

Designing implementation strategies for the inclusion of LGBTQIA+ and key populations content in undergraduate nursing curricula in KwaZulu-Natal, South Africa: Protocol for a Multi-Methods Research Project

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Abstract

Background: Despite South Africa's progressive legislation to protect the human rights of individuals who identify as Lesbian, Gay, Bisexual, Transgender, Intersex, Queer and Allied (LGBTQIA+), these individuals continue to encounter challenges with accessing quality health care. This subsequently leads to unmet health needs which results in poor outcomes. Evidence suggests that the LGBTQIA+ community are faced with disproportionate rates of HIV infection, mental health disorders, substance abuse and other non-communicable diseases. The reported morbidity rates are attributed to challenges they report experiencing when accessing health care. Research suggests that these challenges are mainly due to the lack of knowledge and skills of health workers to provide care that addresses the unique needs of these individuals.

Objective: The proposed study aims to facilitate the inclusion of health content related to the LGBTQIA+ community and other key populations in the undergraduate nursing curricula of KwaZulu-Natal.

Methods: A multi-method design, guided by a combination of theoretical constructs, will be used to conduct the study using multiple phases. Primary and secondary data will be collected and triangulated to co-design relevant content and approaches to facilitate inclusion of LGBTQIA+ health content in the undergraduate nursing curricula of higher education institutions in KwaZulu-Natal, South Africa.

Results: The proposed study is designed within the lens of social justice in that it will inform generation of knowledge and skills that are required for provision of care to meet the unique needs of the LGBTQIA+ community in KwaZulu-Natal, South Africa.

Conclusions: The findings of the proposed project have implications for nursing and broader health science education in relation to knowledge and skills transfer for undergraduate students in KwaZulu-Natal and potentially South Africa and broader health science disciplines.

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Original Manuscript

Designing implementation strategies for the inclusion of LGBTQIA+ and key populations content in undergraduate nursing curricula in KwaZulu-Natal, South Africa: Protocol for a Multi-Methods Research Project

Abstract

Background: Literature suggests that Lesbian, Gay, Bisexual, Transgender, Intersex, Queer and Allied (LGBTQIA+) individuals encounter challenges with access and engagement with health services. Studies have reported that LGBTQIA+ individuals' experiences stigma, discrimination and health workers' micro aggression when accessing healthcare. There is compelling evidence to suggest that the LGBTQIA+ community are faced with disproportionate rates of HIV infection, mental health disorders, substance abuse and other non-communicable diseases. The South African National Strategic Plan (NSP) on HIV/AIDS, TB and STI's (2023-2028) recognises the need for providing affirming LGBTQIA+ health care as part of the country's HIV/AIDS response strategy that is rooted in comprehensive and holistic care underpinned by the principles of community oriented primary healthcare. However, current anecdotal evidence suggests paucity of LGBTQIA+ and key populations health content in the undergraduate health science curricula in South Africa. Moreover, literature reveals a general lack of health worker training regarding the health needs of LGBTQIA+ persons and other key populations such as sex workers, People Who Inject Drugs (PWID) and Men who have Sex with Men (MSM).

Objective: This protocol paper describes the design of a project that aims at facilitating the inclusion of health content related to the LGBTQIA+ community and other key populations in the undergraduate nursing curricula of KwaZulu-Natal, South Africa.

Methods: A multi-methods design encompassing collection of primary and secondary data using multiple qualitative designs and quantitative approaches will be used to generate evidence that will inform the co-design, testing and scale-up of strategies to facilitate the inclusion of LGBTQIA+ and key populations content in undergraduate nursing curricula in KwaZulu-Natal, South Africa. Data will be collected using a combination of convenience, purposive and snow ball sampling techniques from LGBTQIA+ persons, academic staff, undergraduate nursing students and other key populations such as MSM, PWID and sex workers. Primary data will be collected through individual in-depth interviews, focus groups discussions and surveys guided by semi-structure and structured data collection tools. Data collection and analysis will be an iterative process guided by the respective research design to be adopted. The continuous quality improvement process to be adopted during data gathering and analysis will ensure contextual relevance and sustainability of the resultant co-designed strategies that are to be scaled-up as part of the overarching objective of this study.

Results: The proposed study is designed in response to recent contextual empirical evidence highlighting the multiplicity of health challenges experienced by LGBTQIA+ individuals and key populations in relation to health service delivery and access to healthcare. The potential findings of the study may be appropriate for contributing to the education of nurses as one of the means to ameliorate these problems.

Conclusion: This research has potential implications for nursing education in South Africa and worldwide as it addresses up-to-date problems in the nursing discipline as it pertains to undergraduate students' preparedness for addressing the unique needs and challenges of the LGBTQIA+ community and other key populations. The findings may also provide baseline data to inform knowledge transfer to other health sciences disciplines that have not included LGBTQIA+ content in their undergraduate curricula in South Africa.

Background

South Africa is one of the most progressive African nations when it comes to legislation protecting the human rights of individuals who identify as Lesbian, Gay, Bisexual, Transgender, Queer, Intersex and Allied (LGBTQIA+) [1]. Despite institutionalised rights, evidence suggests that the LGBTQIA+ community continue to encounter stigma, discrimination and threats to their personal wellbeing [2-4]. Research on the experiences of gender and sexual minorities indicate that the LGBTQIA+

population experience neglect, harassment and poor treatment at the hands of healthcare workers when accessing healthcare [5, 6]. Moreover, studies report that the LGBTQIA+ community face several systemic and structural barriers that hinder access to various forms of basic public services including health care, resulting in unmet health needs [7] [8]. The structural and systemic barriers hindering access to healthcare relate to the lack of physical resources to cater for the unique needs of this population, the stigmatising attitudes of health care personnel, and the lack of skilled health care workers to provide affirming care, catering to the needs of the population have also been reported [9-11]. Furthermore, literature suggests that the LGBTQIA+ community face disproportionate rates of HIV/AIDS and TB infection [12]. Moreover, they are at higher risk for mental health disorders, substance abuse and long term sequelae resulting from untreated communicable and non-communicable disease due to barriers hindering access to health care [10, 13, 14].

The current reported state of health service delivery as it pertains to the LGBTQIA+ community threatens local and global health policy reforms in terms of Universal Health Coverage and the Sustainable Development Goals. It has been argued that the poor training of health care workers regarding the health needs of this community and the limited provision of appropriate healthcare may account for challenges faced by the LGBTQIA+ community when accessing health services in South Africa [8, 9, 11, 15]. While Literature on the inclusion of LGBTQIA+ health content in the curricula of health science programmes in sub-Saharan Africa, including South Africa is limited, it suggests that there is little, to no, formal theoretical and clinical training provided to undergraduate health science students [16, 17]. It is further suggested that, in instances where content is included, it is often among medical disciplines with no systematic structure, which results in inadequate mastery of essential clinical skills and the knowledge required to enable students to learn how to address the health needs of the LGBTQIA+ community [16, 18]. The findings of a curriculum mapping exercise to determine LGBT health related content, pedagogical assessment and methodology at a selected University in South Africa revealed that the gaps in the inclusion of LGBTQIA+ health content in the curriculum were only evaluated once throughout the duration of the course, with no follow-up, long-term assessment to determine knowledge retention, assess improvement of attitudes or increased levels of comfort. Moreover, the teaching styles adopted did not allow for an awareness and reflection of students' perceptions in a manner which challenges their biases towards the LGBTQIA+ community [16]. The reported inconsistencies in the curriculum may impact on the preparedness of health science graduates for a health system which requires that universal, quality care be provided for all, irrespective of gender identity and sexual orientation. Additionally, they may account for the reported challenges experienced by LGBTQIA+ persons in relation to access and quality of health services provided. This subsequently necessitates training interventions to be directed at pre-service and in-service health care workers to address the current health service delivery disparities faced by the LGBTQIA+ community [19] [20].

The South African health system, which is based on a primary healthcare approach to service delivery, is nurse-led, as nurses constitute the majority workforce [21]. The literature reviewed on the training and inclusion of LGBTQIA+ health needs and of care has revealed gaps in relation to how such training is provided. Current evidence, suggests poor preparation of South African healthcare workers to address the health needs of this community [7, 8]. This may in turn contribute to unmet health needs and the possibility of poor public health outcomes for South Africa, especially in light of the current incidence and prevalence of communicable and non-communicable diseases.

The South African National Strategic Plan (NSP) on HIV/AIDS, TB and Sexually Transmitted Infections (STIs) necessitates targeted interventions to be directed toward key populations and LGBTQIA+ persons to achieve HIV/AIDS epidemic control, in line with the UNAIDS 95-95-95 strategy [22, 23]. An essential part of achieving this goal thus consists of facilitating access to quality health care to meet the needs of LGBTQIA+ persons and other key populations. There is thus a need to facilitate the inclusion of LGBTQIA+ health content in undergraduate nursing curricula to ensure that pre-service nurses are adequately prepared to address the health needs and challenges of these

individuals in line with the principles of universal health coverage and the sustainable development goals [24, 25].

The proposed research will thus be conducted to facilitate the inclusion of LGBTQIA+ and key populations' health content in the undergraduate nursing curricula of higher education institutions in KwaZulu-Natal, South Africa. In this regard, four higher education institutions, namely the University of KwaZulu-Natal, the Durban University of Technology, the University of Zululand and the KwaZulu-Natal College of Nursing, will form part of the project, as these institutions offer undergraduate nursing programmes producing nurses who predominantly serve the KwaZulu-Natal province of South Africa. The proposed study findings have implications for nursing and health science education, in that the findings may inform knowledge and skills transfer for the inclusion of LGBTQIA+ and key populations' health content for all undergraduate nurses in South Africa and broader health science disciplines at higher education institutions in KwaZulu-Natal and the country of South Africa. The study findings also have implications for future research in this area, and for broader public health issues related to provision of health services for the LGBTQIA+ persons and other key populations. For the purpose of this study, other key populations refer to sex workers, drug users, and Men who have Sex with Men (MSMS's) as identified in the South African NSP for HIV/AIDS, TB and STI's (2023-2030).

Aim

To design implementation strategies for the inclusion of LGBTQIA+ and key populations content in undergraduate nursing curricula in KwaZulu-Natal, South Africa.

Objectives

1. To analyse the health needs and practices of service provision for the LGBTQIA+ community and other key populations in KwaZulu-Natal, South Africa
2. To explore the existing practices regarding the inclusion of LGBTQIA+ and key populations health content in the curricula of undergraduate nursing programs in KwaZulu-Natal, South Africa.
3. To co-design, test and evaluate relevant approaches to facilitate inclusion of LGBTQIA+ and key populations health content in undergraduate nursing curricula in KwaZulu-Natal, South Africa
4. To spread and scale-up the use of co-designed evidenced based strategies for the inclusion of LGBTQIA+ and key populations health content in undergraduate nursing curricula in KwaZulu-Natal, South Africa

Research Questions

In relation to objective 1:

- 1.1. What is the current practice of health service provision for the LGBTQIA+ community and other key populations in KwaZulu-Natal, South Africa?
- 1.2. What are the health needs of the LGBTQIA+ community and other key populations in KwaZulu-Natal, South Africa?

In relation to objective 2:

- 2.1. What is the current available health content on the LGBTQIA+ community and other key populations in the curricula of undergraduate nursing programs in KwaZulu-Natal, South Africa?
- 2.2. What are various academics and students' experiences, understanding and perceptions regarding the inclusion of health content on the LGBTQIA+ community and other key population in undergraduate nursing curricula in KwaZulu-Natal, South Africa?

In relation to objective 3:

- 3.1. What strategies can be co-developed to facilitate inclusion of health content on LGBTQIA+ community and other key populations in undergraduate nursing curricula in KwaZulu-Natal, South Africa?
- 3.2. What are the reported outcomes of testing the co-developed strategies to facilitate inclusion of

health content on the LGBTQIA+ community and other key population in undergraduate nursing curricula in KwaZulu-Natal, South Africa?

In relation to objective 4:

- 4.1. What are the recommended approaches to facilitate spread and scale up of co-developed strategies to facilitate inclusion of health content on the LGBTQIA+ community and other key populations in undergraduate nursing curricula in KwaZulu-Natal, South Africa?

Methods

Study setting

The study will be located within the KwaZulu-Natal province of South Africa and four higher education institutions, namely the University of KwaZulu-Natal, the Durban University of Technology, the University of Zululand and the KwaZulu-Natal College of Nursing will be sites for data collection. These higher education institutions each presently have an annual size intake of 50 students per year and collectively produce between 120-170 new nurse graduates annually. The institutions also have a complement of academic staff with varying qualifications ranging from junior degrees to PhDs, with job functions aligned to respective qualifications as per national higher education policy and regulations stipulated by the professional body.

Overarching design

The study will employ a multi-methods design, encompassing quantitative and qualitative approaches to collect data from various categories of participants so as to address the objectives of the research study. The multi-methods design allows for multiple approaches to data collection which address the different research objectives and research questions that are related to the broad objectives of the research project. Moreover, the design will also allow for concurrent triangulation of data which will inform the process of co-designing strategies to facilitate inclusion of health content related to the LGBTQIA+ community and other key populations in undergraduate nursing curricula in KwaZulu-Natal. The study will thus incorporate multiple research designs to execute to the research process. The data that will be generated through the research process will inform the design, testing and implementation of a relevant strategy to facilitate inclusion of LGBTQIA+ and key populations content in undergraduate nursing curricula in KwaZulu-Natal using the process of continuous quality improvement (CQI) as recommended by the Institute of Health Improvement (IHI) [26]. The collection of data with concurrent data analysis will be an iterative process comprising of data triangulation, collation and collaborative strategy design. The study will thus be conducted in three phases which will entail: (1) Formative phase, (2) Co-design and testing and (3) Spread and scale-up. Table 1 provides an overview of the proposed research methodology and research process to be followed for execution of this study as informed by the three phases of the study. All phases of this study are yet to be carried out and will thus commence in 2024. Previous activities related to this project have been carried out informally in the form of undocumented sensitization training in response to contextual anecdotal evidence informed by the study findings on one of the principal investigators of this study [9, 15]. Other work relates to the exploration of nursing students' knowledge attitudes and perceptions regarding the health needs of sexual and gender minority individuals in KwaZulu-Natal, South Africa [27].

Phase 1: Formative phase

Overview

This phase serves to facilitate the situational analysis related to the broad objective of the research project. In phase one primary and secondary data will be collected to generate evidence on the health needs and practices of health service provision for the LGBTQIA+ community and other key populations in KwaZulu-Natal, South Africa. This phase will also entail execution of research processes to generate data on the existing LGBTQIA+ and key populations content in undergraduate nursing curricula in KwaZulu-Natal, South Africa. This phase will thus address

the research objectives one and two together with the related research questions of each objective.

Design

During the formative phase (phase1), primary and secondary data will be collected concurrently, analysed and triangulated to inform research processes that will unfold in phase 2 of this study. Multiple research designs will be used to gain comprehensive and holistic data that will contribute to evidence that will inform the design of implementation strategies to facilitate the inclusion of LGBTQIA+ and key populations content in undergraduate nursing curricular in KwaZulu-Natal, South Africa. The research designs to be used for phase 1 of this study are thus as follows: (1) scoping review, (2) exploratory descriptive qualitative study design, (3) descriptive phenomenological case study design, (4) document review through a curriculum mapping exercise and a (5) qualitative phenomenographic study design. These research designs will collectively inform the execution of the research process that will address objectives 1 and 2 of this proposed study.

To attain information on the health needs and practices of health service provision for the LGBTQIA+ community and other key populations, a systematic scoping review guided by the methodological framework by Arksey and O'Malley (2005) [28] will be conducted. An empirical research study will also be conducted using an exploratory qualitative descriptive design to gain a more in-depth understanding of the health needs of LGBTQIA+ individuals and other key populations. A descriptive phenomenological case study will subsequently be conducted to explore various stakeholder experiences regarding service provision for the LGBTQIA+ community and other key populations in KwaZulu-Natal, South Africa. The results of this empirical study together with the findings of the scoping review will be integrated with other data that will be generated to inform the health content on the LGBTQIA+ population and key populations that should be included in the undergraduate nursing curricula in KwaZulu-Natal.

A curriculum mapping exercise will also be conducted to review and determine the current content that is available on LGBTQIA+ community and other key populations in undergraduate nursing programs in KwaZulu-Natal. A qualitative phenomenographic study design will be used to explore the qualitative differences in various academics' and students' experiences, understanding and perceptions regarding the inclusion of content related to the LGBTQIA+ community and other key populations in KwaZulu-Natal, South Africa.

Sampling and recruitment

Since a combination of primary and secondary data will be collected to during phase 1 of the project, varying recruitment and data collection processes will be conducted. The secondary data that will be collected in this study will comprise of document review of existing research including peer reviewed and grey literature on the practices of health service provision and health needs of the LGBTQIA+ community and other key populations in KwaZulu-Natal, South Africa. The collection of secondary data will also include a curriculum review exercise that will entail mapping of the existing content that is included on the LGTBQIA+ community and other key populations in undergraduate nursing curricular at higher education institutions in KwaZulu-Natal, South Africa. In this regard document review of learning materials, study guides, module descriptors and relevant institutional teaching, learning and assessment policies will be performed for all undergraduate nursing programs in the selected institutions identified for data collection

As part of the empirical study related to the health needs of the LGBTQIA+ population and other key populations in KwaZulu-Natal, South Africa, data will be collected from a purposive sample of individuals from the LGBTQIA+ community and individuals who are key populations namely Men who have sex with men, transgender persons, sex workers and people who inject drugs. To recruit participants for this study, a purposive adjusted snowball sampling technique will be used. Initial recruitment of participants will be facilitated through the mediated access as informed by

key informants that are acquainted to the research team. Identification of participants will thus begin purposively wherein the researchers will identify relevant participants from the LGBTQIA+ community and those that are key populations (namely sex workers, MSM etc.) from their individual network of acquaintances which will include peers, family members, community networks and other spheres of influence. Mediated access to relevant participants will also be facilitated through professional research networks and other related organisations of influence. Since the researchers broadly have diverse networks of influence by virtue of differences in geographical location and professional position of influence, diversity of participants are expected which may thus minimise researcher biases.

To explore stakeholders' experiences regarding service provision for the LGBTQIA+ community and other key populations, purposive sampling of key informants including, healthcare workers, policy makers, key populations and the LGBTQIA+ identifying persons will be conducted. Policy makers will be recruited from district and provincial department of health offices. Healthcare workers will be recruited from primary health facilities within various health districts within the KwaZulu-Natal department of health and will comprise of nurse managers, primary health care nurses, enrolled nurses and nursing assistants. Recruitment of these participants will also be facilitated through relevant line managers and heads of establishment within the various levels of the health system. In this regard, written letters of information will be circulated electronically to provide information of the nature of the study and proposed data collection approaches. Following approval and confirmation by relevant managers, the participants will be contacted through the respective reporting lines and arrangements will be made to facilitate data collection based on their reported convenience in terms of date, time and preferred mode of data collection (whether online or face to face).

For sampling related to the empirical study of various academic and students' experiences, understanding and perceptions regarding the inclusion of content of the LGBTQIA+ community and other key populations, convenience sampling techniques will be used to identify undergraduate nursing students and academic staff in various levels of study. Participants will be approached through academic leaders and relevant level coordinators and lecturers. Recruitment of students will thus take place while students are on campus at the various higher education institutions. Written communication will be providing to relevant Head of department and thereafter disseminated to the various subject lectures. Arrangements will subsequently be made to collect data from the students based on their availability as informed by the various heads of department of undergraduate nursing programs and the relevant lecturers. Students will thus be conveniently approached after attending lectures and information about the nature of the study will be provided, those granting consent will be taken to private offices within the institutions where individual in-depth interviews and focus group discussion sessions will be conducted based on the number of students that consent to participate as convenient sampling processes unfold.

Data collection processes

All primary data will be collected following the appropriate informed consent processes; data will be collected at settings that are most convenient to participants. A combination of individual in-depth interviews and focus group discussions will be conducted. Online and face-to face methods of data collection will be adopted based on the convenience of participants. The online data collection methods will be facilitated through zoom, Microsoft teams, WhatsApp and telephonic interviews as informed by participant's convenience. All qualitative data will be collected until saturation is reached and data analysis will be guided by the qualitative design adopted. The individual in-depth interviews and focus group discussions to be held will be guided by self-developed interview schedule that is aligned to the respective objectives of this study. Typically, all the semi-structured interview guides will comprise of two sections namely participant demographics and guiding interview questions related to the various objectives of the

study. All interviews are anticipated to be conducted for approximately 35 to 60 minutes so as to obtain depth of qualitative data.

The secondary data collection processes will be conducted using the relevant methodological framework and data extraction tools aligned to the objective of the study. For the scoping review component, a self-developed data extraction tool comprising of Author, year of publication, summary of methodology, key findings, recommendation and limitations will be used to chart the data related to the health needs and practices of service provision of the LGBTQIA+ community and key populations. In this regard, two different review processes will be followed culminating in two scoping review documents. The curriculum mapping exercise to review existing content of LGBTQIA+ and key populations will be conducted using a self-developed curriculum review audit tool that assesses the type of content delivered, teaching styles, assessment methods adopted and learning outcomes associated with the content.

Phase 2: Co-design and testing

During this phase, primary and secondary data generated from phase 1 of this study will be consolidated following application of the relevant data analysis and triangulation processes. The consolidated data will be presented as emerging themes and possible recommendations to inform the design, testing and implementation of strategies to facilitate inclusion of LGBTQIA+ and key populations content in undergraduate nursing curricula in KwaZulu-Natal, South Africa. To operationalize the process of co-designing related to this phase 2 of this study, participants recruited as participants during phase one of the study will be contacted to facilitate member checking of triangulated data and emerging results from the data analysis process. The participants will be recruited directly by the researchers of the study using information that would have been obtained from phase 1 of the study. Workshop sessions will subsequently be set up to facilitate the co-design of strategies to facilitate inclusion of LGBTQIA+ and key populations content using data collected from phase one through nominal group technique to facilitate consensus. Implementation and testing of co-designed strategies will be facilitated through the CQI process. The Plan, Do, Study and Act (PDSA) cycle embedded within the CQI process will be used to iteratively define, test and refine the appropriate strategies that may lead to successful implementation of appropriate strategies that will facilitate inclusion of LGBTQIA+ and key populations content in undergraduate nursing curricula on the basis of contextual relevance and feasibility. Sustained stakeholder engagement through a series of workshops, engagements and consensus building sessions will be key feature of this phase and will serve to ensure co-designed strategies that are relevant for the contextual dynamics of higher education and health service delivery responsiveness within the KwaZulu-Natal context. The precise intervention strategy that will be co-designed for testing is presently not known however, it is anticipated that the strategy to be developed will be informed by primary and secondary data that will be generated in this study. Moreover, the strategy to be co-developed will also inform the content to be included, approach to inclusion, assessment strategies and other approaches related to teaching, learning and assessment. The anticipated outputs of this phase may thus be teaching content, learning aids, teaching guidelines and related policy briefs and publications. A key component in the execution of this study will be multiple stakeholder engagement that will include among others members of the LGBTQIA+ community and other key populations. This will ensure that the strategies and content to be included in the curricula are informed by the needs of individuals that the students will eventually have to cater to when upon completion of their studies. This may thus facilitate contextualised learning to ensure that nursing students become graduate that are effective in addressing the health needs of LGBTQIA+ and key populations in KwaZulu-Natal, South Africa.

Phase 3: Spread and scale-up

This phase will be informed by the outcomes of the small-scale testing of strategies that will be

co-designed during phase 2 of this study. The outcomes of the testing process will be informed by the CQI process that will be adopted during phase 2. During the spread and scale up, co-designed strategies will be rolled out at large scale in the undergraduate nursing programs of the selected higher education institutions in KwaZulu-Natal. In this regard, key stakeholders from the undergraduate nursing programs of the selected institutions will be identified as informed by participants that formed part of phase 1 and 2 of the study. The relevant gatekeeper processes will be followed and large scale adoption of the strategies designed in phase 2 will be scaled up based on the outcomes of the testing process and unique contextual factors affecting teaching and learning at different higher education institutions. The precise format of scale up is also not known but depends on the outcomes of phase 2 of the study which in turn is dependent on phase 1. Nonetheless scale-up of the co-designed strategy is anticipated to inform the content that is to be included in nursing curricula and the practices that relate to facilitating inclusion of thereof. The spread and scale-up process will also be monitored through CQI processes that entail routine data collection related to students and academic staff's experiences of the spread and scale-up process. Behaviour and attitude change assessment will also be embedded within the scale-up process as part of continuous quality improvement, this will be facilitated through the administration of quantitative survey tools to students and academic staff on attitudes, perceptions and awareness regarding key contents related to the LGBTQIA+ community and key populations in KwaZulu-Natal, South Africa. The long term sustainability of the project and emerging outcomes will be ensured by the development of policy briefs and recommendations for teaching, learning and assessment that advocate for co-designed content and strategies to be embedded within mainstream curriculum and pedagogical practices based on the contextual dynamics of the specific higher education institutions. Additionally, the inclusion of various categories of academic staff from the various institutions of higher learning as part of co-design, testing and implementation also serves as one of the means of ensuring long term sustainability.

Data analysis

Qualitative data analysis

The primary qualitative data that collected in this study will be analysed based on the design adopted per objective of the study. All qualitative data collected will be analysed following verbatim transcription of all interviews that will be conducted by the researchers and contracted research assistants. In line with primary data collection processes, data collected using the exploratory qualitative design will be analysed using inductively through content analysis as recommended by Cresswell (2014) [29]. The analysis of the data will thus include: (1) verbatim transcription of all audio recorded interviews, (2) writing of field notes with subsequent reading for comparison with audio recorded data to ensure accuracy, (3) repeated reading of transcriptions to attain familiarity with contents and formulate meaning units, (4) selection of informative components of the data, (5) repetition of steps previous steps to ensure valuable information is not missed, (6) grouping of similar topics together and (7) formulation of relevant themes and subthemes.

For the descriptive phenomenological case study design, data collected will be analysed as recommended by Colaizzi's (1978) steps of phenomenological data analysis as cited in Nxumalo et al (2023) [30]. The steps to be followed are thus as follows: (1) repeated reading of transcripts to gain a general sense of its contents, (2) extraction of significant statements in line with the relevant objective (3) formulation of meanings from the significant statements derived, (4) sorting of formulated meanings into categories, clusters of themes and themes, (5) integration of findings into an exhaustive description of the phenomenon being investigated, (6) description of the fundamental structure of the phenomenon, and (7) finally, member checking to validate the descriptive results.

Data collected through the phenomenographic study design will be an iterative process following steps guided by Sjolstrom and Dahlgren (2002) [31]. The first step will entail the familiarization,

where transcripts were read several times to become familiar with their contents. Second, a more focused reading to deduce differences and similarities in the transcripts. Through this process, the researchers will identify the key elements in the answers. During the condensation step, only the meaningful and relevant aspects of the transcript will be extrapolated. The fourth step will be preliminary grouping in with the focus on locating and classifying similar responses into preliminary groups. These preliminary groups will be reviewed to ascertain whether any other groups show the same meaning under different headings. This will be followed by a preliminary comparison of categories. Thereafter, categories naming following their confirmation in order to emphasize their essence. In the final step, the hope is to discover the outcome space based on their internal relationships and the qualitatively unique ways of understanding, conceiving, and experiencing the phenomena. Analysis of secondary data from the curriculum reviews and scoping review will be analysed thematically using steps recommended by Braun and Clarke (2012) [32]. The presentation of secondary data will thus be presented narratively following thematic analysis.

Quantitative data analysis

The quantitative data collected as part of the CQI process of phase three of the study will be analysed using descriptive statistics and inferential analysis. To facilitate this process, the data from Google Forms will be imported to a MS Excel spreadsheet in preparation for analysis which will be conducted using XPSS. The demographic profile data will be converted into categorical data, and the remaining sections will be converted into statistical data for interpretation. The categorical variables will be analysed descriptively as counts and percentage frequencies. To determine the association between categorical variables, the Chi-Square Test will be used. When the distribution of the cross-tabulations contains an expected value of less than 5, Fischer's exact test will be applied.

Trustworthiness and rigour

Techniques to ensure dependability, credibility, confirmability and transferability in this study will include triangulation and member checking. Individual in-depth interviews recorded using an audiotape will ensure credibility and confirmability of the data. The process of data transcription will appropriate data analysis process that are informed by the research design will ensure dependability. The iterative data collection and concurrent analysis approaches to be adopted will also facilitate credibility and confirmability. Data analysis will be done by experts in qualitative research methods to ensure reliability of findings. Moreover, member checking will also be done facilitate confirmability. To facilitate member checking, copies of transcriptions with emerging preliminary analyses of the data will be provide electronically to all participants to ascertain whether the transcripts and analysed data are a reflection of participants' responses and personal interpretation of the data. Moreover, during the workshop sessions to be held in phase 2 in line with the CQI processes, the analysed data will also be presented for participants to provide input as part of ensuring that the analysed data presented resonates with the participants' personal interpretations and intended meaning that they had hoped to get across during the qualitative interviews. All details related to the design and execution of the study are documented to facilitate transferability of the findings that are to emerge. For the quantitative data, the internal consistency of a set of items will be assessed using Cronbach's alpha and the item-rest correlation. Inferential statistical analysis tests will be conducted at 5% levels of significance.

Ethical considerations

Ethical approval was received from the Biomedical Research Ethics' Committee (BREC) at the University of KwaZulu-Natal - BREC/00002917/2021. Gatekeeper permission to conduct the study has been obtained from all selected higher education institutions where data will be collected. Written and verbal informed consent will be obtained from all participants prior to data collection. Ethical principles of autonomy, confidentiality, anonymity, and the right to withdraw will be observed. To ensure autonomy and right to withdraw from the study, all informed consent

will be obtained from all participants' prior data collection, a written information sheet will also be provided to all participants clarifying the nature of the in addition to verbal information that will be provided. Informed consent will be obtained verbally from all participants and they will be given the option to provide voluntary consent and opt-out of the study at any time without any form of penalty. Confidentiality and anonymity will be ensured during the data collection processes through conducting of individual interviews and focus groups in private venues that are not accessible to the general public, moreover special precautions will be taken not to collect personal information such as names, addresses and phone numbers during the recording of interviews. Unique identifies through the assignment of participant codes will also be done to facilitate anonymity during storage of data which will be kept in a password protected folder in the laptop of one researcher and will only be accessible to the research team. During data dissemination, no personal information and data that reveal participant identity will be reported, this includes manuscripts, reports and other written outputs that may emerge from the data collection process.

Results

The proposed project is informed by the findings of recent contextual studies related to health service provision for the LGBTQIA+ community and key populations in KwaZulu-Natal, South Africa. The findings of these studies have revealed gaps in training and preparedness of health science graduates to address the unique needs of these individuals in the South African context. Moreover, the South African NSP (2023-2028) on HIV/AIDS, TB and STI's necessitates targeted interventions and healthcare be provided to the LGBTQIA+ community and key populations as part of the HIV/AIDS response strategy. These interventions must be rooted in holistic and comprehensive person centred care. The aforementioned factors thus necessitate capacity to be created within existing undergraduate health science programs to enable pre-service healthcare providers to be adequately prepared to attend to the unique health needs of the population. Since current empirical evidence reveals gaps training of health science graduates in this regard it is necessary that research be conducted to inform co-design of relevant strategies to facilitate inclusion of LGBTQIA+ and key populations content in undergraduate nursing curricula in KwaZulu-Natal, South Africa.

In the context of the proposed study, strategies to facilitate inclusion of health content related to LGBTQIA+ communities and key populations relate to the design and implementation of relevant course content and other relevant teaching, learning and assessment materials that may support existing curriculum and pedagogical factors. The precise format of strategies and content that is to be developed remains unknown due to the varying contextual dynamics of higher education institutions and diverse health landscape of South Africa. Nonetheless the co-development and implementation process will be underpinned by recommended best practise related to teaching, learning and assessment practices, particularly in relation to teaching content related to sexual and gender minority groups. In this regard, it is envisioned that strategies and content will be systematically scaffolded into the curriculum and delivered in a manner that facilitates values clarification so that students' personal biases are challenged thereby addressing challenges of stigma and discrimination that are presently experienced by LGBTQIA+ persons and key populations. It is also envisaged that the training methodology and content will foster a culture of empathy and respect among students thus enabling them to be able to render affirming healthcare.

Discussion

This protocol paper describes the design of an evidenced informed project aimed at facilitating the inclusion of health content related to the LGBTQIA+ community and other key populations in undergraduate nursing curricula in KwaZulu-Natal, South Africa. A multi-methods design encompassing collection of primary and secondary data using multiple qualitative design

methods and quantitative approaches will be used to generate data that will be triangulated and integrated to inform the co-design, testing and scale-up of strategies to facilitate the inclusion of LGBTQIA+ and key populations content in undergraduate nursing curricula in KwaZulu-Natal, South Africa. Multiple stakeholder engagement underpinned by the continuous quality improvement process will ensure contextual relevance and sustainability of the outcomes of the project in terms of spread and scale-up of co-designed strategies. As informed by the recommendations of previous contextual and international literature, the undoubted severity of the health related problems of the LGBTQIA+ community and other key populations and the importance of different kinds of intersectional discrimination against LGBTQIA+ persons and the appropriateness of high quality education of nurses as a possible means to ameliorate these problems. On the contrary, existing literature alludes to the lack of training of undergraduate nursing students regarding the unique health needs of the LGBTQIA+ population and other key populations with potential consequences of unmet health needs which may contribute to poor health outcomes for these individuals [33].

The reported potential for mortality and morbidity related to untreated communicable and non-communicable diseases owing to reported challenges with access to healthcare among these individuals has public health implications. The training of pre-service nurses is thus a crucial step towards addressing the reported challenges experienced by the LGBTQIA+ population and other key populations. In this regard a holistic understanding of the different factors operating in the complex social processes involved in the healthcare problems of the LGBTQIA+ community may also be important to facilitate better understanding of these problems and therefore form the basis for appropriate strategies to be designed and implemented. In relation to training of pre-service nurses, this information may form the basis upon which content to inform health service provision is designed and implemented. The proposed study employs a multi-methods design to elicit data using a multi-phase data collection processes through multi-stakeholder engagement so as to co-design contextually relevant strategies to facilitate inclusion of LGBTQIA+ and key populations content in undergraduate nursing curricula in KwaZulu-Natal.

Implications

The anticipated outcomes of this research process has implications for nursing education, nursing scholars in South Africa and worldwide as it addresses up-to-date problems in the nursing discipline as it pertains to undergraduate students' preparedness for addressing the unique needs and challenges of the LGBTQIA+ community and other populations. In the South African context, this study also has potential implications for informing pre-service nurses training on healthcare provision for the LGBTQIA+ persons and other key populations as documented country's National Strategic Plan (2023-2028) for HIV/AIDS, TB, and STI's. The findings of this study also have potential implications for all undergraduate nursing programmes in the country, and may inform knowledge transfer for other health science disciplines which do not have this content formally embedded with their curricula.

Limitations

The execution of this project will be limited to undergraduate nursing programs in KwaZulu-Natal, South Africa which may not necessarily be reflective of all undergraduate nursing programs in the country. Moreover, since the study will be limited to undergraduate nursing programs, the findings may not be wholly applicable to other health science programs. Nonetheless the findings may provide foundational information to guide similar the co-design of similar strategies in other health science disciplines and undergraduate nursing programs in South Africa.

Conclusion

This paper describes the design of a multi-methods research project aimed at facilitating the inclusion of LGBTQIA+ community and other key populations in undergraduate nursing

curricula in KwaZulu-Natal, South Africa. This project is informed by the findings of previous contextual studies that have revealed challenges faced by the LGBTQIA+ community when accessing healthcare. Moreover, evidence has also revealed that South African healthcare workers are not equipped with training to deal with LGBTQIA+ health issues pre-service and in-service. The proposed study findings may thus contribute to addressing this gap and may serve as a means of ameliorating health challenges faced by LGBTQIA+ persons. The use of the multi-methods design and multiple stakeholder engagement including students, academics, members of the LGBTQI+ community and key population serves as a means of ensuring contextually relevant strategies are designed. The CQI process to be adopted as part of the co-design and testing phase will serve to ensure relevance of the strategies to be co-designed. The quantitative and qualitative evaluation processes to be adopted will ensure that outcomes of the project are measured in terms of knowledge, attitudes and perceptions.

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Data availability

All data used in the writing of this manuscript has been cited appropriately in text and in the reference list of this manuscript. No primary data set presently exists as this is a protocol paper.

Declaration

The authors declare no competing or conflicting interests

No generative AI was used on any portion of the manuscript

All authors contributed and agreed to the submission of this manuscript

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Table1. Summary of methodology and study execution

Phase	Objective (s)	Research question (s)	Design	Population	Sampling and data collection processes
Phase1: Formative phase	1.3. To analyse the health needs and practices of service provision for the LGBTQIA+ community and other key populations in KwaZulu-Natal, South Africa.	1.1.1. What is the current practice of health service provision for the LGBTQIA+ community and other key populations in KwaZulu-Natal, South Africa?	<ul style="list-style-type: none">▪ Scoping review using JBI/Arksey and O’Malley framework▪ Empirical study: qualitative descriptive phenomenologic al case study	<ul style="list-style-type: none">▪ Published and grey literature including related studies, policies and guidelines▪ Healthcare workers i.e. nurses, doctors, clinical associates and policy makers	<ul style="list-style-type: none">▪ Population, Intervention, Context, Outcomes (PICO) framework to identify relevant literature▪ Purposive sampling of healthcare workers and key informants and combination of focus group discussions and in-depth interviews to collect data

		1.1.2. What are the health needs of the LGBTQIA+ community and other key populations in KwaZulu-Natal, South Africa?	Exploratory qualitative descriptive study	LGBTQIA+ individuals and persons who are key populations (MSM, sex workers, PWID)	Purposive adjusted snowball sampling will be used to identify relevant participants and individual interviews and focus group discussions to collect data
	1.2. To explore the existing practices regarding the inclusion of LGTQIA+ and key populations health content in the curricula of undergraduate nursing programs in KwaZulu-Natal, South Africa	1.2.1. What is the current available health content on the LGBTQIA+ community and other key populations in the curricula of undergraduate nursing programs in KwaZulu-Natal, South Africa?	Retrospective document analysis	Teaching and learning documents including but not limited to relevant teaching, learning and assessment policies, study guides, module descriptors, course contents, examination papers etc	A modified curriculum audit tool will be used to assess documents with a review period pf 12 months prior commencement of data collection
		1.2.2. What are various academics and students' experiences, understanding and perceptions regarding the inclusion of health content on the LGBTQIA+ community and other key population in	A qualitative phenomenographic study	Various categories of academic staff and undergraduate nursing students at all levels of study in the selected higher education institutions	Purposive sapling will be used to collect data using focus group discussions

		undergraduate nursing curricula in KwaZulu-Natal, South Africa?			
Phase2: Co-design and testing	2.1. To co-design, test and evaluate relevant approaches to facilitate inclusion of LGBTQIA+ and key populations health content in undergraduate nursing curricula in KwaZulu-Natal, South Africa	2.1.1. What strategies can be co-developed to facilitate inclusion of health content on LGBTQIA+ community and other key populations in undergraduate nursing curricula in KwaZulu-Natal, South Africa?	Consensus methodology using nominal group technique underpinned by CQI process (PDSA)	All participants identified in phase1 of the study (LGTQIA+ individuals, academics, nursing students, healthcare workers, policy makers, core research team)	Purposive sampling of participants identified in phase 1 of the study and focus group discussions to gather data facilitating by workshop sessions
		2.2.2. What are the reported short-term outcomes of testing the co-developed strategies to facilitate inclusion of health content on the LGBTQIA+ community and other key population in undergraduate nursing curricula in KwaZulu-Natal, South Africa?	Exploratory qualitative descriptive study and quantitative descriptive cross-sectional survey	Academic staff, nursing students in various levels where co-designed interventions will be tested	Purposive sampling will be used to collect data from all participants and a combination of focus group discussions and individual in-depth interviews will be used to gather qualitative data from participants. Quantitative data will be collected using a tested knowledge,

					attitude, perception and awareness survey to assess the short term outcomes of testing the co-designed strategies for facilitating inclusion of LGBTQIA+ and key population content in the undergraduate nursing curricula in KZN, South Africa
Phase3: Spread and scale-up	3.1. To spread and scale-up the use of co-designed evidenced based strategies for the inclusion of LGBTQIA+ and key populations health content in undergraduate nursing curricula in KwaZulu-Natal, South Africa	3.1.1. What are the recommended approaches to facilitate spread and scale up of co-developed strategies to facilitate inclusion of health content on the LGBTQIA+ community and other key populations in undergraduate nursing curricula in KwaZulu-Natal, South Africa?	Data triangulation method	Data collected from phase 1 and 2 and academic staff in the selected higher education institutions	The core research team will use data informed by phase 1 and phase 2 of the study to develop a relevant approach to scale-up co-designed strategies to facilitate inclusion of LGBTQIA+ and key populations content in undergraduate nursing curricula in KwaZulu-Natal, South Africa
		3.1.2.What are the reported s outcomes of scaling-up the co-	Exploratory qualitative descriptive study and quantitative descriptive	Academic staff, nursing students in various levels where	Purposive sampling will be used to collect data from all

		developed strategies to facilitate inclusion of health content on the LGBTQIA+ community and other key population in undergraduate nursing curricula in KwaZulu-Natal, South Africa?	cross-sectional survey	co-designed interventions will be tested	participants and a combination of focus group discussions and individual in-depth interviews will be used to gather qualitative data from participants. Quantitative data will be collected using a tested knowledge, attitude, perception and awareness survey to assess the largescale outcomes of scaling-up the co-designed strategies for facilitating inclusion of LGBTQIA+ and key population content in the undergraduate nursing curricula in KZN, South Africa
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Supplementary Files

Multimedia Appendixes

Untitled.

URL: <http://asset.jmir.pub/assets/d56e61bbf4dbcc97ebf8523ef2e97755.docx>