The authors did not receive any funding for the study.

Conflict of interest: The authors report no conflict of interest.

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