Educational Knowledge, Attitude and LGBT Inclusive Training in an Academic Setting: A Mixed Methods Case Study of Faculty and Healthcare Students in Nigeria.

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Abstract

Background: The highest quality of appropriate care is required to achieve the UN's Sustainable Development Goals and improve the health of the LGBT population in the global south. This study assessed the training, knowledge, beliefs, attitudes and practice of Nigerian healthcare students and faculty living, working and learning within the constraints of religious, legal and cultural barriers for LGBT people.

Methods: This study was carried out among all the tutors in the faculty of clinical sciences, year five medical and nursing students in the College of Medicine, University of Lagos. The sequential mixed methods study design was guided by the socio-ecological model of health. Quantitative data were collected with an adapted questionnaire. The results were used to generate prompts for the qualitative component consisting of In-depth interviews with 21 of the respondents. Transcripts were analysed using thematic analysis. The quantitative and qualitative data were subsequently integrated and, using the socio-ecological model, synthesized.

Results: The response rate was 88.2% (medical students), 66.2% (nursing students) and 60.7% (tutors). Themes uncovered were: knowledge of LGBT terminologies; teaching and learning about LGBT health topics; ethics, professionalism and personal beliefs. A fifth of tutors reported teaching related topics or using LGBT examples in class. Students were more knowledgeable of LGBT terminologies than tutors. Facilitators and barriers to LGBT inclusion in healthcare education settings were identified within the following socio-ecological domains: globalization, policy, community, institution, intrapersonal and individual.

Conclusion: Ongoing advocacy with policy makers and educational leaders on the right to health for all citizens was recommended. A multilevel intervention by non LGBT and LGBT individuals is required for inclusion of LGBT health in educational curriculum of healthcare students and professionals.

Background

The healthcare needs of communities and nations are not static but constantly evolving. It therefore becomes imperative that the training of healthcare professionals should adapt to the changing population health profiles. Recognising this, the World Health Organization (WHO), adopted the transformation and scaling up of education and training for the health workforce as the strategy for meeting the health care needs of the 21st century.[1]

Lack of experience with Lesbian, Gay, Bisexual and Transgender (LGBT) populations during training has produced healthcare providers with poor knowledge about LGBT patient care issues,[2,3] inadequately prepared to perform a comprehensive patient history and unable to develop satisfactory patient-provider relationships with LGBT individuals, resulting in poor quality of care and unsatisfactory experiences for

LGBT patients.[4–7] The eventual fall-out of this is avoidance of healthcare providers, low uptake of preventive care, late presentation for treatment, poor health seeking behaviour and underuse of health services by LGBT people.[8] As a result, LGBT people experience poor health outcomes and are at increased risk of disability and premature death.[9–11]

A positive attitude towards LGBT patients is an essential requirement for healthcare students and providers to achieve cultural competency, and research has shown that healthcare students who are knowledgeable about LGBT people had more positive attitudes towards LGBT patients.[12–14] Efforts at promoting health equity for the LGBT population led to a critical evaluation of the curriculum and training for healthcare professionals in the USA.[15] Evidence generated from that evaluation revealed that healthcare students were either not receiving any education on LGBT health or the training was deficient in some key areas.[15]

In sub-Saharan Africa (SSA), there is dearth of data and research around this issue. A review of faculty in a South African health sciences faculty revealed the absence of LGBT health- related topics in the allied health student's curriculum as well as lack of an integrated approach to teaching LGBT health topics for medical students.[16]

In this article, we aim to gain insight on the issues – at local, institutional and national levels – that influence the level and nature of the inclusion of LGBT health topics in the healthcare curricula in Nigerian universities, with a view to understanding which interventions might be required to improve access and equity of health services in Nigeria. The guiding framework for this study is the socio-ecological model.[17–19] The model posits that for substantial change in behaviour to be maintained, a combination of individual, policy and environmental level interventions are required.[20]

Methods

A sequential mixed-methods study was designed to explore and analyse the multilevel factors influencing the knowledge of LGBT related terminologies, attitude towards LGBT patients, teaching and learning of LGBT health topics in a college of medicine in a sub-Saharan Africa country with multiple criminalising laws against LGBT people. The study was carried out in the Faculty of Clinical Sciences in the College of Medicine of the University of Lagos; a training centre for healthcare students in southwest Nigeria with approximately 2000 students.[21] The Faculty of Clinical Sciences was used for the study because the faculty and students were more likely to have patient contact and manage conditions more prevalent in LGBT people. The study population comprised of all of the 173 faculty and all the year five MBBS (n = 144) and Nursing (n = 68) students. All students and faculty were eligible to participate.

A questionnaire was developed including questions and statements adopted from the American Psychological Association definition of LGBT terminologies,[22] the attitudes toward LGBT patients scale[23] and the readiness to practise with LGBT patients questions.[16] The list of 13 topics related to LGBT health

in it was adapted from a previous study assessing University of Cape Town's medical curriculum.[16] The questionnaire was pretested in another College of Medicine in the same town.

Faculty were invited to complete the questionnaire by email invitation/placed in envelopes and distributed by non-academic staff with anonymous return. For the students the questionnaires were put in envelopes and distributed within the hostels during room to room visits by the research assistants. The students were able to complete the questionnaires in their own time, the envelope was picked up by the class captain at an arranged time and venue. The topic guide for the interviews was designed based on (a) the socio-ecological model, which emphasizes multiple levels of influence on health and (b) the results of the questionnaire. The topic guide covers knowledge of LGBT terminologies, attitudes and experience of providing care for LGBT patients, barriers and facilitators to teaching LGBT related topics. Eleven faculty members from seven departments, four nursing students and six medical students who participated in the quantitative survey were interviewed. Conscious attempt was made to ensure inclusion of seven out of the thirteen departments and for gender representation. Selection of students was carried out by the student representative, attempts were made to include individuals who participated in the quantitative survey, people with diverse opinions on LGBT issues and gender equality. The interviews took between 30 to 50 minutes, they were audio recorded with permission. The interviewer took field notes which were also analysed. The recordings were transcribed verbatim and destroyed. Data for faculty and students were analysed separately using thematic analysis. The process was inductive and commenced with coding, review of the codes, refining to generate the lean codes, generation of categories, review and generating a condensed codebook and thematic tables. This ensured identification of relevant themes and concepts. Data collection took place between June and July 2018. The data from the quantitative and qualitative surveys were analysed separately before they were integrated and synthesized using the socio-ecological model to synthesis the results and develop conclusions (Table 1).

Results

A. Participants

The response rate for the questionnaire was 88.2% for MBBS students (n = 127), 66.2% for nursing students (n = 45) and 60.7% for faculty (n = 105). The students were predominantly below 25 years of age (86.0%), while the faculty were mainly married (88.6%) older people (85.7% were 40 years and above) who had been teaching for over 5 years (74.2%). Most of the respondents (students and faculty) were Christians (more than 85%), and held religion in high esteem. Ten students (four from the department of nursing and 6 from 500level MBBS class) and eleven faculty (from seven departments in the faculty of clinical sciences) participated in the interviews. Anonymised verbatim quotes are used in the results. Participants are assigned an anonymous identifier (beginning with F or S to indicate if they were faculty or staff and a number).

B. Knowledge of LGBT Terminologies

The mean score and pattern of knowledge for LGBT related terms is similar among faculty and students with regards to the terms well known and those that were not familiar although a higher proportion of the students had good knowledge (58.7% vs 48.6%). Less than a fifth of the faculty had attended formal training on LGBT health. [Table 2]

Faculty ascribed their poor knowledge to reservations about inclusion of LGBT topics in regular conversation and the curriculum. At the individual level, cultural and religious bias against any variation from cisgender identity or heterosexuality inhibits faculty from teaching the topics in class and actively seeking for knowledge improvement. Some faculty were of the opinion that the students might be more knowledgeable of LGBT terms which corroborates the data above.

Nigerian, irrespective of your educational level, we are still modulated by our culture and our religion, if you really look at most of those terminologies, it's like a taboo for you even to go and check the meaning, they don't even want to let it get integrated in their brain. (F8)

However, completing the study questionnaire was reported to have generated discussion among the students about perceived deficiencies in their knowledge. Local research to gather evidence and shed more light on the phenomenon was suggested as a remedy.

I think we discussed first of all the terms, a lot of people were like they don't even know this one existed and everything, then I found out that interestingly, some of my own friends really wanted to know more about it…. So maybe if we get to talk about it and then we get to accept it, maybe it would have been better. (S9)

C. Teaching and learning about LGBT related health topics

One fifth of faculty reported using LGBT examples in class during teaching which featured under abnormalities/diseased states while over a third expressed interest in doing so. A quarter of the students had attended lectures where the following topics were mentioned: definition and theories of sexual orientation, HIV and sexually transmitted infections in LGBT people. The least addressed topics were homophobia, sex reassignment surgery and transitioning. The commonest teaching methods mentioned were tutorial, seminar and didactic lecture. [Table 3]

Ci - Current practice with regards to teaching and learning

Respondents believed that teaching and learning of LGBT topics in the classroom was inadequate. Faculty reported not teaching because it was either not relevant to their specialty or because it was not included in the current curriculum for teaching healthcare students in the institution. The students reported that LGBT topics were never directly addressed as the main focus of teaching, only occasionally mentioned in passing.

In the course of my practice, I do not see anything, that would take me into that and I don't give lectures around cultural issues where we'll be talking about stigma. I've never used it as an example in any of my lectures, so no, I have not had reason to talk about LGBT issues in any of my lectures. (F10)

I teach sexual dysfunction and paraphilias and that is why I have the opportunity of what, mentioning some of these things, okay, yes but it is not as if I'm going to teach them that because it's just an overview in that curriculum and that is not enough. (F6)

Student's descriptions of faculty demeanour while talking about LGBT topics in class ranged from professional, to verbal and non-verbal expression of discomfort. They expressed concern that some faculty were unable to teach the subject without introducing their cultural and religious beliefs. Despite the deficiency in the teaching, the content was considered useful.

She was showing a disgust in her facial expression, she was really angry like if she sees one of them right now she is going to fight the person that was her expression. I was uncomfortable at the beginning of the lecture but during the course of the lecture in my mind I was like me that I'm not even comfortable with it, I'm not as uncomfortable as she is…..why is she is so uncomfortable? (S1)

Cii - Concerns regarding teaching and learning about LGBT health topics within the culture of silence and a criminalizing law

Within the immediate physical and social environment, teaching and learning about LGBT topics in the classroom was considered unsafe. At the interpersonal level, students worry that their parent/guardian will object to their learning about the topics as well as the tone and the energy of the presentation. Faculty however were concerned about the ability to truly teach the topics in a professional manner devoid of beliefs and values while maintaining cultural sensitivity. Knowing that everyone listening to their lectures are trying to form an opinion on whether they are biased or in support of LGBT people is a psychological stressor for the few people who teach LGBT related health topics.

……So the onus is going to be on whoever or however the system is going to bring in teachings on LGBT health related topics…… it should be evidence based and knowledge based but you know very well that maybe at the point of the delivery, the beliefs and thoughts would come in, we should not deceive ourselves, it will come out there. (F1)

Some faculty noted that the unaccepting culture in the wider community influenced the institutional culture. The criminalising law strengthens this culture and makes it enforceable within the institution. For faculty the law generates concerns that it might be unsafe to teach LGBT topics in the classroom; this perception is borne out of interpersonal interactions between faculty as colleagues as well as faculty and students. This has negatively influenced the development and delivery of an inclusive curriculum.

……the teachers themselves come from a background where this was something that was not culturally, socially acceptable…..there are some people that deep down wouldn't mind giving examples on LGBT

health but they are afraid of the backlash. Once something is highly controversial like this, people are very careful. (F4)

The students also acknowledge that the decision to teach on these topics would not be straightforward and that there may be barriers:

First of all, before you can be able to teach, it has to pass through various processes, administrative and all that, so that can serve as a barrier at first, and I don't know the orientation of people at the top about these issues too, they can also serve as barriers too, if you have the support of the management, it's going to be easy, you know. (S10)

Ciii - Recommendations for effective training and integration of LGBT topics into the curriculum

In addition to the topics on ethics and professionalism which already exist in the curriculum, most of the participants supported teaching and learning within the institution using an inclusive curriculum. They suggested the development of innovative techniques and engaging methodologies for teaching LGBT topics in several departments within and outside the college supported by e-learning platforms and conferences.

D. Attitudes towards LGBT Patients

Faculty and students had divergent views on LGBT patients, with faculty expressing a higher level of acceptance than students (55.2% vs 41.9%). Respondents felt that healthcare professionals in public health facilities should treat LGBT patients, however, the majority would be wary about providing healthcare services. [Table 4]

Di. Conflicting heart, trying not to feel it, trying not to let it show within the context of service provision to a hidden population

Some respondents expressed difficulty in achieving a balance between professionalism and their beliefs. While some believe they will struggle with it, some believe that it is not a problem at all and others are convinced that the resulting conflict will negatively impact on their mental health. Providing general healthcare services constitutes an ethical dilemma while in other instances this will occur only with specialized services.

I do have strong beliefs but at the same time I believe that yes, they should have access to care, but I wish that our values are preserved and are not eroded because we want to provide healthcare, so that is where I have a bit of a problem with it. (F1)

Participants explored ways in which they might manage the negative effect on their mental health of this clash of their values and practice:

I think I will have negative attitude towards LGBT patient because I will always feel guilty, there'll be a sense of guilt while treating them if I have to. I would rather not…. I hope I won't have to take care of them but if I have to, it might affect my mental health but I will deal with it in the place of prayer and faith. (S4)

One interviewee felt that he would not be able to provide specific care to an LGBT individual and that if he was forced, he may leave the profession:

I will personally not be involved in converting a man to a woman. I will personally not, no matter the amount of money made available because it's against my own religious and let me just say personal belief……if the law made it compulsory that I must do transgender surgery that I don't believe in, then it will affect my mental state, I may even possibly resign. (F11)

Dii. Distrust and safety concerns surrounding healthcare professional and LGBT patient interaction

With regards to examination and clerking of LGBT patients, faculty were more comfortable than students. For students, the perception that an LGBT patient is dangerous plays a critical role in the level of comfort associated with providing care. Some students were scared of unwanted sexual advances/harassment. Intersection of identities and gender influences perception of danger

Providing physical care if the person is a em, female, like a lesbian, it will be at the back of my mind that oh! Hope she's not showing some advances to me and all that, so I wouldn't be comfortable at all. If it's a gay man I wouldn't be comfortable but at the back of my mind, I would be like oh! He does not really like females, so I can provide physical care to him I wouldn't really see him as a threat [Smiling] Transgender! Ah! That one, I will not even know what to think, I think I will just find excuse and not care for the person or something. (S1)

Diii. Distrust and perception of rejection from healthcare provider

Some faculty were of the opinion that even though instances occur when healthcare professionals exhibit verbal and nonverbal acts of discrimination, LGBT patients have also been observed to be unduly sensitive during clinical encounters and biased against non-LGBT healthcare professionals. Thereby attributing the blame for poor and unsatisfactory patient-physician encounter on both parties i.e. the provider and the client.

……automatically you are just going to feel that oh! This person is doing a sinful thing and unconsciously you might just have that reservation against the act, you may not be against the people. Separate that okay somebody is uncomfortable with my sexual preference, not that the person hates me, not that the person wants to harm me. (F9)

I've treated quite a lot of them but there's none of them that will not ask me, are you surprised doctor, some will say I see you didn't even asked me further questions, some will say doctor, ah! Is it that you are not surprised, why do they ask such a question? That means they themselves have seen themselves as a

different group from the norm of the community therefore it could be a perceptual disorder from them…… (F8)

Div. Access to healthcare services for LGBT people in Nigeria

Participants were of the opinion that the criminalizing law in Nigeria has negatively impacted on the willingness of healthcare professionals to learn about LGBT health related issues and service provision for them. This is mostly due to fear of LGBT people, fear of repercussion including courtesy stigma and arrest by law enforcement as well as lack of visibility of the LGBT population. Providers operate within the restriction and limitation of the law which, in effect, is preventing equal access to healthcare. The law also provides an escape route and justification for providers who may prefer not to interact with the population based on individual beliefs and values.

Some person may privately be trying to assist people and providing healthcare but I think it still goes back to the laws, the values and policies and in the absence of that, you know, you can not overtly assure those equal right, so you can mouth it, it's just, it can be all talk but they are actually here to ensure that it's not going to see the light of day. (F3)

….people don't want to be associated with what is not openly accepted, meanwhile clandestinely they will provide that service, same thing nobody wants to be given the stigma that he or she treats or he or she manages someone who is lesbian, someone who is transgender or someone who is a gay, this carry stigma. (F5)

Dv. Recommendations for Healthcare professionals on service provision to LGBT people

Both faculty and students were of the opinion that a "holistic, comprehensive" (F10) approach to service provision is the best way to ease the stigma associated with LGBT identity and ensure that healthcare facilities become safe spaces for LGBT people

I don't really know if you have a place where you label LGBT; nobody would want to go there because they know that okay, anybody that's entering there, this is who you are, you are one of them. So, well, I just feel they should be treated like normal people, if you have any issues, just come around, I don't feel there should be any segregation. (S10)

Nonetheless, the respondents acknowledged that in service provision, it would be difficult for healthcare professionals to overcome their personal prejudices and the stigma surrounding LGBT identity. At the institutional level, they identified the need to improve the quality of training for healthcare professionals as well as specially designed programs on ethics as the best option to help practitioners achieve professionalism in the presence of conflict.

……so maybe, they should start programs to help the people that are having problems, to help them to see LGBT people as human beings first and treat them as human beings and not as

something...something...abominable or something. I think there should be programs created to help the doctors see the difference and maintain their professionalism. (S7)

Respondents considered some skills critical in other to provide culturally acceptable care to LGBT patients. These includes: friendliness, being knowledgeable about LGBT related health issues and responsive to patient/client needs.

…….the person might have a preconceived notion that they are going to stigmatize me and so they might read meaning into some things that should not be read meaning into, so em, health care workers too should have that at the back of their mind so that if the person is being defensive and all that, you just know that it maybe because of what they've experienced before or what they perceived…. (F9)

In addition, participants appealed to core professional values to explain how they could provide better care:

I think confidentiality should be of utmost importance in situations whereby you come across them because even within hospital settings, much as we like to pride ourselves on confidentiality, stories of patients with abnormalities always get out and so I feel like confidentiality should be formed that such information won't. S6

Discussion

Summary of findings and comparison to existing literature

The findings from our mixed methods study reinforce and extend findings from earlier studies. Teaching and learning about LGBT health was found to be inadequate for healthcare students in Lagos, Nigeria from the perspective of both students and faculty. Similar findings have been reported in a South African study[16], indicating that this finding may be transferable across other countries in the region. The majority of the faculty do not teach LGBT health related topics in class nor use LGBT examples. Most of the students could not recollect instances when they received lectures on LGBT topics in class.

Overall, knowledge of LGBT related terminologies was poor, with students more knowledgeable than faculty while faculty were more accepting of LGBT patients compared to students. Although there is some evidence that understanding of language around LGBT identities may be improving [24], poor knowledge of LGBT-related terminologies remains an issue in the USA [25,26] Transgender patients are particularly vulnerable to the impact of poor understanding and perceptions from healthcare professionals, which sometimes manifests as confusion about terms, lack of comfort and discriminatory acts during encounters.[27,28] Poor LGBT health-related knowledge has even been documented among physicians with a positive attitude,[4] which was explored in more depth in this study uncovering the finding that many participants were keen to know more in order to better support their patients. Inadequate representation of teaching on human sexuality in curriculum delivery and evaluation has been observed in schools of nursing and medical schools in other countries in the global south and north.[29],

and this study found that the social and political context exacerbated this problem. In addition, the absence of LGBT content in the formal curriculum was a deterrent to its delivery in the classroom, which has also been reported by other studies where students did not learn about LGBT health issues in the classroom.[30]

Previous studies have shown that exposure to LGBT patients during clinical training is key to developing inclusive practice and is associated with development of positive attitudes towards LGBT people.[2,31]. Healthcare students and faculty in this study reported minimal contact with LGBT individuals and patients, which might contribute to the high proportion that were either indifferent or expressed negative attitudes, as well as the very high proportion that would observe as bystanders if they witness harassment of an LGBT individual. However, it has also been argued that clinical exposure alone is not sufficient and that appropriate information on LGBT health must complement clinical training before attitudinal change can occur.[32] The manner in which faculty handle delivery of LGBT health topics can serve as an indication of comfort with LGBT related issues. In this study, the reports of faculty discomfort while mentioning LGBT health in class described by both students and faculty clearly falls short of that required for a positive classroom culture, an attribute that promotes student learning.

Theoretical interpretation

By building on the socio-ecological model, this study is able to link its results to potential interventions at different policy levels (Individual; Intrapersonal; Institution; Community; Policy; Globalization).

Placing our findings within the context of the six levels of the socio-ecological model (Fig. 1**)**

Domain 1 – Individual

Conflict arising from incongruent personal and professional values has been described in previous studies[33] and in this context was characterized by the fear of being accused of promoting/supporting LGBT interests (legal) or the emotional disturbance of promoting and abetting a 'sin' during clerking, physical examination and care for an LGBT patient (religious and cultural), while also believing in professional values about caring for patients regardless of personal identity characteristics and acknowledging that the WHO position on sexuality and gender identity was counter to their own beliefs. The internal conflict can manifest as implicit bias which may be picked up by patients during patient provider interaction. This dilemma could be temporarily 'resolved' through enacting a restriction on the type of service providers were willing to render (i.e. basic general healthcare services and not LGBT specific services). Healthcare professionals in this study were worried that providing services to LGBT patients would impact negatively on their own mental health.

Domain 2 – Interpersonal

Interpersonal communication and relationships within and outside the classroom between faculty, students and/or patients, and between LGBT and non-LGBT individuals moderates the perception of safe

and inclusive interpersonal spaces.[34,35] The sense of safety may be threatened in a situation where participants are struggling to manage the conflict between personal and professional expectations as described above. In addition, the sense of personal safety within the campus is affected by stigma, which was a major theme in our qualitative data. Furthermore, for healthcare faculty and students, the risk of courtesy stigma was perceived to be high

The limited exposure to LGBT patients removes the opportunity for healthcare students and professionals to confront or reflect upon their own assumptions about LGBT people. Moreover participants in the survey, expressed poor understandings of the nature or impact of discrimination on the health of LGBT people, which may help explain the poor quality of service experienced by LGBT patients in previous studies in Lagos.[36,37]

Discriminatory and micro-aggressive behaviours based on heteronormative and cisnormative beliefs are embedded within teaching, learning and service provision.[38,39] Healthcare students imbibe the norms, values and beliefs of the profession from their lecturers, academic mentors, role models and peers during formal and informal encounters.[40,41] The fear and anticipation of these acts at the interpersonal level during clinical encounters might be responsible for perceptions of the faculty in this study that LGBT patients are unduly sensitive and biased against non-LGBT providers.

Domain 3 – Institutional

Both formal and informal aspects of institutional culture contribute to an inclusive climate.

The curriculum is the main formal driver for teaching, learning and training, and the absence of formal requirements to address LGBT health is compounded by some faculty refusing use LGBT examples in class, either because they do not have the pre-requisite knowledge or because they consider being LGBT to be socially or morally unacceptable. The marginalization of LGBT topics in the curriculum creates a hidden curriculum[41] (shared through the interpersonal level, described above) that reinforces and institutionalises the culture of heteronormativity and provides an easy solution for individuals who would rather not mention teach the topics. In addition, our study shows that most students desired to know more about LGBT related issues. They wanted access to local studies and evidence to provide information on the aetiology of medical issues often experienced by LGBT people and on the social issues surrounding LGBT identity, in order to provide guidance and enable them make informed decisions on this subject in Nigeria.

Domain 4 – Community

Culture and religion influences what is acceptable. In Nigeria, demands for equal rights for LGBT people with their heterosexual and cisgender citizens is morally and socially unacceptable to the majority of people who participated in this study (and to the wider population).[41] The common perception of an LGBT person as an individual with mental health issues, an abnormal or immoral lifestyle and or as a criminal raises great concerns about safety issues and generates fear within the healthcare community.

Intergenerational differences exist within the community on knowledge and attitude towards LGBT people which was attributed partly to the effect of social media and the evolving culture. This in turn causes concern about how people will preserve their faith in the context of changing values and evolving culture worry. These unresolved issues have led to resistance to addressing inequalities in the access to healthcare services for LGBT people and inequalities in health outcomes.[42–44]

Domain 5 – Policy

Colonial laws and colonization are an important dimension in the LGBT narrative in Nigeria because the British colonial laws were the backbone of the Nigerian legal system until recently. The interactions between culture, religion and the law support widespread discrimination against LGBT people, including in the health system. The law criminalising same sex marriage, which attracts a 10 year jail sentence, and also criminalizes those who 'support' LGBT people,[45] is the main reference point to justify non-inclusion of LGBT health in the curriculum and/or for not teaching the subject in all the departments. However, the policy picture is not clear as there were three groups of faculty, those who are currently using LGBT examples in teaching, those who are willing to use LGBT examples in teaching and the majority who are not willing to do so. The poor knowledge and the fear of what might happen when interacting with an LGBT patient recorded in this study is potentially a surmountable barrier to teaching about LGBT health inequalities.

Domain 6 – Globalization

Media socialization has been shown to increase acceptance of LGBT individuals.[42,44] By showing LGBT individuals locally and in foreign countries (ordinary people, celebrities and role models) in real life situations, social media in Nigeria is successfully generating conversation around LGBT identity. There have been two responses: those trying to understand, who have been secondarily socialised through social media and will prefer to talk about LGBT issues, and people who feel that silence and refusal to acknowledge those who are LGBT or support LGBT people is the best way forward. Participants in this study reported that the older generation are the vast majority in the latter group while the younger generation are the majority in the previous group. Through technology and international travels individuals have been exposed to global ideologies and United Nations anti-discriminatory human rights laws. Globalization has therefore contributed to the evolving culture observed in several countries including Nigeria, and plays a role in the generational divide on LGBT acceptance reported in this study.

Strength and limitations

This is a case study of a complex and controversial topic in an academic institution in a cosmopolitan city in Nigeria. A strength of the study was the mixed methods approach: by starting with an anonymous survey, this generated a discussion around LGBT issues, which loosened up inhibitions and enabled recruitment of people with diverse opinions to the interview study. The survey responses were analysed and used to review and refine the interview guide for the qualitative interviews. By exploring personal stories and subjective experiences within the contextual landscape we were able to explore nuances and

challenges in the experience of faculty and students and to link these to an established theory - the socio-ecological model. However, our findings may not be representative of attitudes in similar institutions in other parts of Nigeria. The assessment of knowledge was not comprehensive as it was restricted solely to LGBT terminologies. There is likely to be some degree of socio-acceptability bias resulting in some respondents providing socially desirable responses that fits the expectations of a healthcare professional while on the other hand responses on attitude could also be exaggerated due to the existing criminalising law.

Implications for practice

Recommendations for practice are presented at the different levels of policy indicated by the socio-ecological model, and reinforce the importance of multi-level intervention for long term change. Theoretical and clinical training of faculty will empower providers to deal with internal conflict thereby improving access to quality services. Opportunities for reflexivity and deeper understanding of the impact of stigma on the mental and physical wellbeing of LGBT people can improve understanding of the interpersonal issues in inclusive clinical practice. Development of an integrated inclusive curriculum with relevant LGBT topics followed by a trial to evaluate its effectiveness before its adoption will address institutional homophobia and transphobia while nationwide replication of this study will raise the importance of the issue at other institutions and allow for comparison of similarities and differences and identification of peculiarities important for program design and future interventions. Locally-relevant research evidence on the right to health and context–specific educational models will generate confidence within the healthcare community and reduce the risk of courtesy stigma (from the interpersonal level). Advocacy with policy makers by an intersectoral multidisciplinary team on the right to health and repel of criminalising laws will provide an enabling environment for healthcare professionals to provide quality services for LGBT people. On a global level, as the younger generation of Nigerian healthcare professional interact through global travel and digital technology with laws and policies protective of LGBT health, knowledge may increase. However, our research has shown the continued complexity of global relationships in a post-colonial world and these debates need to be addressed as advocacy that is perceived to be pseudo-colonial in nature is unlikely to be effective in addressing health inequalities.

Conclusion

This study generated timely evidence on the pathway for a multi-level intervention to address documented health disparity experienced by LGBT individuals in sub-Saharan Africa as a result of lack of access to quality healthcare services. Action is required by non-LGBT individuals and the LGBT community to generate a roadmap based on scientific evidence for an inclusive society that will advocate for, train the health workforce on and build enduring institutions that will enshrine the right to health for LGBT people in countries with criminalising laws including Nigeria.

Declarations

- Ethics approval and consent to participate - Ethical approval for the study was obtained from the College of Medicine, University of Lagos Health Research and Ethics Committee CMUL/HREC/08/17/240 and University of Birmingham Ethics Committee (ERN_17-1538).
- Consent for publication - Not applicable
- Availability of data and materials - The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request.
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- Authors' contributions

AS, KJ and NG conceived the idea for the study and developed the protocol; AS collected and analysed the data; AS, NG and KJ interpreted the data; AS drafted the manuscript with critical input from NG and KJ; all authors read and approved the final manuscript.

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Tables

Table 1: Integration of Qualitative and Quantitative Result

(Table Titles & Corresponding Qualitative Themes)

Quantitative result	Qualitative result
Knowledge of LGBT related terminologies (Table 2)	Theme – Knowledge of LGBT terminologies among faculty and students
Teaching of LGBT related health topics (Table 3)	Theme – Teaching and learning about LGBT health topics *Categories* *i. Current practice with regards to teaching and learning* *ii. Concerns regarding teaching and learning about LGBT topics within the culture of silence and a criminalizing law* *iii. Recommendations for effective training and integration of LGBT health into the curriculum*
Attitudes towards LGBT patients (Table 4)	Theme – Ethics, professionalism and personal beliefs in a conflict situation *Categories* *i. Availability of safe spaces in health facilities* *ii. Conflicting heart, trying not to feel it, trying not to let it show within the context of service provision to a hidden population* *iii. Intersectionality: Faculty and students as healthcare professionals with religious and cultural beliefs* *iv. Distrust and perception of rejection from healthcare provider* *v. Access to healthcare services for LGBT people in Nigeria* *vi. Recommendations for Healthcare professionals on service provision to LGBT people*

Table 2: Knowledge of LGBT Related Terminologies

Terminology	Knows the meaning Student (n = 172)	Knows the meaning Faculty (n = 105)
Bisexual	144 (83.7)	89 (84.8)
Biphobia	48 (27.9)	24 (22.9)
Cisgender	17 (9.9)	15 (14.3)
Cisnormativity	14 (8.1)	11 (10.5)
Gender Identity	91 (52.9)	58 (55.2)
Heterosexual	136 (79.1)	87 (82.9)
Heterosexism	52 (30.2)	34 (32.4)
Heteronormativity	23 (13.4)	14 (13.3)
Homosexual	153 (89.0)	94 (89.5)
Homophobia	114 (66.3)	59 (56.2)
Micro-aggression	20 (11.6)	20 (19.0)
Sexual orientation	119 (69.2)	82 (78.1)
Lesbian	161 (93.6)	99 (94.3)
Gay	162 (94.2)	99 (94.3)
Bisexual men	153 (89.0)	90 (85.7)
Bisexual women	151 (87.8)	88 (83.8)
Trans	130 (75.6)	61 (58.1)
Transgender	150 (87.2)	82 (78.1)
Transphobia	81 (47.1)	28 (26.7)
LGBT	105 (61.0)	71 (67.6)
Queer	45 (26.2)	44 (41.9)
Queerphobia	30 (17.4)	21 (20.0)
Knowledge Score	Student Mean 12.27 $\pm$ 4.19 $\pm$ 5.03	Faculty mean 12.10
Knowledge Grade (scores above the mean are classified as good)	Student Good 101 (58.7) (48.6) Student Poor 69 (40.1) (51.4)	Faculty Good 51 Faculty Poor 54

Table 3: Teaching of LGBT Related Topics

Topic	Yes		Teaching method
	Frequency (%)		
	Student	Faculty	
Definition and theories of sexual orientation	43 (25.0)	6 (57)	Tutorial, seminar, didactic lecture, discussion
Homophobia, heterosexism	16 (9.3)	3 (29)	Tutorial, seminar, didactic lecture, clinic, ward-round
Barriers to access to health care for LGBT people	21 (12.2)	5 (48)	Tutorial, didactic lecture, discussion
Alcohol, tobacco, or other drug use by LGBT people	18 (10.5)	6 (57)	Tutorial, didactic lecture, ward round, group project
Safer sex for LGBT people	20 (11.6)	5 (48)	Tutorial, seminar, didactic lecture
HIV in LGBT people	47 (27.3)	7 (67)	Tutorial, seminar, didactic lecture, ward-round, group project
Other sexually transmitted infections in LGBT people	34 (19.8)	6 (57)	Tutorial, seminar, didactic lecture, discussion, ward-round
Chronic disease risk for LGBT populations	19 (11.0)	5 (48)	Tutorial, seminar, didactic lecture
Disorders of sex development (DSD)/Intersex	26 (15.1)	10 (95)	Tutorial, seminar, didactic lecture, discussion, clinic, ward-round
Transitioning (e.g. male-to-female, female-to-male)	14 (8.1)	5 (48)	Tutorial, seminar, didactic lecture
Sex reassignment surgery / Gender affirming treatment	11 (6.4)	6 (57)	Tutorial, seminar, didactic lecture
LGBT adolescent health	16 (9.3)	3 (29)	Tutorial, seminar, didactic lecture
Mental health in LGBT people	18 (10.5)	3 (29)	Tutorial, seminar, didactic lecture

Table 4: Attitudes towards LGBT Patients

	Agree		Indifferent		Disagree	
Statement	**Student**		**Student**		**Student**	
(n = students 172, faculty 105)		**Faculty**		**Faculty**		**Faculty**
LGBT patients deserve quality care from doctors and nurses.	146 (84.9)	95 (90.5)	15 (8.7)	7 (6.7)	7 (4.1)	1 (1.0)
LGBT patients should only seek health care from LGBT health clinics.	23 (13.3)	10 (9.5)	29 (16.9)	19 (18.1)	116 (67.5)	73 (69.5)
Doctors and nurses in public health facility should not treat LGBT patients.	6 (3.5)	0 (0.0)	14 (8.1)	10 (9.5)	148 (86.0)	31 (88.5)
I would be comfortable if I became known among my colleagues as a doctor that treats LGBT patients.	70 (40.7)	43 (41.0)	59 (34.3)	42 (40.0)	39 (22.7)	18 (17.1)
I would be comfortable if my heterosexual patients learned that I was treating LGBT patients.	77 (44.8)	49 (46.7)	63 (36.6)	37 (35.2)	27 (15.7)	17 (16.2)
I would be comfortable telling my family that I treat LGBT patients.	85 (49.4)	54 (51.4)	57 (33.1)	34 (32.4)	26 (15.1)	15 (14.3)
I would be comfortable taking history from an LGBT patient	111 (64.5)	74 (70.4)	44 (25.6)	23 (21.9)	13 (7.6)	6 (5.7)
I would be comfortable conducting a physical exam on an LGBT patient.	99 (57.5)	75 (71.4)	44 (25.6)	21 (20.0)	25 (14.5)	7 (6.7)
I would be comfortable conducting a genitourinary or pelvic examination on an LGBT patient.	90 (52.3)	67 (63.8)	52 (30.2)	20 (19.0)	26 (15.1)	15 (14.3)
I would be comfortable discussing sexual behaviour with an LGBT patient	82 (47.7)	60 (57.1)	49 (28.5)	27 (25.7)	36 (20.9)	16 (15.3)
Attitude LGBT patient Score NR students = 4, faculty = 0	Mean Student 37.95 $\pm$ 7.17		Mean Faculty 39.58 $\pm$ 9.75			
Attitude LGBT patient Grade	Student Positive 72 (41.9) Student Negative 96 (55.8)		Faculty Positive 58 (55.2) Faculty Negative 47 (44.8)			

Figures

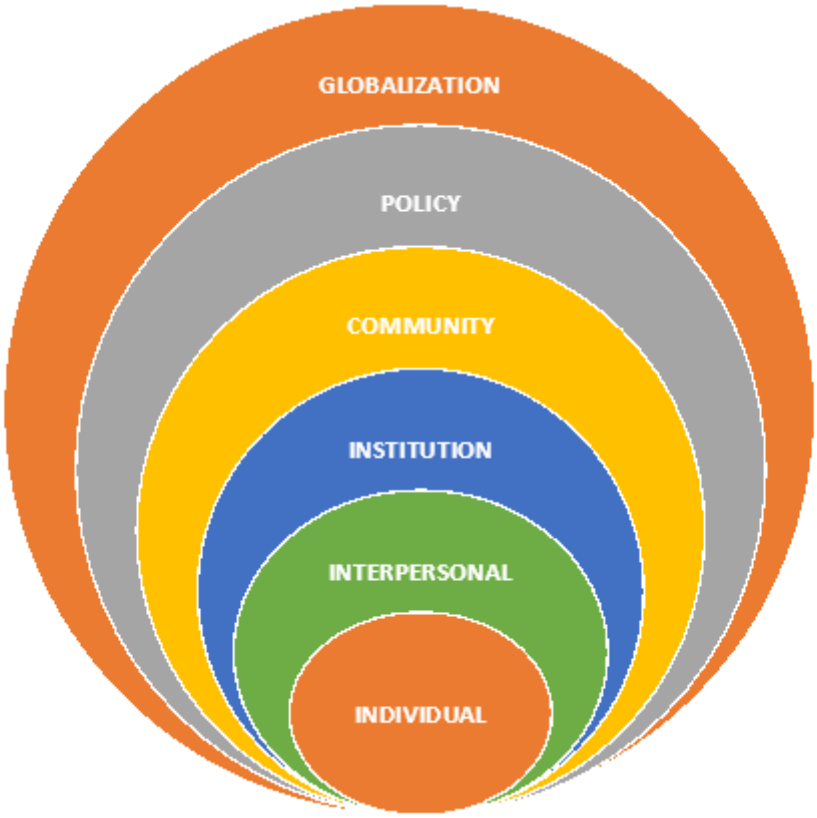

Figure 1

Modified Socio-Ecological Model showing Barriers and Facilitators to Teaching and Learning LGBT Topics. • Globalization Concepts – [Human Rights, Global ideologies, International media, International travels, Laws and policies in High income countries] • Policy Concepts – [Criminalising laws, National laws and policies, Legal enforcement, Rights to health] • Community Concepts – [Culture, Religion, Attitude, Social media, Training institutions, Local media] • Institutional Concepts – [Curriculum, Classroom etiquette, Institutional policy and culture, Attitude of staff, Training opportunities for staff, Access to online resources] • Interpersonal Concepts – [Interactions faculty/faculty, faculty/students, students/parents, student/student] [Interactions non-LGBT/LGBT family, friend, peer, colleague, patient, role model, celebrity] [Family culture and cohesion] • Individual Concepts – [Knowledge, Beliefs and values, Attitudes, Sexual orientation, Gender identity, Age, Experience, Religion, Skills and training, Local media, Social media]