

Junior doctors and medical students knowledge and attitude towards LGBTQ patients

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Abstract: Homosexuality is complex and diverse to understand. Being doctors we have a responsibility of care for stigmatised and discriminated groups. We need to be sensitive and be educated about the needs and care of this community.

Aims & objectives: To assess their knowledge about homosexuality and their attitudes toward the LGBTQ patients.

Following approval of ethical committee, MBBS students, Interns and Postgraduates students were sent an online questionnaire containing 4 sections, the first section with information regarding the study & consent form, 2nd section contains socio-demographic details, while the 3rd section contains The Sex Education and Knowledge about Homosexuality Questionnaire [SEKHQ] and 4th section contains Attitudes Toward LGBT Patients Scale [ATLPS]. Descriptive statistics are described in frequencies and percentages for categorical variables and mean values with standard deviations for continuous variables. One-way ANNOVA was used for

comparison of mean scores. Pearson’s correlations analysis was used to find bivariate correlations between variables.

Result: A total of 413 responses were analysed. Medical students, interns, and postgraduates had inadequate knowledge about homosexuality, although they endorsed a positive attitude towards LGBT patients. Females had more knowledge and more positive attitudes. Knowledge emerged as the most significant predictor of attitude; those having higher knowledge had more positive attitudes.

Conclusion: Enhancing medical students' understanding of homosexuality-related health issues by including them in the curriculum could assist in minimising prejudice against sexual minorities and, as a result, have an impact on their future clinical practise.

Keywords: Attitude of Health Personnel, Homosexuality, Female, Homosexuality, Male, India, Surveys and Questionnaires, Medical students. Knowledge.

Introduction

Sexual orientation refers to a person's sexual and emotional attraction to another person, as well as the behaviour and/or social affiliation that may emerge from such attraction. A person's deep-felt, intrinsic sense of being a boy, a man, or male; a girl, a woman, or female; or an alternate gender. Transgender is a broad term that refers to people whose gender identity and/or gender role differ from what is normally associated with their biological sex.¹ In India, such people are known as Hijra, but their identification does not correspond to modern western gender or sexual orientation categories.²

Understanding homosexuality is difficult due to its complexity and diversity.³ In ancient Indian texts, gender was fluid, with homosexual characters and ideas appearing in texts and sculptures. "Vikriti Evam Prakriti," which means that what appears to be unnatural is actually natural.⁴ Scholars in Rigveda recognised the homosexual and transsexual aspects of human life, as well as all types of global diversity. Vatsyana's ancient Indian classic, Kamasutra, devotes an entire chapter to erotic homosexual behaviour. In the ancient Indian text Arthashastra, heterosexual behaviour was penalised more severely than homosexual behaviour. Hinduism has adopted a variety of perspectives on the subject, from including homosexual characters and motifs in its writings to remaining neutral or opposed. Heterosexuality became the norm after colonisation, especially in India.

A standard textbook on forensic medicine and toxicology notes: "In India, a class of male prostitutes known as eunuchs act as passive agents in sodomy. Among them, there are two groups: Hijrahs and Zenana, who live independently. Tribadism, or lesbianism, refers to female homosexuality. Many lesbians have masculine

personalities, probably due to endocrine problems, and are uninterested in people of other sexes. Lesbians who are morbidly jealous of one another may commit violence, suicide, or both when they are rejected."⁵ Even after the American Psychological Association [APA] removed homosexuality as a disorder in 1974, we are taught in Indian medical literature that homosexuality is a form of sexual perversion, which creates a biased image.⁴

According to a widely used psychiatric textbook, "methods for seeking a change in sexual orientation include: (1) psychoanalytic psychotherapy (especially when associated with personality issues), (2) behaviour therapy—aversion therapy (rarely used), covert sensitisation, systematic desensitisation (especially if there is a phobia of heterosexual relationships), (3) supportive psychotherapy, and (4) androgen therapy (occasionally)." "Approaches that are just used to alleviate suffering include: (1) psychoanalytic and supportive psychotherapy based on personality type. (2) Medications for anxiety and depression, such as antidepressants and/or benzodiazepines"⁶

Spiritual gurus and community leaders are notorious for perpetuating homophobia. India's strict cultural and sexual milieu has had a detrimental impact and created a sense of aversion against the lesbian, gay, bisexual, transgender, and queer (LGBTQ) population. Conversion therapies, medicine, electric shock therapy, and sexual reorientation [psychoanalysis, psychotherapy, BT] were all used by baby boomers to cure homosexuality. As much as social influencers preach that yoga can cure homosexuality, they think it is an inherited mental condition or that it is all in their heads.

The tides have started to turn in India after the judgement of the Supreme Court in 2018 on Section 377

of the Indian Penal Code. Judges GS Singhvi and S.J. Mukhopadhyaya quoted, "Currently, many things that were considered immoral 20 years ago have become accepted by society now."⁷ Despite the fact that differences in sexual orientation are not disorders, the societal attitude toward homosexuality has been contemptuous in the bygone days.

For a variety of reasons, including the related shame and societal repression, the unrepresentative samples surveyed, and the failure to separate desire, behaviour, and identification, estimating the prevalence of homosexuality is challenging. Age groups, geographical regions, and cultures all have different figures.⁷ Although a global survey estimated that in India, 17% of the population identified as lesbian, gay, or bisexual (LGB) and others.⁸

Doctors have a duty of care to stigmatised and marginalised populations. The Indian psychiatric organisation (IPS) announced homosexuality was not a part of illness in July 2018, partly to discourage psychiatrists from using "conversion therapies" on LGBT+ patients in the hopes of converting them to heterosexuality. The attitudes of medical professionals toward homosexuals have an impact on the health treatment provided to such patients of different sexual orientations.⁹ According to research, LBGT patients have expressed dissatisfaction with doctors who are insensitive to or unaware of LGBT concerns, obstructing their ability to receive adequate care.¹⁰ In the health system, people from sexual and gender minorities have faced discrimination, stigmatisation, and even denial of care.¹¹ According to a UNAIDS assessment, in India, a number of transgender people have had bad experiences with doctors and nurses in government institutions (2017).¹²

When doctors encounter LGBT patients, they may be unaware of and unresponsive to their needs and concerns, and such topics are underrepresented in medical school curricula.¹³ Thus, there is a need to assess the medical students' knowledge and attitude towards it, which could help in formulating a curriculum. This study examines medical students, interns, and postgraduate students' understanding of homosexuality and attitudes toward LGBT patients. It's critical to comprehend their knowledge and attitudes because their approaches to patients may differ.

Materials and methods

A cross-sectional study, approved by the ethics committee of KVG medical college and hospital, was conducted among the MBBS students from all the years, interns, and postgraduate students. This study aimed to evaluate Indian medical undergraduate, intern, and postgraduate students' knowledge about homosexuality and attitudes towards LGBT patients. Informed consent was obtained from all the participants, and they were asked to self-administer a survey that was sent via messages and/or emails.

Sample size- Since no similar study had been done in this place, we considered the prevalence of positive attitude towards LGBTQ as 50 %.

$n = 4 pq / L^2$ with an error of 5 % (400)

Prior to the completion of the survey, every participant was informed about the purpose of the study, its voluntary nature, and made aware of all ethical considerations, such as anonymity and privacy, and was always assured of confidentiality. The questionnaire was created using the Google Forms platform and was available from November 1st, 2021, until December 31st, 2021. Students that participated in the study did not receive any form of compensation. The google form

contained the following scales: [SEKHQ]¹⁴ The Sex and Knowledge About Homosexuality Questionnaire, and [ATLPS]¹⁵ The Attitudes Toward LGBT Patients Scale. Those who were not willing to take part in the study were excluded.

Survey instruments

A self-administered questionnaire consisting of three sections was implemented: section one covered consent; section two covered socio-demographic data; section three consisted of the SEKHQ; and section four consisted of the ATLPS Questionnaire.

Age, gender, religion, marital status, sexual orientation, and year of medical schooling were collected as baseline demographics.

SEKHQ¹⁴- Internal consistency for SEKHQ is 0.92, and test-retest reliability is 0.71. Participants were asked to rate 32 statements as "true," "false," or "don't know" in terms of their validity. The score on this scale ranged from 0-32, where 32 represented the score with all correct answers. Wrong answers and "don't know" responses received a score of 0. The questionnaire was created by compiling statements from three previous studies^{16,17,18} and was previously used by Dunji-Kosti et al.

ATLPS¹⁵- In its original form, it consisted of 13 items that examined attitudes toward LGBT patients. The current study used Wilson et al.'s revised version with 11 questions administered to a group of healthcare students. They deleted two questions from the original that suggested participants were practising medicine. It acquired a mean score of 3.92 (a range of 1.7–4.6) for medical students. Items 2, 3, 5, 7, 8, and 9 were reverse scored to produce total scores, with a score of 1 indicating "strongly agree" and a score of 5 indicating "strongly disagree."

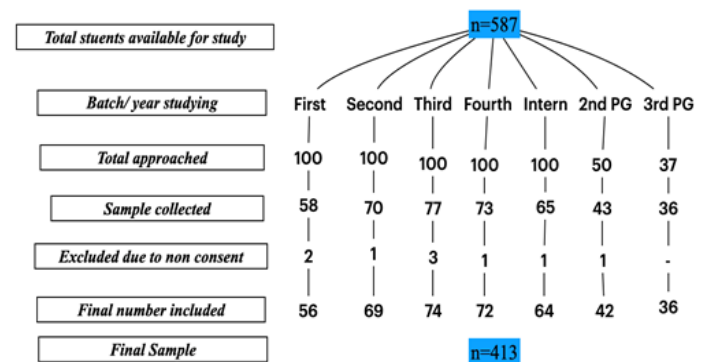
Analytical Statistics

Primary data was collected using Google forms and was retrieved in Microsoft Excel spreadsheets. Statistical analysis was done on IBM SPSS version 20.1. Categorical variables were represented in the form of frequencies and percentages. The continuous variables were represented using mean and standard deviations. The sex education and knowledge about homosexuality questionnaire: SEKHQ score was obtained by summing the scores of 32 responses. ATLPS was scored as a Likert scale and the cumulative score was obtained by summing up responses of 11 statements. The comparison between averages was done using one-way ANNOVA. The bivariate correlations were performed using Pearson's correlation coefficient. P value <0.05 was considered significant and value <0.01 was considered highly significant.

Results

A total of 587 students, interns, and postgraduates were approached and invited to participate, out of which 413 (70.35%) agreed to participate and filled out the survey. The response rate for each year ranges from 69.5% for undergraduates, 65% for interns, and 90.8% for postgraduate students. Nine participants were excluded from the study due to non-consent. (Figure 1).

Figure 1: PG- postgraduate.



Section 2- Sociodemographic details.

Table 1 displays the socio-demographic characteristics of the study population. The mean age of the respondents was 24.09 years (2.881), with a range of 18-34. The sample had a male and single preponderance,

and a majority of the participants were Hindus. Most of the participants identified themselves as heterosexuals (76.2%). Interns made up the smallest proportion of the study population, accounting for 15.4% of the total.

Table 1: Socio-demographic characteristics of the study sample (n=413)	
Variable	Mean (S.D)/ n(%)
AGE	24.09 (2.881)
GENDER (at birth)	
Male	214 (51.81)
Female	199 (48.18)
RELIGION	
Hindu	260 (62.9)
Christian	68 (16.4)
Muslim	67 (16.2)
Jain	16 (3.8)
Others	2 (0.48)
MARITAL STATUS	
Single	366 (88.6)
Married	46 (11.1)
Others	1 (0.24)
RESIDENCE	
Urban	315 (76.2)
Rural	98 (23.7)
DESIGNATION/ YEAR STUDYING	
Undergraduates (1,2,3,4 yr. MBBS) students	271 (65.6)
Interns	64 (15.4)
Postgraduate students (2 nd , 3 rd yr.)	78 (18.8)
SEXUAL ORIENTATION	
Heterosexual	315 (76.2)
Bisexual	55 (13.3)
Homosexual	28 (6.7)
Pansexual	9 (2.17)
Asexual	6 (1.4)

Section 3- SEKHQ

Table 2 shows the percentage of correct responses for each item of the SEKHQ. On 25 of the 32 questions about knowledge related to homosexuality, more than half of the participants responded incorrectly. 15.2 percent of the participants could correctly respond that there had not been an increase in homosexuality in the

last 25 years. The highest correct response rate of about 68.7 percent was for the statement that homosexuals usually disclose their sexual identity to a friend before they tell a parent. The mean total score of the respondents on the SEKHQ was 11.74 (4.38), with a range of 0-15.

Table 2: Response on sex education and knowledge about homosexuality questionnaire: SEKHQ	
(Correct response) Statement	Correct response (n=413) n (%)
(F) Approximately 25-30% of adolescent boys have a homosexual experience during their teenage years	28 (6.7)
(F) A majority of homosexuals were seduced in adolescence by a person of the same sex, usually several years older	80 (19.3)
(T) Approximately 6-11% of adolescent girls have a homosexual experience during their teenage year	236 (57.1)
(T) Sexual orientation is usually well-established by adolescence	256 (61.2)
(T) The homosexuals usually disclose their sexual identity to a friend before they tell a parent	284 (68.7)
(F) A homosexual person's gender identity does not agree with his/her biological sex	214 (51.8)
(F) If children are raised by openly homosexual parents, the likelihood that they themselves will develop a homosexual orientation is greater than if they were raised by heterosexual parents	108 (26.1)
(T) Gay men and lesbian women have an increased incidence of anxiety and depression compared to heterosexual men and women	70 (16.9)
(F) Homosexuals place more importance on the physical attractiveness of their dating partners than do heterosexuals	180 (43.5)
(T) The experience of love is similar for all people regardless of sexual orientation	64 (15.4)
(T) Gay male couples are likely to have the most permissive attitudes about sexual activity outside of a committed relationship compared to lesbian couples and heterosexual couples	170 (41.1)
(T) In some cultures, it is normal practice for boys to have sex with their same gender during adolescence.	161 (38.9)

(F) In the world as a whole, the most common mode of transmission of the HIV virus is through gay male sex	246 (59.5)
(T) Testosterone is the hormone responsible for the growth of pubic hair on girls	108 (26.1)
(T) Boys' breasts typically grow during puberty	197 (47.9)
(F) Research supports the notion that sex education offered in schools increases the amount of sexual activity amongst adolescents	132 (31.9)
(F) In the last 25 years there has been an increase in homosexuality	63 (15.2)
(F) Most homosexual men and women want to be heterosexual	122 (29.5)
(F) Most homosexuals want to encourage or entice others into a homosexual or gay lifestyle	117 (28.3)
(T) Heterosexual teachers, more often than homosexual teachers, seduce their students or sexually exploit them	187 (45.2)
(F) Greece and Rome fell because of homosexuality	81 (19.6)
(F) Heterosexuals generally have a stronger sex drive than do homosexuals	85 (20.5)
(T) About one-half of the population of men and more than one-third of women have had a homosexual experience to the point of orgasm at some time in their lives	170 (41.1)
(T) The homosexual population includes a greater proportion of men than of women	181 (43.8)
(T) Heterosexual men and women commonly report homosexual fantasies.	200 (48.4)
(F) If the media portrays homosexuality or lesbianism as positive, this could sway youths into becoming homosexual or desiring homosexuality as a way of life	133 (32.2)
(F) Homosexuals are usually identifiable by their appearance or mannerisms	111 (26.8)
(F) Homosexuals do not make good role models for children and could do psychological harm to children with whom they interact as well as interfere with the normal sexual development of children	162 (39.2)
(T) Gay men are more likely to be victims of violent crime than the general public	205 (49.6)
(F) Homosexuality does not occur among animals (other than human beings)	115 (27.8)
(F) Historically, almost every culture has evidenced widespread intolerance towards homosexuals, viewing them as "sick" or as "sinners"	63 (15.2)
(T) Heterosexual men tend to express more hostile attitudes towards homosexuals than do heterosexual women	211 (51.0)

Section 4- ATLPS

Table 3 presents the mean scores obtained on each item of the ATLPS. Positive attitudes towards LGBT patients

were reflected in statements like "LGBT patients deserve the same level of quality care from medical institutions as other patients." (M=4.40 SD=0.84) and "I would be

comfortable telling my intimate partner that I cared for LGBT patients.” (M=4.06 SD=0.96) Negative attitudes towards LGBT patients were most reflected in statements like “Healthcare professionals in private practice have a responsibility to treat LGBT patients.”

(M=1.83 SD=0.83) and “LGBT patients should disclose their LGBT status to their healthcare providers.” (M=1.98 SD=0.91) The mean total score of the respondents on the ATLPS was 32.32 (SD 3.167), with a range of 12-42.

Table 3: Response on The Attitudes Toward LGBT Patients Scale: ATLPS	
Statement	Response Mean ± SD
LGBT patients deserve the same level of quality care from medical institutions as other patients.	4.40 ± 0.84
LGBT patients should only seek healthcare from gay and lesbian health clinics	2.10 ± 1.10
Healthcare professionals in private practice have a responsibility to treat LGBT patients.	1.83 ± 0.83
I would be comfortable if I became known among my professional peers as a health professional who cares for LGBT patients.	3.99 ± 1.04
I am concerned that if heterosexual patients learned that I was treating LGBT patients, they will no longer seek my care	2.19 ± 1.03
I would be comfortable telling my intimate partner that I cared for LGBT patients	4.06 ± 0.96
It would be more challenging to gather a history from an LGBT patient than from a heterosexual patient	2.11 ± 0.92
It is more challenging to discuss sexual behaviour with LGBT patients than with heterosexual patients	2.23 ± 0.93
LGBT patients should disclose their LGBT status to their healthcare providers	1.98 ± 0.91
Same-sex sexual attraction is a natural expression of sexuality in humans	3.69 ± 1.16
Same-sex sexual behaviour is a natural expression of sexuality in humans	3.68 ± 1.19

Table 4 indicates the relationship between socio-demographic characteristics and homosexual awareness and attitudes toward LGBT patients. Females were shown to have a more favourable attitude toward LGBT patients than males, as was their understanding of homosexuality. On knowledge examinations, interns and postgraduate students outperformed undergraduate students, but the difference was not reflected in their attitudes. Religion and marital status were revealed to be statistically significant predictors of attitude as well. When all of the respondents were combined into a single

group, those with more knowledge expressed more positive attitudes. (See Table 5).

Table 4: Association of gender, designation and religion with Knowledge and attitude towards LGBT				
Variables	Score on SEKHQ		Score on ATLPs	
	Mean (SD)	Significance t/F P value	Mean (SD)	Significance t/F P value
Gender				
Male	11.2 (4.6)	0.016	33.4 (4.2)	<0.001
Female	12.3 (4.2)		35.1 (4.8)	
Religion				
Hindu	11.6 (4.6)	0.676	35.0 (4.6)	<0.001
Christian	11.9 (4.2)		33.5 (5.3)	
Muslim	11.8 (4.2)		32.3 (3.0)	
Jain	13.0 (3.5)		31.8 (2.4)	
others	14.0 (2.8)		43.5 (4.9)	
Marital status				
Single	11.7 (4.5)	0.827	34.5 (4.6)	0.004
Married	11.7 (3.9)		32.2 (3.9)	
Other	9.0 (0)		31.0 (0)	
Residence				
Urban	11.8 (4.5)	0.294	34.3 (4.5)	0.35
Rural	11.3 (4.0)		33.9 (4.9)	
Designation				
Undergraduates	11.4 (4.5)	0.151	34.1 (4.4)	0.855
Interns	12.1 (3.8)		34.4 (5.1)	
Postgraduates	12.4 (4.6)		34.4 (4.7)	
Sexual orientation				
Heterosexual	11.3 (4.5)	0.011	34.6 (4.8)	0.036
Bisexual	12.9 (4.0)		33.7 (3.6)	

Homosexual	13.5 (2.5)		31.9 (2.2)	
Pansexual	13.1 (3.4)		33.2 (5.3)	
Asexual	11.7 (7.1)		33.8 (1.8)	

The score on SEKHQ [Table 5] correlated positively with age (being older entailed greater knowledge), and with the score on ATLPS (those having higher knowledge had more positive attitudes). The score on

ATLPS correlated inversely with age (older students had negative attitudes), which was highly significant.

Correlation coefficient (r)	Variable	Score on SEKHQ		Score on ATLPS	
			Sig.		Sig.
	Age	0.062	0.203	-0.207	<0.0001
	Score on SEKHQ	—		0.082	0.094

Discussion

As per our knowledge, this is the first study in Karnataka exploring undergraduates, interns, and postgraduates' knowledge about homosexuality and their attitude towards LGBT patients. The response rate in this study was 71.8%. Response rates have ranged from 29% to 92% in studies around the world.^{19,20,21} In Indian studies, they have ranged from 80.5% to 93.1%.^{22,9}

The mean age of our sample was 24.09 years, similar to other studies around the world ranging from 20-27 years¹⁹⁻²⁷ and in Indian studies, the mean age of most of them was 20 years. This difference could be because of the batches selected for the studies. In these studies, there were mainly undergraduate students only.^{9,22,23}

Our sample showed a predominance of males (51.81%), similar to most Indian studies.^{9,22,23} Contrary to the studies done around the world, which showed female predominance.^{19,21,24-27} Our study found a statistically significant difference between the male and female genders in both knowledge and attitude. Similar to this, most studies have found positive attitudes in female

students^{19-22,24,25} with statistical significance in one study,¹⁹ which is contrary to another which found no significant difference between genders.²¹ We also found females had significantly better knowledge compared to males, differing from a study in Gujarat which found no significant difference in knowledge between genders.²² Our sample has 62.9% of Hindus, which is dissimilar to other Indian studies, which have 89.3% of the sample.^{22,23} This may be due to the region where the study was done, which houses a majority of Hindus. Most of the studies around the world have shown a negative attitude with an increase in religiosity,^{19-21,25,26} which was also found in our study. Most of the studies have found no statistical significance in knowledge among different religions, which is similar to our results.^{21,22} Only a few studies, similar to ours, have found significant differences in attitudes among religions.^{25,26}

Our study had a majority of unmarried students (88.6%), similar to other Indian studies (98.7%). Although our study had a higher proportion of married students

(11.1%) compared to others (1.3%).^{22,23} This difference could be due to the involvement of postgraduate students. There is a dearth in the literature about the significance of marital status on knowledge and attitude. Our study found no statistically significant difference in knowledge, but found a highly significant difference in attitude, with a better attitude among unmarried students. Most of the participants in our study identified as heterosexuals (76.2%) compared to other studies in India and around the world. (83.0% -99.6%)^{19,21,22,25-27} A high proportion of the students identify as LGBT (23.57%), which greatly surpasses the proportion of self-identified LGB people in the general population (17% UN). Other studies have found 4.3%-13.5% of LGBT students around the world,^{19-21,26,27} and only 1 identified as LGB in an Indian study.²² The high proportion could be due to the anonymity of the survey, though it cannot be validated. We found a statistically significant difference among various sexual orientations in both knowledge and attitude.

Knowledge scores increased with advanced medical years but was not statistically significantly. Attitudinal scores did not correlate with advanced years in medical courses similar to another study.¹⁹

SEKHQ-The statement that most participants (68.7%) judged correctly was: "The homosexuals usually disclose their sexual identity to a friend before they tell a parent." The vast majority of participants (93.3%) answered incorrectly to the following question: "Approximately 25-30% of adolescent boys have a homosexual experience during their teenage years." (See Table 2). Our response rate to statement 17 was the same as in a study done in Gujarat²² and similar to other studies.¹⁹ Our study has shown an inadequate knowledge about homosexuality similar to another study in India.²²

Response rate to knowledge statements (correctly answered questions) was the same as in another Indian study.²²

ATLPS- 58.5 % of our participants strongly agreed that "LGBT patients deserve the same level of quality care from medical institutions as other patients." (n=242), showing a positive attitude toward LGBT patients. Our study has shown a positive attitude among the medical students, interns, and postgraduates like one Indian study,⁹ and other studies in the world.^{20,21,25-27} This result differs to findings in most Indian studies, which have a neutral stance.^{22,23} The reason for the difference could be due to widespread acceptance of LGBT in the society after 2018. The variables found to be statistically significant with attitude scores were gender, marital status, religion, sexual orientation, and knowledge.

The study has some limitations, such as the fact that it is a cross-sectional study, which means that connections are demonstrated but no causative relationships can be concluded. Second, a more detailed examination of views toward specific sexual and gender minorities may reveal variances in attitudes that more accurately reflect differences in gender and sexual identity. Finally, the validity of the responses could not be checked because the survey was a self-administered questionnaire rather than an interview.

Implications and conclusions

This study provides preliminary insight into Indian medical students' knowledge and attitudes about homosexuality and LGBT patients, but more research on a larger scale across the country is needed to gain a more comprehensive picture of medical students' perspectives on the issue, which could aid in the development of guidelines for the inclusion of homosexual patients' health needs in the Indian medical curriculum. We could

utilise a standard scale to assess the participant's sexual identity in the future to better understand the relationship of sexual orientation on knowledge and attitude. Medical treatment, as has been well observed, has more to do with doctors' views and attitudes than with actual truths. Patients and doctors have different perspectives, attitudes, and expectations. The ability to recognise and accept these variances, as well as treat each patient as an individual, is critical to the practise of medicine.²⁸ Medical students must be taught how to maintain a non-homophobic mindset and how their own attitudes influence clinical judgement. Enhancing medical students' awareness by incorporating LGBT concerns into the curriculum could help minimise prejudice against LGBT patients among practising doctors and improve the health care provided to such patients.

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