



Original Article

Development of the Knowledge, Attitudes, and Practices towards LGBT in Healthcare Questionnaire (KAP-LHQ)

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Abstract

Background: Lesbian, gay, bisexual, and transgender (LGBT) individuals continue to experience health disparities related to discrimination and health professional inadequacies despite increasing social acceptance of the LGBT community in society. Understanding the knowledge, attitudes, and practices concerning the healthcare of LGBT individuals among healthcare professionals can enable gender-affirming healthcare for the LGBT community. However, there is a need for a culturally relevant and updated tool to describe healthcare professionals' interactions with the LGBT community. **Objectives:** The objective of this study is to describe the development of the Knowledge, Attitudes, and Practices towards LGBT in Healthcare Questionnaire (KAP-LHQ) and demonstrate its content and face validity. **Methods:** The KAP-LHQ was developed using a two-phase process. Phase 1 involved the generation of items through a literature review and discussions among the authors. Phase two included the evaluation of its content and face validity. Content validity was determined by six experts using the Content Validity Index, while ten healthcare professionals evaluated the tool for face validity. **Results:** The KAP-LHQ demonstrated good content and face validity. Content validity indices were high. Item-Level CVI (I-CVI) ranges from 0.83 to 1.00 for the items under the Knowledge section and has a Scale-Level CVI (S-CVI) of 0.97. The Attitude section items scored an I-CVI of 0.83 to 1.00 and a S-CVI of 0.99, while most of the Practices section items scored an I-CVI of 1.00 with an overall S-CVI of 0.94. One item was omitted on the final version for having an I-CVI of 0.67. Face validity of the final questionnaire across parameters has a median of 4 out of 4, reflecting the appropriateness, comprehensibility, and relevance of the questionnaire. **Conclusion:** The KAP-LHQ appears to be a valid tool that has the potential for assessing the KAP of health professions to improve training and increase healthcare outcomes for the LGBT community. Using the tool on a larger population can firmly establish its efficacy, further validity, and even reliability.

Key Words: LGBT, KAP survey, content and face validity, tool development, healthcare

INTRODUCTION

Despite remarkable civil rights progress and increasingly higher levels of acceptance, substantial obstacles continue to impair the healthcare experiences of individuals who identify themselves as lesbian, gay, bisexual, or transgender (LGBT).¹ For decades, LGBT populations have been exposed to a social environment laden with broad-based discrimination and marginalization, which creates multiple health disparities compared to heterosexual and cisgender populations.² These health disparities are heightened in aging LGBT

populations, with worsening psychosocial consequences for these communities.¹ The health concerns of LGBT populations have gained increased recognition and responses, particularly in recent years. More collection of data and studies conducted have increased awareness about the particular burdens faced by these communities regarding mental health, substance abuse, and rates of human immunodeficiency virus (HIV) and other sexually transmitted infections.^{3,4} With such developments, however, healthcare providers

are still uninformed and lack the necessary training to effectively respond to the needs of LGBT individuals, hence the continuous crisis in LGBT healthcare globally today.¹

In the Philippines, at least 58% of older LGBT individuals shared in a survey carried out by EnGendeRights Philippines and Outright International that they had not visited doctors within the last six months for fear of discrimination and lack of money. Also, over 60% showed psychological distress when accessing healthcare.⁵ Furthermore, Handayan added that the shortage of culturally competent and trained healthcare workers around the LGBT population in the Philippines made these individuals resort to precarious health alternatives.⁶

The concern is even further complicated by diversity in the LGBT population, reflecting every race, ethnicity, and socioeconomic status, and by the struggles of healthcare systems to deliver culturally competent care.³ While impressive work has been achieved in lowering prejudice and stigmatization, especially over the past 50 years,⁷ there is a continued need for more discourse and additional action with the view of alleviating the disparities in access to and outcomes regarding healthcare that LGBT people continue to face. The knowledge, attitudes, and practices (KAP) of healthcare professionals have become significant factors in the level of care that LGBT individuals receive and, thus, have a direct bearing on their health outcomes and well-being. Most of the healthcare providers lack the requisite knowledge and cultural competence to appropriately manage LGBT patients which then contributes to misdiagnosis and delays in diagnosis, poor health outcomes within the LGBT population.⁸⁻¹⁰ Such challenges, of course, demand that health sciences education itself undergo structural changes in the direction of increasing the cultural competence of health professionals and preparing them for providing care in a non-discriminatory manner.¹⁰⁻¹¹

Concerning these matters, there is an urgent need to understand the current KAP of healthcare professionals concerning the LGBT community using a culturally appropriate and specific instrument in the Philippines. Even though there has been a lot of research done

about LGBT healthcare concerns elsewhere, the literature in the Philippines is scarce.¹² Studies on understanding the KAP of Filipino health professionals are important for moving towards inclusivity and diversity, which could reshape the healthcare system and educational training of health professionals in the Philippines.

Despite using existing questionnaires regarding KAP of healthcare professionals towards the LGBT community can save time and resources,¹³ the rights, views, and landscape of the LGBT community, including in healthcare, are rapidly changing,¹⁴ hence updated tools that apply to the broader healthcare system must be developed. Several studies used their own KAP surveys in the Philippines but these instruments are confined to particular professions or populations and may not be comprehensive or up to date, specifically for the Philippine setup.^{12,15-16} Internationally developed surveys sometimes only capture knowledge and attitudes,¹⁷ and some are highly specific to a certain profession or specialization¹⁸, which could be limiting in Philippine applications. Hence, this signals the need for a tool that is based on an extensive review of literature that is current and influenced by engaged¹⁹ researchers in a local setting, just like the authors. Therefore, this study on the development and Validation of the Knowledge, Attitude, and Practices towards LGBT in Healthcare Questionnaire, referred to as KAP-LHQ, was undertaken. A KAP survey is a focused methodology that might be used to gauge the knowledge, general attitudes, and current practices of healthcare professionals about the LGBT community. This is theoretically based on "KAP theory," a health behavior change theory that describes how knowledge provides the foundation for behavior change, through attitudes that motivate behavioral change. The "Health Belief Model" also points to health beliefs as one of the key determinants in the adoption of healthy behavior.²⁰⁻²¹ This research intends to describe the development of KAP-LHQ and demonstrate its content and face validity as a sound questionnaire for assessing Filipino healthcare professionals on their KAP towards the LGBT community.

Methodology

Ethical Considerations. This study was conducted with ethical review and approval from the University of the Philippines Manila Research Ethics Board with a designated reference code UPMREB 2023-0087-01. After the approval, the development of the draft questionnaire began, followed by the recruitment of experts and initial participants for validity testing. Informed consent forms containing the purpose of the study, its procedure, and the rights of the participants were given to all participants. The consent form made it clear that participation would be voluntary and there and, there was to be a guarantee of confidentiality in response, and participants would maintain anonymity throughout the research. Members gave informed consent before the study; thus, it was guaranteed that all stages of this research were conducted with high ethical considerations.

Research Design. This research follows the classical test theory²² of developing and testing a valid tool. This study was conducted in two major phases: (1) the development of the questionnaire through item generation based on an extended literature review, collaborative discussions among the authors that ensured that items were theoretically and practically eclectic in base, and (2) validation was done through content and face validity testing.

Guided by the Consensus-based Standards for the selection of health Measurement Instruments (COSMIN) Study Design checklist,²³ which is recommended for working with studies that focus on measuring properties of outcome measures, the KAP-LHQ is assured to have a clear purpose, understandable description of the measure and items, and an identified set of tool users.

Developed Instrument

Purpose of the Questionnaire. The aim of the Knowledge, Attitudes, and Practices Towards LGBT in Healthcare Questionnaire (KAP-LHQ) is to assess the knowledge, attitudes, and practices of licensed healthcare professionals by determining their understanding of basic key concepts within the LGBT community, their perspectives, and openness in providing care for

the LGBT individuals, and common practices that demonstrate gender-affirming activities.

Development and Features of the KAP-LHQ.

This study is part of a bigger study that explores the current landscape of LGBT healthcare in the Philippine health system. A preliminary scoping review¹⁴ was first conducted to map the existing knowledge base related to this topic that involves both the perspectives of healthcare professionals and the LGBT community about healthcare and LGBT individuals. This review was foundational and has helped inform the current study in the development of KAP-LHQ. Additional material relevant to the construction of KAP questionnaires in various fields was also reviewed to derive an item pool to assure comprehensiveness and relevance. The primary author initially drafted a set of items for the questionnaire based on the extensive review of literature and informal consultations with peers. The initial draft consists of 63 items, with 21 items on each construct, knowledge, attitude, and practice, respectively. Discussions with the two authors of this study followed the first draft resulting in revisions focused on the phrasing of the questions and re-allocating items on each construct. This iterative process resulted in the development of KAP-LHQ Version 2, and finally, KAP-LHQ Version 3, which was sent to experts for content validation. KAP-LHQ Version 3 is a four-part comprehensive questionnaire designed to assess healthcare professionals for their knowledge, attitudes, and practices about LGBT individuals. Part A was demographic, and Parts B, C, and D were questions of knowledge, attitudes, and practices, respectively; each had 21 questions. For Part B, which dealt with knowledge, there were three response options, indicating the understanding of the participants about LGBT terminologies and beliefs. The attitude part in Part C contained statements rated using a 5-point Likert scale, ranging from "strongly agree" to "strongly disagree," intended to capture the attitude of the respondents. Part D allowed the frequency of inclusive practice by the healthcare providers while interacting with LGBT clients. This tool did not apply a summative score like most of the scoring questionnaires, but focused on each item to detail, intricately about each component.

Target Users. KAP-LHQ is designed to be used by any healthcare professional working with any LGBT individual. This feature makes the tool distinct from the usually developed tools that are intended for a specific profession or health specialty. This tool can enable possible comparisons of results among healthcare professionals, enabling evaluation and monitoring of progress towards gender-affirming healthcare. This is not yet intended to assess professionals who are still in their training or within the university or college.

Data Collection and Analysis

Content Validity. COSMIN Study Design checklist on content validity states that content validity can be tested by asking professionals regarding the relevance, completeness, and understandability of the items, response options, and instructions. Moreover, according to Nikolopoulou,²⁴ content validity exists to the extent that a measuring instrument represents the universe of what is being measured. Content validity ensures that items within an instrument represent the domain and are easily understood by the respondents. This element of validity has been very crucial since an instrument that lacks content cannot be reliable, as suggested by Zamanzadeh and colleagues.²⁵ To examine KAP-LHQ Version 3, convenience sampling was used to recruit six experts to assess the relevance and clarity of the items using a 4-point agreement scale with 4 as the favored rating. Each of the

experts was emailed with the informed consent form, the draft of the questionnaire, the rating scale, along with a guide on how to assess KAP-LHQ Version 3. Experts were chosen using selection criteria including a minimum degree at the master's level, experience in the Philippine healthcare system, and knowledge about LGBT issues. The demographic details of these experts are shown in Table 1.

While content validation can be conducted with as few as two experts, a panel of six is commonly recommended for robust validation.²⁶ The expert panel rated the relevance of each item individually and gave their qualitative feedback for each item if additional information is needed regarding the rating. The quantitative data were encoded and analyzed using the latest version of Excel. Quantitative assessment of the validity of each item was determined by using the Content Validity Index (I-CVI). I-CVI was calculated as the number of experts rating the item as either 3 or 4 divided by the total number of experts. The items with an I-CVI of 0.79 or higher were considered acceptable since this reflected that the item was relevant. On the other hand, those I-CVIs ranging between 0.70 and 0.79 needed revision for the particular item. All items below 0.70 I-CVI were subjected to elimination.²⁷ The S-CVI was also calculated, which has been defined as the mean of the I-CVI scores of all the items in each scale.²⁶

Table 1. Profile of Experts

Panelist Number	Profession	Highest Education Attainment	Biological Sex	Sexual Orientation
1	Nurse	Master's Degree	Male	Homosexual*
2	Occupational Therapist	Master's Degree	Female	Heterosexual**
Panelist 3	Dentist	Master's Degree, Doctor of Dental Medicine	Male	Homosexual*
Panelist 4	Development Worker	Master's Degree	Male	Homosexual*
Panelist 5	Occupational Therapist	Master's Degree	Female	Heterosexual**
Panelist 6	Physical Therapist	Master's Degree	Female	Heterosexual**

Note: *Homosexual are people who are sexually or romantically attracted to people of the same sex

** Heterosexual are people who are sexually or romantically attracted to people of the opposite sex.

Moreover, qualitative insights were also sought from the experts, but were not required. These

were summarized by the authors and considered for revisions.

Face Validity. Face validity refers to an appearance or superficial look of whether or not a test appears to measure what it is supposed to be measuring, which includes concerns about the relevance and appropriateness of the test on a superficial level.²⁸ Ten (10) health professionals rated the questionnaire across various aspects remotely and individually. After the content validity, KAP-LHQ Version 3 was revised accordingly based on the results of content validity. Hence, KAP-LHQ Version 4 was used for the face validity testing. There were no major changes made aside from the elimination of 1 item and the rephrasing of some items, so KAP-LHQ Version 4 was not subjected to another set of content validity from experts. The health professionals reviewed the KAP-LHQ for appropriateness, comprehensibility, formatting, clarity, relevance, and importance. A rating scale ran from 1 to 4, with 4 being the desirable score. A median score equal to or above 3 represented that the questionnaire was acceptable in that specific parameter, while less than 3 showed that it needed modification. Qualitative comments were also collected, but were not required for each healthcare professional.

Results

Through an extensive literature review and research of the primary author and discussion of the authors, the KAP-LHQ Version 3 was developed. KAP-LHQ was developed with the intent of assessing the KAP of healthcare professionals towards the LGBT community. It has four parts encapsulating the knowledge, attitudes, and practices constructs, with 21 items each.

Content Validity of KAP-LHQ. For content validity, experts rated each item's relevance on a 4-point scale, with 4 being "very relevant." Table 1 shows that the statements per construct were almost all rated as relevant.

Expert feedback confirmed that the content validity for the whole questionnaire was excellent. For the knowledge section, all of its 21 items were judged to be appropriate, thus giving it an S-CVI of 0.97, although most had an I-CVI score of 1.00, with four (13, 15, 17, and 19) having a lower I-CVI score of 0.83. Likewise, the

attitude section had an S-CVI of 0.99, although item 9 was rated at 0.83. The practices section in general had an S-CVI of 0.94, however, item 17 was suggested for deletion at an I-CVI of 0.67. Item 17, which asks users whether "[They] create opportunities for LGBT clients to make their own healthcare decisions," was removed due to ambiguity. Overall, the expert review indicated that almost all items were relevant and suitable to ensure the validity of the survey in measuring perceptions among healthcare professionals.

In addition to these numerical ratings, qualitative comments by the experts pointed to several key considerations. One expert highlighted that healthcare workers still have much to learn in terms of their knowledge, attitudes, and practices concerning the care of LGBT individuals, especially regarding health disparities concerning LGBT individuals, and why culturally appropriate care is so important. Another expert recommended that generalized wording within the questionnaire be changed to make this clear, considering the diversity within the LGBT community. There were concerns raised about the biases that could relate to health practices, such as infection control in attending to LGBT patients. One expert recommended adding questions related to the sources of knowledge and views of healthcare workers, and also commented that the questionnaire appeared to relate to the health of transgender people. Another invited the authors to investigate the attitudes of health professionals to work in multidisciplinary teams around LGBT clients, particularly in medically complex contexts, suggesting that qualitative interviews be added to complement the quantitative data.

Face Validity of KAP-LHQ. The expert reviews gave an appropriate shape to KAP-LHQ Version 3 by delimiting it to Version 4 through the deletion of item 17 from Practices and modification of the language and structural format of some items. Version 4 was then subjected to face validity among 10 participants by rating the questionnaire based on appropriateness, comprehensiveness, format, clarity, relevance, and importance. See results in Table 3. These demonstrated good face validity, with median scores of 4 for all the parameters. Participants'

other comments described the questionnaire as detailed, comprehensive, and enlightening.

Overall, the feedback affirmed the suitability of the questionnaire for its intended purpose.

Table 2. Expert Validation Results of KAP-LHQ Version 3 (Content Validity)

Statement Number	Number of Raters who found the item Relevant (ratings ≥ 3)	Number of Raters who found the item Relevant (ratings ≤ 2)	I-CVI	Interpretation	S-CVI
Construct 1: Knowledge					
1	6	-	1.00	Appropriate	0.97
2	6	-	1.00	Appropriate	
3	6	-	1.00	Appropriate	
4	6	-	1.00	Appropriate	
5	6	-	1.00	Appropriate	
6	6	-	1.00	Appropriate	
7	6	-	1.00	Appropriate	
8	6	-	1.00	Appropriate	
9	6	-	1.00	Appropriate	
10	6	-	1.00	Appropriate	
11	6	-	1.00	Appropriate	
12	6	-	1.00	Appropriate	
13	5	1	0.83	Appropriate	
14	6	-	1.00	Appropriate	
15	5	1	0.83	Appropriate	
16	6	-	1.00	Appropriate	
17	5	1	0.83	Appropriate	
18	6	-	1.00	Appropriate	
19	5	1	0.83	Appropriate	
20	6	-	1.00	Appropriate	
21	6	-	1.00	Appropriate	
Construct 2: Attitude					
1	6	-	1.00	Appropriate	0.99
2	6	-	1.00	Appropriate	
3	6	-	1.00	Appropriate	
4	6	-	1.00	Appropriate	
5	6	-	1.00	Appropriate	
6	6	-	1.00	Appropriate	
7	6	-	1.00	Appropriate	
8	6	-	1.00	Appropriate	
9	5	1	0.83	Appropriate	
10	6	-	1.00	Appropriate	
11	6	-	1.00	Appropriate	
12	6	-	1.00	Appropriate	
13	6	-	1.00	Appropriate	
14	6	-	1.00	Appropriate	
15	6	-	1.00	Appropriate	
16	6	-	1.00	Appropriate	
17	6	-	1.00	Appropriate	
18	6	-	1.00	Appropriate	
19	6	-	1.00	Appropriate	
20	6	-	1.00	Appropriate	
21	6	-	1.00	Appropriate	
Construct 3: Practices					
1	6	-	1.00	Appropriate	0.94
2	6	-	1.00	Appropriate	
3	5	1	0.83	Appropriate	
4	5	1	0.83	Appropriate	
5	6	-	1.00	Appropriate	
6	6	-	1.00	Appropriate	
7	6	-	1.00	Appropriate	
8	6	-	1.00	Appropriate	
9	6	-	1.00	Appropriate	
10	6	-	1.00	Appropriate	
11	6	-	1.00	Appropriate	
12	6	-	1.00	Appropriate	
13	5	1	0.83	Appropriate	
14	6	-	1.00	Appropriate	
15	6	-	1.00	Appropriate	
16	6	-	1.00	Appropriate	
17	4	2	0.67	Not Recommended	
18	5	1	0.83	Appropriate	
19	6	-	1.00	Appropriate	
20	6	-	1.00	Appropriate	
21	6	-	1.00	Appropriate	

Discussion

Different studies have been conducted that have measured the KAP regarding healthcare professionals concerning LGBT clients using varied methodologies. Approaches ranged from qualitative approaches, represented by focus group discussions,²⁹ and others that have prepared questionnaires based on certain subgroups within the population,³⁰ or prepared them based on a particular topic of interest, such as sexual healthcare issues.³¹ Most of these studies have been conducted in developed countries^{30,32-33} while very few were observed in developing regions or countries of the world such as the Philippines. Such studies are important in bringing to light the need for an integrated tool that can assess KAP across cadres of health professionals and, at the same time, provide a baseline and monitor progress. Thus, the authors developed the KAP-LHQ, an easily administered tool applied to a larger population, and as such aimed to give evidence-based insights efficiently and easily.

Moreover, the KAP-LHQ is different from other tools because it is based on the scoping review of perspectives of health professionals and LGBT individuals about LGBT issues in healthcare.¹⁴ This tool can also be used by any healthcare professionals, which can be different from a few KAP surveys utilized in other studies. Furthermore, it is the only KAP survey that

measures the participants' knowledge of occupational justice, which is an emerging concept in occupational science. Occupational justice denotes a person's self-expression, an inherent right of all individuals, and which certainly appeals to the LGBT community to make them understand their situation and be able to give them equitable healthcare opportunities.³⁴

The content validity of KAP-LHQ revealed excellent results, where most of the items received an I-CVI of 1.00 except for 10 items out of 63 from the three sections. Most notably, most revisions fell into the section of "practices," showing the more troublesome development of KAP questionnaires across the healthcare professions. This also argues the real need for the development of such a new tool because of the ever-evolving practices toward the LGBT community, but since it is based on a current review, the tool can be used in the current times. These positive results regarding the content validity indicate that the KAP-LHQ could fill a very important gap by providing a means to measure KAP regarding LGBT people among a variety of healthcare professions, allowing comparisons to be made and facilitating the development of programs.

Major revisions from Version 3 to Version 4 included, but were not limited to, reducing ambiguity by adding examples.

Table 3. Pilot Test Feedback of KAP-LHQ Version 4 (Face Validity)

Component	Sample Size	Rating with ≥3	Median Score (Highest Score = 4)	Interpretation
Appropriateness	n=10	9	4	Acceptable
Comprehensibility	n=10	9	4	Acceptable
Formatting	n=10	9	4	Acceptable
Clarity	n=10	9	4	Acceptable
Relevance	n=10	9	4	Acceptable
Importance	n=10	9	4	Acceptable

For example, "I support the establishment of a resource center for LGBT clients" was revised to "I support the establishment of a resource center (e.g., book collection, safe space facility, etc.) for LGBT clients." This revised the item to be more

inclusive and clearer by providing concrete examples. Moreover, question 8 under "Practices" added if professionals used pronouns when asking if they used clients' lived names to complete the assessment. These refinements

were guided by expert input that aimed to develop easier and more applicable questionnaires. These changes provided insight into how this tool was developed to make healthcare professionals, and its users, easily and completely understand the context and ideas within to get their KAP towards the LGBT community.

For the KAP-LHQ, the face validity was proven to be adequate for a general population with no limitations against any professions or topics. However, several study limitations must be acknowledged such as the questionnaire has not yet pilot tested with a good number of participants, wherein for the face validity, only 10 healthcare professionals from various backgrounds rated KAP-LHQ. Also, the qualitative analysis of the single items was not exhaustive, since it relied exclusively on spontaneous comments and suggestions from the respondents. A more rigorous analysis of each can be done on a bigger psychometric study with a bigger sample. Nonetheless, the questionnaire is still undergoing pilot testing in another study on a larger population, which shall yield more robust data for validation. That study could further strengthen the utility and validity of this tool.

Moreover, just like other KAP surveys, the possible results of KAP-LHQ should be taken with caution and proper analysis since as it quantifies and describes the constructs, knowledge, attitudes, and practices of healthcare professionals, there are still gaps that should be filled out in understanding healthcare professionals interactions with the LGBT community, using other methods such as participant observations, discussions, and in-depth interactions to complement this KAP survey.³⁵

Conclusion

This study briefly described how KAP-LHQ was developed and demonstrated content and face validity. KAP-LHQ Version 4 is now a 4-part questionnaire with 62 items that can be used to assess the KAP of any Filipino healthcare professional towards the LGBT community. Based on the results, it has proven to have good

content and face validity. The KAP-LHQ represents a key, yet nascent step to advance LGBT health care access and delivery. Despite significant advancements in civil rights and improved social tolerance for LGBT people, health disparities across the LGBT communities are substantive and are, in part, believed to be the result of systemic discrimination and inadequate provider knowledge. The authors emphasize that a need has emerged for a resource to measure healthcare professionals' KAP vis-à-vis LGBT individuals. In this respect, the authors developed the KAP-LHQ with appropriate validation by anchoring it on recommendations from a scoping review and new concepts such as occupational justice. Its content and face validity were accepted, showing its relevance to the practical applications. It is a detailed instrument that might be adopted in the evaluation and improvement of health care services. Its comprehensive validation will come with more extensive tests elsewhere.

Individual Author's Contributions

All authors contributed equally to this study protocol.

Disclosure Statement

This paper is not funded by any organization or institution.

Conflicts of Interest

Author RCD is part of the PJAHS Editorial Board.

Supplementary Material

[Supplementary Material A. Knowledge, Attitudes, and Practices towards LGBT in Healthcare Questionnaire \(KAP-LHQ\)](#)

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