

REVIEW

Reviewer's Evaluation of the Dissertation by Balnur Iskakova on the Topic: "Measuring HIV-related stigma in healthcare settings" for the Doctor of Philosophy (PhD) Degree in the Specialty 6D 110200 – "Public Health"

№	Criteria	Compliance with criteria (please select one of the response options)"	Justification for the official reviewer's position
1.	The dissertation topic (as of its approval date) aligns with the directions of scientific development and/or government programs.	<p>1.1 Alignment with Priority Directions of Scientific Development or Government Programs</p> <p>1. The dissertation was carried out within the framework of a project or target program funded from the state budget (please specify the name and project or program number).</p> <p>2. The dissertation was conducted within the framework of another state program (please specify the name of the program).</p> <p>3. The dissertation corresponds to a priority direction of scientific development approved by the Higher Scientific and Technical Commission under the Government of the Republic of Kazakhstan (please specify the direction).</p>	<p>The topic of the dissertation corresponds to the priority direction of scientific development approved by the Higher Scientific and Technical Commission under the Government of the Republic of Kazakhstan, in the section "Life and Health Sciences."</p> <p>The dissertation was conducted as part of the program at S.D. Asfendiyarov Kazakh National Medical University for the preparation of PhD candidates in the field of "6D1100200 – Public Health," which is funded from the state budget of the Republic of Kazakhstan.</p>
2.	Importance for Science	The work makes /does not make a significant contribution to science.	Examining the stigma associated with HIV among medical professionals and subsequently creating relevant interventions can enhance the quality of healthcare provided to individuals living with HIV. This research will not only increase awareness about stigma in this domain but also identify the factors influencing the development of stigma among healthcare workers. The importance of this dissertation is effectively emphasized by the author.
3.	The principle of independence	Level of independence: High; Moderate; Low; No independence.	The doctoral candidate has undertaken this research independently, with guidance from academic mentors. The dissertation provides a detailed account of every phase, encompassing data collection, analysis, and interpretation, thus demonstrating the candidate's self-reliance in executing the study.

4.	The principle of internal unity	<p>4.1 Justification of the Dissertation's Relevance: Justified; Partially justified; Not justified.</p>	<p>The significance of this research is substantiated through a meticulous review of the literature on the topic. The author compares studies conducted in different countries and published in peer-reviewed scientific journals, and convincingly demonstrates that this issue is inadequately explored in the Central Asian region, including Kazakhstan. However, as a future suggestion, I recommend also analyzing so-called "gray" literature since some data may be published in local publications and not make it into international journals. Overall, the relevance of the topic is well-established, as stigma related to HIV is a global issue.</p>
		<p>4.2 The content of the dissertation reflects the dissertation topic: Reflects; Partially reflects; Does not reflect.</p>	<p>The content of the dissertation accurately reflects the dissertation's topic. The author effectively delves into the subject of HIV-related stigma and its impact on healthcare professionals. The dissertation thoroughly examines the significance of this stigma in the prevention and treatment of HIV/AIDS, with a particular focus on the situation in Kazakhstan. The research contributes valuable insights to an underexplored area and underscores the importance of understanding and combating stigma among healthcare workers.</p>
		<p>4.3. The objectives and tasks correspond to the dissertation topic: Correspond; Partially correspond; Do not correspond.</p>	<p>The objectives and tasks align with the dissertation's topic. The aim of this research was to assess the level of HIV-associated stigma among healthcare workers in primary healthcare organizations in Almaty. The tasks were oriented towards the re-validation and adaptation of the stigma assessment instrument in Kazakh and Russian languages, the study of stigma levels regarding PLWH, the analysis of factors influencing stigma, and obtaining the perspectives of healthcare workers on HIV and key populations. Recommendations for stigma reduction are also provided based on the research findings.</p>

	<p>4.4 All sections and provisions of the dissertation are logically interconnected: Fully interconnected; Partial interconnection; No interconnection.</p>	<p>The dissertation is written in a coherent and logical manner. The author begins by providing a literature review on HIV stigma in healthcare settings, with a focus on the situation in Kazakhstan and neighboring countries. Subsequently, the lack of research in this area is highlighted, along with the justification for conducting the study. This is followed by sections on methodology, presentation of results, discussions, and recommendations, all following the logical flow of the dissertation.</p>
	<p>4.5 The author's proposed new solutions (principles, methods) are justified and evaluated in comparison to known solutions: Critical analysis is present; Partial analysis; The analysis consists of quotes from other authors.</p>	<p>Based on the provided information, the decisions made were well-founded as they relied on existing data and research. The author cites studies from various countries and contexts, offering thoughtful and informed solutions that take into account the findings of previous research by authoritative authors on reducing HIV-related stigma in healthcare.</p>
Fo 5. The principle of scientific novelty	<p>5.1 Are the scientific results and propositions new? Entirely new; Partially new (25-75% are new); Not new (less than 25% are new).</p>	<p>The scientific findings and conclusions are indeed novel, as they reveal a high level of negative attitudes towards PLWH in primary healthcare, inadequate knowledge about HIV among primary healthcare workers, and a high level of fear of HIV transmission in the workplace. However, in presenting these results to the medical community, it's important to exercise diplomacy and consider the possibility of heightened sensitivity and reluctance to acknowledge the facts uncovered by the researcher. This approach is crucial to maintain optimal collaboration with healthcare professionals on this topic in the future.</p>
	<p>5.2 Are the dissertation's conclusions new? Entirely new; Partially new (25-75% are new); Not new (less than 25% are new).</p>	<p>Based on the analysis of the information provided in the dissertation, it can be stated that the conclusions are entirely novel and of great significance to the medical community. The author's study, conducted within the context of Kazakhstan, exposes a high level of negative attitudes towards individuals living with HIV among healthcare professionals. Additionally, it highlights the influence of work experience and interactions with HIV-</p>

		<p>positive patients in mitigating these negative attitudes. The research also emphasizes the necessity for more frequent training on HIV-related topics. These findings contribute to a better comprehension of the issue of HIV stigma within healthcare institutions in Kazakhstan and offer valuable insights for the development of strategies to combat these negative stereotypes in primary healthcare settings.</p>
	<p>5.3 Are the technical, technological, economic, or managerial solutions new and justified? Entirely new; Partially new (25-75% are new); Not new (less than 25% are new).</p>	<p>The development of an assessment tool for HIV-associated stigma in healthcare by the author is an extremely valuable and innovative contribution. This tool is now available in both Kazakh and Russian languages. The validation process and results have been published in a highly reputable scientific journal, PLOS ONE, confirming the tool's high level of novelty.</p>
6.	<p>The justification of the main conclusions.</p>	<p>All the main conclusions are based on substantial scientific evidence or are reasonably well-founded (for qualitative research and fields of study related to arts and humanities).</p> <p>The discussion of the results is conducted in a scientific style, applying a critical approach to each outcome of statistical analysis, which includes factor analysis for categorical data, descriptive analyses, and logistic regression models. The author also employs content analysis for qualitative data, and the steps involved are well-documented in the dissertation, particularly in the analysis and interpretation of in-depth interviews</p>

7.	The main points presented for defense.	<p>7.1 Is the proposition proven? Proven; Likely proven; Likely not proven; Not proven.</p> <p>7.2 Is it trivial? Yes; No.</p> <p>7.3 Is it novel? Yes; No.</p> <p>7.4 Level of applicability: Narrow; Moderate; Broad.</p> <p>7.5 Is it proven in the article? Yes; No.</p>	<p>The following statements presented in the dissertation are novel, highly practical, rigorously reviewed, and published in scientific journals:</p> <p>A re-validation and adaptation of the HIV-related stigma assessment tool for Kazakhstan have been conducted. The instrument demonstrates good psychometric properties and is available in both Kazakh and Russian languages.</p> <p>The level of negative attitudes towards PLWH among primary healthcare workers reached 87%. Many respondents also expressed concerns about HIV transmission during their work.</p> <p>Factors influencing the stigmatization of PLWH include work experience and contact with HIV-positive patients. Knowledge about HIV is linked to the respondent's age and completion of training in infection control. Workers in primary healthcare settings exhibit negative attitudes towards PLWH and key population groups.</p>
8.	The Principle of Credibility of Sources and Provided Information	<p>8.1 The choice of methodology is justified or the methodology is described in sufficient detail: Yes; No.</p> <p>8.2 The results of the dissertation work were obtained using modern methods of scientific research and data processing and interpretation techniques with the use of computer technologies: Yes; No.</p> <p>8.3 Theoretical conclusions, models, identified relationships, and regularities are proven and confirmed by experimental research (for fields of study related to pedagogical sciences, the results are proven based on pedagogical experiments): Yes; No.</p>	<p>The choice of methodology is well-justified, and the methodology is described in sufficient detail. The author employed a mixed-method research approach, which allows for a better understanding of complex phenomena such as stigma.</p> <p>The research utilizes state-of-the-art data analysis methods, including various statistical packages like R and STATA. However, for content analysis, I would also suggest considering the use of qualitative data analysis tools like NVivo. Nevertheless, given the small interview sample size and limited time for conducting interviews, manual content analysis can still be acceptable and reliable.</p> <p>The results of the multivariate analysis are well-explained in the discussion section and are compared to other similar studies. However, it is indeed surprising that knowledge was not correlated with the level of stigma, and additional explanations on this matter could further enhance the dissertation.</p>

		8.4 Important statements are supported /partially supported/not supported by references to current and reliable scientific literature.	The literature used in the dissertation is up-to-date and encompasses a wide range of studies from various countries around the world.
		8.5 The sources of literature used are sufficient /insufficient for the literature review.	The literature section is sufficient (n=168).
9	The principle of theoretical significance	9.1 The dissertation has theoretical significance: Yes; No.	The theoretical significance of this research lies in its contribution of new knowledge and evidence for understanding HIV-related stigma among healthcare workers who typically do not work with PLWH. This is well-described in the introduction and discussion sections of the dissertation.
		9.2 The dissertation has practical significance, and there is a high probability of applying the obtained results in practice: Yes; No.	The practical significance of this research lies in the validation of stigma assessment tools for the conditions in Kazakhstan, along with obtaining the corresponding copyrights. The results obtained are also valuable for further research, including the development and implementation of interventions to reduce HIV-related stigma in healthcare settings.
		9.3 Are the practical recommendations new? Completely new; Partially new (25-75% are new); Not new (less than 25% are new).	An important aspect of this research is the development of a new Kazakhstani version of the tool for use. Although a Russian-language version of the tool had been used previously, the dissertation's contribution lies in providing information about its validation, which was previously lacking.
10.	Quality of academic writing	The quality of academic writing: high; average; below average; low.	The dissertation is written in accordance with the high standards of academic writing. However, in the 3 rd and 4 th main provisions for defense it would be desirable to reflect the evidence of the obtained results. This also applies to the recommendations.

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