

# Knowledge and attitude of medical students and residents towards LGBT individuals

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## Abstract

**Background:** It has been over two decades since the World Health Organisation has removed homosexuality from its list of mental disorders. However, evidence has shown that discrimination and negative encounters with healthcare workers affect frequency and type of healthcare sought by LGBT (lesbian, gay, bisexual, transgender) members. Attitudes of medical professionals towards LGBT community can influence their willingness to provide these persons with medical help. Studies have shown that Indian medical students have a negative attitude toward LGBT people as they have little knowledge about these people.

**Aim:** To assess the knowledge and attitude of medical students and residents towards LGBT individuals.

**Materials and Methods:** Convenient and non-probable sample of 680 medical students and residents was taken in 4 months via Google Forms, who anonymously completed the survey. The “Survey on California State University, Northridge (CSUN) attitude towards LGBT” was the survey tool. Data was analysed using SPSS for descriptive and analytic calculations.

**Results:** Study was conducted among 680 medical students and residents. The majority percentage of students and residents disagree with the traditional gender roles without any significant gender differences. It was also found that as compared to females, more percentage of males are uncomfortable in interacting with LGBT people. The results show that the participants have better knowledge about LGBT people; however, the change from “neutral” and “agreement” to “disagreement” is not much significant. The students have a positive attitude toward the LGBT people.

**Conclusion:** This study concludes that there is adequate knowledge and positive attitude among medical students and residents towards LGBT individuals.

**Keywords:** Attitude, medical students, knowledge, LGBT community, doctors

## Introduction

Lesbian, bisexual, gay, and transgender people are collectively referred to as LGBT. This group is defined on the basis of gender, sexual orientation, race, and socioeconomic status of the individual. The percentage of this population is estimated to be less than five percent in the Western world as well as the rest of the world <sup>[1]</sup>. Before the 1960s, homosexuality was

considered a mental disorder. There has been a shift in understanding of homosexuality from a pathological model to a normal variant model of sexuality. Homosexuality is no longer considered a mental disorder <sup>[2]</sup>. On September 6, 2018, the Supreme Court of India ended Section 377 from Indian Penal Code (IPC) and decriminalised homosexuality <sup>[3]</sup>. In spite of this move, there remains a significant amount of homophobia among the Indian population.

Hudson and Ricketts defined “Homonegativism” as a multidimensional construct that includes judgment regarding the morality of homosexuality, the decision concerning personal and social relationship, and any response concerning belief, preferences, legality, social desirability, or similar cognitive responses <sup>[4]</sup>. In this world where heterosexuality is the norm, this group faces few challenges due to its minority status, which include the experience of prejudiced events, expectations of rejection, hiding and concealment, and internalized homophobia <sup>[5]</sup>. These stressors lead to mood disorders, anxiety disorders, increased suicidal risk, body dissatisfaction, and eating disorders in LGBT people <sup>[6-8]</sup>.

Healthcare setting is one of the places where the LGBT community is faced with minority stressors. Studies have found that half of these people do not have access to basic primary healthcare and have faced discrimination due to their gender identity <sup>[9]</sup>. Such attitude is seen due to little formal education given during medical studies about LGBT, rights of these people, and their special healthcare needs <sup>[10]</sup>. In India, physicians discriminate against them by not treating them like other patients, addressing them in disrespectful manner, and frequently using male pronouns that they find very offensive <sup>[11]</sup>.

Studies have shown that Indian medical students have a negative attitude toward LGBT people as they have little knowledge about these people <sup>[12]</sup>. The aim of this study is to evaluate the attitude and knowledge about the LGBT community in medical undergraduates and to see the impact of education on their knowledge and attitude.

## **Methodology**

### **Study Design**

This was a cross-sectional study of 680 medical students and residents of Telangana. Participants were selected through convenient sampling during January and April 2022. They filled and submitted the Google Forms, anonymously.

### **Tools**

#### **Semi Structured Proforma**

It included details like age, sex assigned at birth, current gender, sexual orientation, highest level of education and religion,

#### **CSUN Attitudes toward LGBT Questionnaire**

This questionnaire was used in a pilot study at California State University, Northridge (CSUN), to gather as much information as they can about the attitudes of their CSUN community members toward lesbian, gay, bisexual, transgender or transsexual, and intersexual matters. It is a 13 domains questionnaire about beliefs, attitudes, and practices. The domains have further sub-questions. The domains include questions about the religiosity of the participant; religiosity of household; belief in traditional gender roles; level of comfortableness while interacting in person with people belonging to LGBTIQ community; knowledge about LGBT people; about the origin of sexuality and gender; attitudes toward issues pertaining on LGBT people; changes our institute should do for LGBT people; acceptability of public display of affection by LGBT people; their religion and its view on LGBT community; their families’ and friends’ view on LGBT; frequency of usage of derogatory words; and the number of LGBT people among their family, friends, and workplace. Their responses were accepted in the form of a Likert scale ranging from strongly

agree, agree, disagree, strongly disagree to neutral <sup>[13]</sup>.

## Statistical Analysis

All the collected data were tabulated in Microsoft Excel and analysed using statistical software “Statistical Package for Social Science Version 25.0.” Frequencies and percentages were computed for the sociodemographic details. Chi-square test was used for qualitative data.  $p < 0.05$  was considered statistically significant.

## Results

**Table 1:** Demographic Details

Variables		n	%
Sex at Birth	Male	239	35.1
	Female	441	64.9
Current Gender	Male/Man	238	35.0
	Female/Woman	442	65.0
Sexual Orientation	Straight	623	91.6
	Homosexual	12	1.8
	Bisexual	25	3.7
	Others (Asexual, Pansexual, Queer, etc)	20	2.7
Highest Level of Education	MBBS	408	60
	Post-Graduation (MD/MS)	228	33.5
	Super Speciality (SS)	44	6.5
Religion	Hindu	549	80.8
	Muslim	49	7.2
	Christian	41	6.0
	Others (Parsi, Jain, Sikh, Buddhist, Atheist, etc)	41	6.0
Total sample		680	100

In the study population of 680 participants, mean age and standard deviation is  $23.385 \pm 3.49$  years, respectively. 64.9% ( $n = 441$ ) reported their sex at birth to be female, while current female gender increased marginally to 65% ( $n=442$ ). In terms of sexual orientation, 91.6% ( $n=623$ ) reported that they are straight. 3.7% ( $n=25$ ) reported to be bisexual and 1.8% ( $n=12$ ) reported to be homosexual. As per the highest level of education among the participants, majority were doing or have completed MBBS is 60% ( $n = 408$ ), followed by post graduation (MD/MS) being 33.5% ( $n=228$ ) and super speciality (SS) being 6.5% ( $n=44$ ). As per religion, the majority belonged to the Hindu religion (80.8%) followed by Muslims and Christians.

**Table 2:** Agreement regarding traditional gender role beliefs

Items		I believe men and women have separate gender roles		Task of childbearing, nurturing, and emotional support for women		Task of breadwinning, strict discipline, and decision-making for men		Roles of men and women are to procreate for the continuation of species		To NOT conform to traditional gender roles is to go against nature and biology	
		Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Strongly agree	N	33	38	8	10	4	2	35	16	9	7
	%	13.9	8.6	3.4	2.3	1.7	0.5	14.7	3.6	3.8	1.6

Agree	N	98	149	58	41	37	9	87	126	24	28
	%	41.2	33.7	24.4	9.3	15.5	2.0	36.6	28.5	10.1	6.3
Neutral	N	34	67	32	45	25	26	33	76	37	61
	%	14.3	15.2	13.4	10.2	10.5	5.9	13.9	17.2	15.5	13.8
Disagree	N	44	109	79	174	104	158	52	126	96	170
	%	18.5	24.7	33.2	39.4	43.7	35.7	21.8	28.5	40.3	38.5
Strongly disagree	N	29	79	61	172	68	247	31	98	72	176
	%	12.2	17.9	25.6	38.9	28.6	55.9	13.0	22.2	30.3	39.8
P value		0.015*		0.000*		0.000*		0.000*		0.035*	

\*Statistically significant

The majority of participants disagreed with the statements - "Task of childbearing, nurturing, and emotional support for women", "Task of breadwinning, strict discipline, and decision-making for men" and "To NOT conform to traditional gender roles is to go against nature and biology. However, most males agreed and most females disagreed with the statements - "I believe men and women have separate gender roles" and "To NOT conform to traditional gender roles is to go against nature and biology". P value was obtained. Chi square test was done by taking strongly agree and agree as one group and strongly disagree and disagree as another group comparing with males and females.

**Table 3:** Degree of comfort while interacting with LGBT people

Items	Gay men		Lesbian women		Bisexual		Transgender		Intersexual people		
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	
Highly comfortable	N	71	176	98	163	84	165	52	153	59	158
	%	29.8	39.8	41.2	36.9	35.3	37.3	21.8	34.6	24.8	35.7
Somewhat comfortable	N	65	81	55	82	55	82	51	88	53	80
	%	27.3	18.3	23.1	18.6	23.1	18.6	21.4	19.9	22.3	18.1
Neutral	N	60	135	60	131	70	133	80	151	94	164
	%	25.2	30.5	25.2	29.6	29.4	30.1	33.6	34.2	39.5	37.1
Somewhat uncomfortable	N	32	38	20	45	20	43	42	40	26	34
	%	13.4	8.6	8.4	10.2	8.4	9.7	17.6	9.0	10.9	7.7
Very uncomfortable	N	10	12	5	21	9	19	13	10	6	6
	%	4.2	2.7	2.1	4.8	3.8	4.3	5.5	2.3	2.5	1.4
P value		0.003*		0.148		0.701		0.000*		0.034*	

\*Statistically significant

The majority of the students would be comfortable interacting with these people. It can be seen that more females (54.5%) were comfortable interacting with transgenders, when compared to males (43.2%). More males (17.6%) were uncomfortable interacting with gay men, when compared to females (11.3%). P value was obtained. Chi square test was done by taking very uncomfortable & somewhat uncomfortable as one group and very uncomfortable & somewhat uncomfortable as another group comparing with males and females.

**Table 4:** Knowledge about LGBT people

Items		LGBT people's sexual acts are against what God intended		LGBT people are unnatural		LGBT people are mentally sick or immature		LGBT people are sexual pervers		Homosexuality, bisexuality, and transgenderism are the result of too much freedom in the country	
		Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Strongly agree	N	8	13	7	2	5	1	4	2	9	2
	%	3.4	2.9	2.9	0.5	2.1	0.2	1.7	0.5	3.8	0.5
Agree	N	25	18	15	17	14	16	17	9	26	19
	%	10.5	4.1	6.3	3.8	5.9	3.6	7.1	2.0	10.9	4.3
Neutral	N	55	84	47	66	38	54	46	65	32	50
	%	23.1	19.0	19.7	14.9	16.0	12.2	19.3	14.7	13.4	11.3
Disagree	N	30	64	37	57	41	63	38	63	42	67
	%	12.6	14.5	15.5	12.9	17.2	14.3	16.0	14.3	17.6	15.2
Strongly disagree	N	120	263	132	300	140	308	133	303	129	304
	%	50.4	59.5	55.5	67.9	58.8	69.7	55.9	68.6	54.2	68.8
P value		0.007*		0.003*		0.010*		0.001*		0.000*	

\*Statistically significant

Majority of the participants had good knowledge about LGBT people. P value was obtained. Chi square test was done by taking strongly agree and agree as one group and strongly disagree and disagree as another group comparing with males and females.

**Table 5:** Attitude towards LGBT individuals

Items		Marriage should only between a man and woman		There are public/occupati ons where homosexual and bisexual should be avoided		There are public/occupati ons where transgender should be avoided		LGBT couples should have the right to adopt children		Students should be exposed to age-appropriate lessons about LGBT		Parents of students taking sex education should have the options to allow them to learn about LGBT		Students should be taught about tolerance/a cceptance of LGBT	
		Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Strongly agree	N	26	30	9	3	4	1	158	336	139	311	124	296	179	372
	%	10.9	6.8	3.8	0.7	1.7	0.2	66.4	76.0	58.4	70.4	52.1	67.0	75.2	84.2
Agree	N	20	20	9	3	11	1	38	60	44	64	55	60	32	42
	%	8.4	4.5	3.8	0.7	4.6	0.2	16.0	13.6	18.5	14.5	23.1	13.6	13.4	9.5
Neutral	N	47	65	30	34	24	32	29	40	44	55	36	69	22	25
	%	19.7	14.7	12.6	7.7	10.1	7.2	12.2	9.0	18.5	12.4	15.1	15.6	9.2	5.7
Disagree	N	35	54	32	52	40	59	5	2	2	8	16	9	4	1
	%	14.7	12.2	13.4	11.8	16.8	13.3	2.1	0.5	0.8	1.8	6.7	2.0	1.7	0.2
Strongly disagree	N	110	273	158	350	159	349	8	4	9	4	7	8	1	2
	%	46.2	61.8	66.4	79.2	66.8	79.0	3.4	0.9	3.8	0.9	2.9	1.8	0.4	0.5
P value		0.002*		0.000*		0.000*		0.009*		0.002*		0.000*		0.026*	

\*Statistically significant

Majority of the participants had a good attitude towards LGBT individuals. P value was obtained. Chi square test was done by taking strongly agree and agree as one group and strongly disagree and disagree as another group comparing with males and females.

**Table 6:** Principal source of information about LGBT people

Responses	Male		Female		P value
	N	%	N	%	
Print media	4	1.7	12	2.7	0.212
Electronic media	161	67.6	290	65.5	
Educational curriculum	36	15.1	91	20.6	
Peers	19	8	27	6.1	
Others	18	7.6	22	5	

\*Statistically significant

Principal source of information regarding LGBT for the majority of participants remains electronic media, followed by educational curriculum.

### Discussion

This study finds that there is higher knowledge in medical students toward the LGBT community as they have an understanding that the sexuality of LGBT community people is natural, which is similar to the results seen in a study done among the second-year medical students in Kolkata in 2018 (Table 4) <sup>[12]</sup>. The attitude of the participants was also found to be positive as most of them disagreed on questions like marriages must be between man and woman, LGBT people should be avoided at places of occupation, and others asked in (Table 5). This is contradictory to what was predicted and was found in one of the studies in China on university students having a negative attitude toward LGBT people <sup>[14]</sup>. We assume that the positive attitude is due to Hijra community (transgender) acceptance in society since pre-colonial era, increasing level of education, awareness, and tolerance regarding LGBT rights from the increasing use of electronic media (as shown in Table 6). Although there is positive knowledge among the medical students and residents, they are still uncomfortable interacting with LGBT people (Table 3). This would lead them to not properly communicate about the healthcare needs of the LGBT people. It is assumed that this discomfort may be due to lack of exposure to LGBT community as proposed by Kelly et al. <sup>[15]</sup> or can also be due to local religious and social orthodoxy in the modern doctors in India <sup>[16]</sup>. It is to be noted that we also found that gender differences exist in the degree of discomfort felt by respondents. As compared to females, males are more uncomfortable interacting with the LGBT people. This result may be due to the rigid attitude of men to maintain the male and female conformity and being threatened by the nonconformity as seen in the study by Winter in 2008 among Hong Kong undergraduate students <sup>[17]</sup>. About 80.9% of our respondents agreed that the students should be exposed to age-appropriate lessons about the LGBT community. One of the studies in the USA has found that the mean number of hours of the medical curriculum in medical undergraduate teaching was 2.5 hours only throughout 4 years of teaching <sup>[18]</sup>. In India, there are no publications or formal reports regarding the amount of teaching hours of medical students about the LGBT community. General physicians (GPs) believed that the education regarding the health of non-heterosexual people is the need for better communication and treatment of LGBT people found out in a qualitative interview study with 22 GPs practising in Sheffield, United Kingdom <sup>[19]</sup>. The Association of American Medical Colleges recommends medical curricula to ensure students learn skills and attitudes necessary to provide comprehensive care for LGBT like training in communication skills with patients regarding sexual orientation and gender identity. In India, the inclusion of such training programs is necessary for an increasing standard of healthcare of LGBT people.

### Conclusion

This study concludes that though there is positive knowledge and attitude among medical undergraduates, discomfort among them is still a major issue that might lead to poor communication with and improper treatment of LGBT community people. The way of history taking and asking about their health problems has to be taught to the students so that they can

inculcate these practices in their profession. The medical curriculum of India should include proper lectures and practical assignments regarding LGBT community health problems and discrimination faced by them.

**Conflict of Interest:** No conflict of interest was reported during conduction of study and preparation of this research article

**Source of Funding:** No funds were taken to carry out this study and prepare the article.

**Ethical Clearance:** Due ethical clearance from the institutional ethics committee was taken.

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