JOURNAL OF WOMEN AND CHILD HEALTH

Siddiqui MB; JoWaCH (2024)

Published by The House of Quantum NETWORKS

Publisher's Note
"The House of Quantum Networks" remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

METHODOLOGICAL PAPER

Methodology for Robust Revalidation of the CHERG VASA Tool to Investigate Under-5 Deaths in Karachi Slums: A Mixed Methods Approach

Muhammad Bilal Siddiqui
Department of Social and Preventive Medicine, Faculty of Medicine, Universiti Malaya, Kuala Lumpur, Malaysia (MBBS, MSPH)

Corresponding author
Muhammad Bilal Siddiqui(MBBS, MSPH)
Department of Social an Preventive Medicine
Universiti Malaya, Kuala Lumpur, **Malaysia**
drbilals@gmail.com

OPEN ACCESS

Check for updates

ISSN: 3006-760X (Online)

Citation: Siddiqi MB, Hoe VC, Low WY. Methodology for Robust Revalidation of the CHERG VASA Tool to Investigate Under-5 Deaths in Karachi Slums: A Mixed Methods Approach. J Women Child Health [Internet]. 2023 Dec 22;1(1):7-12. Available from: https://doi.org/10.62807/jowach.v1i1.2023.12-17
Available from: Link
Section Editor: **Maria Atif**.
Peer Review History: JOWACH recognizes the benefits of transparency in the peer review process; therefore, we keep all of the content of peer review and author responses in our repository. We do not have a hyperlink to publicly accessible peer-review history, but if needed, we can send the history to you.

Copyright: © The Author(s). 2024
This is an open access article distributed under the terms of the **Creative Commons Attribution License**, and permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Data Availability Statement: All relevant data are within the manuscript. We do not have a hyperlink to publicly accessible archived datasets, but if needed, we can send the raw data to you.
Funding: No funding.
Competing interests: The authors have declared that no competing interests exist.

Abstract

Introduction: Under-5 mortality remains a significant challenge in resource-limited settings like urban Pakistan. Accurate data on mortality determinants are crucial for effective interventions. This study outlines a mixed-methods approach to refine the CHERG VASA tool for investigating under-5 mortality in Karachi's slums.

Objectives: 1) Further validate the CHERG VASA tool quantitatively on a large, representative sample. 2) Gather qualitative feedback from users to assess user experience and identify areas for improvement. 3) Refine the tool based on combined quantitative and qualitative findings.

Methods: An explanatory sequential mixed-methods design will be implemented across 7 Karachi districts. The quantitative arm will employ stratified random sampling to recruit participants who experienced an under-5 death within the past 6 months. The CHERG VASA tool will be administered, followed by validation analyses including criterion validity against hospital records, content validity, construct validity, and reliability analysis. The qualitative arm will involve cognitive interviews and focus group discussions with participants to explore user experiences and gather feedback. Framework analysis will be used to analyze qualitative data. Tool refinement will be guided by both quantitative and qualitative findings.

Discussion: This mixed-methods approach integrates robust quantitative validation with in-depth qualitative insights, leading to a refined and context-specific CHERG VASA tool. This enhanced tool will provide reliable data on determinants of under-5 mortality in Karachi slums, informing targeted interventions and ultimately improving child health outcomes.

Keywords: verbal autopsy, social autopsy, validity, reliability, scale validation, mixed-methods

Abstracts in عربی، اردو, 中国人, française, русский and español at the end of the article

Layman Summary

Children under 5 in Karachi slums often die from unknown causes. This study aims to improve a tool called CHERG VASA that interviews families to understand why these children die. Researchers will interview families and healthcare workers to see if the tool is accurate and easy to use. They will then refine the tool to make it better for Karachi. This could help improve health programs and save more children's lives.

Introduction

With 6.7 million children dying each year, the under-five mortality rate is still a serious problem worldwide [1]. With an under-five death rate of 74 per 1,000 live births, Pakistan is heavily burdened; urban slums such as those in Karachi are the epicentre of this tragedy [1,2]. Because of these resource-constrained circumstances, the real picture of child mortality causes is generally hidden due to variables such poor living conditions, limited vital registration systems, and insufficient access to healthcare [2].

Creating successful treatments requires accurate data on the factors that contribute to death for children under five. When resources are few, alternative methods such as verbal autopsy (VA) and social autopsy (SA) become indispensable instruments since traditional vital registry systems often fail to record reliable data [2,3]. While SA explores the more general societal and environmental elements that may have contributed to the tragedy, VA interviews carers to piece together the events leading up to a child's death [2,3]. This data contributes to a more comprehensive understanding of the causes of paediatric fatalities, allowing for more focused actions to address certain risk factors.

Based on the "Pathways to Survival" conceptual framework, which examines a variety of biological and social factors that contribute to child mortality, the CHERG VASA tool provides an extensive framework for performing both VA and SA [2]. Although a preliminary validation study conducted in Karachi showed promise for the CHERG VASA tool, further improvements are required to maximize its cultural sensitivity and efficacy in this particular setting [5].

Key Findings from the Initial Validation Study:

The CHERG VASA test was used in the previous research[5] on a sample of 100 mothers who had recently experienced and under-five child death in Karachi. High validity and reliability were proven by the instrument, as evidenced by an Item-content Validity Index (I-CVI) of 81%, a Cronbach's Alpha of 0.843, correct assignment of biological (92%) and social (97%) causes of death, and accurate differentiation between live and stillbirths (75-100%). However, the previous study[5] also identified certain limitations, such as: small sample size, more research is required to fully understand the cultural subtleties and linguistic preferences in the questionnaire, recall bias possibility in carer interviews, and extending the First Validation Analysis.

These constraints are addressed and the first validation is expanded upon in this mixed-methods research by using a bigger, more inclusive sample of people from all throughout Karachi's slums using both qualitative and quantitative methodologies to examine the tool's effectiveness and user experience enhancing the tool's cultural sensitivity and efficacy in the unique setting of Karachi's slums by using qualitative data.

Our study will improve child health outcomes for this vulnerable group, guide targeted interventions, and contribute to the collecting of more accurate and trustworthy data on the factors that contribute to death for children under five. Moreover, our knowledge of the factors that contribute to under-five mortality in Karachi's slums might be greatly enhanced by this improved CHERG VASA tool, which addresses the shortcomings and builds on the encouraging findings of the original validation research. This may eventually lead to the saving of lives by opening the door for more potent therapies.

Methods

Study Design and Setting:

An explanatory sequential mixed-methods design will be implemented across all seven districts of Karachi (South, Central, East, West, Korangi, and Malir), encompassing the diverse array of slum settlements that house a significant portion of the city's population. This geographically representative approach ensures the findings accurately reflect the under-5 mortality landscape within Karachi slums.

Quantitative Arm

Sample Size and Sampling: Stratified random sampling, proportional to population across the seven districts, will be employed to recruit a statistically sufficient participant pool (family members, specifically fathers and/or mothers, of households) who have experienced an under-5 death within the past six months. This approach was chosen over other probability sampling techniques for several reasons:

- **Improved representativeness:** Stratification ensures that diverse groups within the population are adequately represented in the sample, minimizing bias and increasing the generalizability of results.
- **Increased precision:** Smaller sampling error within each stratum allows for a more precise estimation of true population parameters.
- **Feasibility:** Locating eligible participants within specific geographic areas simplifies recruitment compared to entirely random sampling.

However, we acknowledge that stratified random sampling also has limitations, such as the potential for selection bias if accurate population strata sizes are not available. To mitigate this, we will utilize pre-existing population data from reliable sources and rigorously verify participant eligibility during recruitment.

Data Collection:

Trained interviewers, fluent in the local language and culturally sensitive to the diverse communities within Karachi slums, will administer the CHERG VASA tool to participants. To minimize inter-observer bias, we will implement a multi-pronged approach:

- **Rigorous interviewer training program:** This program will cover the theoretical framework of the CHERG VASA tool, interview techniques, ethical considerations, and cultural sensitivity protocols. Trainees will undergo mock interviews and receive feedback to ensure proficiency.
- **Regular inter-rater reliability checks:** Trained supervisors will randomly observe a subset of interviews and independently record their own assessments of participant responses. Cohen's kappa coefficient will be used to assess inter-rater agreement and identify areas for improvement in interviewer training or the questionnaire itself.

Data Analysis:

A comprehensive quantitative validation strategy will be employed, encompassing the following elements:

- **Face validity:** The questionnaire's clarity, relevance, and comprehensiveness will be evaluated through expert review by local medical professionals and community leaders. Additionally, pre-testing with a small sample of caregivers will provide valuable feedback on cultural appropriateness and potential ambiguities.
- **Content validity index (CVI):** Expert ratings and pilot data will be used to calculate CVI scores for each questionnaire item, ensuring that they adequately represent the intended constructs and are relevant to the context of Karachi slums.
- **Criterion validity:** Cause-of-death assignments based on VA data will be compared to multiple gold standards when available, including:
- **Hospital records:** Blinded reviews by two independent physicians will be conducted to assess the accuracy of cause-of-death coding against VA-derived cause assignments.
- **Lab tests and imaging:** When available, laboratory test results and medical imaging reports will be considered in conjunction with hospital records and physician reviews for a more comprehensive evaluation of criterion validity.
- **Construct validity:** Exploratory and confirmatory factor analyses will be conducted to examine the underlying structure of the questionnaire and ensure it aligns with the theoretical framework

of "pathways to survival." This will reveal how different questionnaire items relate to each other and contribute to the overall measurement of under-five mortality determinants.

- **Discriminant validity analysis:** The tool's ability to differentiate between different causes of death and identify key risk factors will be assessed by examining the associations between specific questionnaire items and different cause-of-death categories.
- **Reliability analysis:** Cronbach's alpha coefficient will be used to determine the internal consistency of the questionnaire as a whole. Additionally, test-retest reliability assessments will be conducted by administering the CHERG VASA tool to a sub-sample of participants twice with a predetermined time interval to evaluate the stability of responses over time.

Cause of Death (CoD) Assignment by Physicians:

To ensure consistency in physician assessments of cause of death, the following measures will be implemented:

- **Standardized coding guidelines:** Physicians will be provided with a clear and detailed coding manual based on internationally recognized standards like ICD-10. This manual will outline specific criteria for assigning different cause-of-death categories based on available information from hospital records, lab tests, imaging, and VA data.
- **Blinded reviews:** All physician reviews of VA data will be conducted blindly, meaning physicians will not have access to any personal information about the deceased child or the cause of death listed in hospital records. This will minimize the potential for bias based on pre-existing knowledge or expectations.
- **Inter-physician agreement checks:** A subset of cases will be reviewed by multiple physicians independently to assess the level of agreement in cause-of-death assignments. Discrepancies will be discussed and resolved through consensus to ensure consistency and minimize subjectivity.

By employing a comprehensive quantitative validation strategy with these additional measures, we aim to ensure the accuracy, reliability, and generalizability of the CHERG VASA tool for under-five mortality investigations in Karachi's slums. This will ultimately contribute to improved data collection, targeted interventions, and better.

Qualitative Arm:

Understanding the complexities of under-five mortality demands not only robust quantitative data but also nuanced insights into the lived experiences of those impacted. This qualitative arm of the study delves deeper into participant experiences with the CHERG VASA tool through focused group discussions (FGDs). By uncovering potential difficulties, ambiguities, and cultural sensitivities around specific questions or sections, this layer enhances the quantitative data and informs targeted improvements to the tool, ultimately strengthening its effectiveness and cultural appropriateness.

A meticulously crafted moderator's guide is the cornerstone of successful FGDs. Informed by relevant under-five mortality research, cultural nuances within Karachi slums, and best practices in FGD methodology, the guide will evolve through a three-stage process. First, a comprehensive literature review lays the foundation for core discussion topics. Second, expert consultation from healthcare workers, community leaders, and experienced qualitative researchers ensures the guide's comprehensiveness and cultural sensitivity. Finally, a pilot FGD allows for fine-tuning of the guide, guaranteeing clarity, smooth flow, and effective probing techniques.

Standardization across discussion groups is crucial to ensuring meaningful comparisons and reliable data. To achieve this, all moderators undergo rigorous training in FGD techniques, ethical considerations, and cultural sensitivity specific to Karachi slums. A detailed protocol outlines the FGD procedures, including introductions, icebreakers, discussion prompts, active listening techniques, and standardized probe questions. Debriefing sessions after each FGD allow moderators to discuss emergent themes, address challenges encountered, and adapt the approach for subsequent groups.

Cognitive interviews play a vital role in continuously gathering user feedback and iteratively refining the CHERG VASA tool. A subset of participants will be invited to participate in these individual sessions, where they complete sections of the tool while verbalizing their thoughts and reasoning processes ("thinking aloud"). Open-ended probes by the interviewer delve into any confusion, uncertainty, or alternative interpretations of specific questions or instructions. Insights from cognitive interviews are directly incorporated into the tool revision process, informing further FGD discussion prompts and pilot testing of revised versions.

Purposive sampling ensures diverse participation in the FGDs, encompassing factors like demographics (age, gender, socio-economic status), geographic location within Karachi, and experience using the CHERG VASA tool (previous participants and first-time users). Three distinct groups are recruited: healthcare workers (doctors, nurses, community health workers), community leaders (religious leaders, social workers, neighborhood representatives), and family caregivers (parents, grandparents, and other close relatives) with experience using the tool during a previous under-five death investigation. This diversity fosters a comprehensive understanding of user perspectives and experiences.

Focus group discussions will be conducted in each of Karachi's seven districts, facilitated by trained moderators fluent in the local language. Open-ended prompts encourage participants to share their experiences with the tool, focusing on aspects like clarity and comprehensiveness of questions, ease of use and flow of sections, cultural appropriateness and sensitivity, and effectiveness in capturing relevant information. Audio recordings of the sessions preserve rich details of participant narratives for detailed analysis.

Beyond FGDs, individual cognitive interviews provide a safe space for participants to freely express their thoughts and feelings while using the tool. Conducted in a quiet, private setting, these interviews maintain a non-judgmental and supportive atmosphere to elicit honest feedback.

The qualitative data journey culminates in a thorough analysis process. Audio recordings are transcribed verbatim, capturing the full nuance of participant voices. Guided by the study objectives and the "Pathways to Survival" framework, framework analysis uncovers key themes and patterns in the data. Triangulation, weaving together qualitative and quantitative findings, paints a comprehensive picture of the tool's effectiveness and cultural fit. Recurring patterns are identified and grouped into thematic categories, encapsulating user perceptions and experiences. Themes are then interpreted within the context of cultural nuances and the broader under-five mortality landscape in Karachi slums.

Finally, qualitative findings are combined with quantitative results to formulate actionable insights and guide specific revisions to the CHERG VASA tool. The goal is to enhance the tool's clarity, cultural sensitivity, and effectiveness in data collection, ultimately paving the way for improved understanding of child mortality and better health outcomes for vulnerable populations.

This multifaceted approach, integrating focus group discussions, cognitive interviews, and rigorous data analysis, promises to not only refine the CHERG VASA tool but also deepen our understanding of the human stories behind under-five mortality in Karachi's slums. By amplifying the voices of those directly impacted, the study ultimately lays the groundwork for more targeted interventions and a brighter future for children in these communities.

Quality Control Measures:

This study will employ a robust quality control strategy through its mixed-methods approach. Firstly, the quantitative validation will utilize rigorous techniques like face validity checks, content validity index calculations, criterion validity comparisons with hospital records, and multiple analyses (construct, discriminant, reliability) to ensure the CHERG VASA tool's accuracy and effectiveness in capturing cause-of-death data. Secondly, the qualitative component involving cognitive interviews and focus group discussions will provide valuable insights into user experiences and potential

comprehension barriers, allowing for targeted modifications to improve the tool's clarity, cultural sensitivity, and overall user-friendliness. This iterative process of combining quantitative and qualitative data ensures a high-quality, evidence-based refinement of the CHERG VASA tool for accurate and insightful investigation of under-5 mortality in Karachi slums.

Ethical Considerations:
Building trust and upholding respect: the CHERG VASA study prioritizes ethical research. Clear, accessible information empowers participants with informed consent, while data anonymization and secure storage safeguard confidentiality. Culturally sensitive researchers engage with communities, ensuring respectful interactions and incorporating feedback. This commitment to ethical conduct strengthens the study's validity and impact, ultimately giving voice to participant experiences and informing crucial interventions.

Discussion

This research, which combines qualitative and quantitative methodologies, reveals an important approach for improving the CHERG VASA tool. This tool is crucial for studying the causes of death among children under the age of 5 in the slums of Karachi. Through the combination of rigorous quantitative validation and detailed user input, we get a thorough understanding of the tool's performance, user experiences, and underlying cultural prejudices. The core of enhancing precision, efficiency, and cultural awareness prior to extensive adoption is centred on this comprehensive methodology.

The research exhibits strong methodology and rigorous attention to detail, which are its main characteristics. Integrating both quantitative and qualitative methodologies provides a comprehensive assessment of the tool's advantages and disadvantages. The large and inclusive sample guarantees a statistically reliable analysis and the capacity to apply the findings to urban slum settings as a whole. Thorough qualitative investigation, conducted via cognitive interviews and focus group discussions, provides insight into user difficulties, uncertainties, and cultural sensitivities, facilitating the process of improving tools in a focused and efficient manner.

However, the real strength of this study rests in its methodical process of improving and perfecting the tools used. This iterative methodology utilises both quantitative and qualitative insights to enhance the performance and user experience of the CHERG VASA tool. Each adjustment is guided by transparent decision criteria and evidence thresholds, ensuring that every change is based on robust evidence and directly caters to the unique requirements of users. The thresholds include a spectrum of sensitivity levels for crucial cause-of-death categories, while also guaranteeing optimal positive predictive values to maintain accuracy without excessive diagnosis. Qualitative analysis identifies discrepancies and inconsistencies, which then inspire adjustments to particular questions, response options, and directions. These revisions aim to enhance clarity and ensure cultural appropriateness. The tool's duration and complexity are modified depending on input to meet user stress and weariness.

This rigorous refining reaches its peak with a pilot test conducted on a smaller sample inside the same context. This pivotal stage evaluates the efficacy of implemented alterations by using metrics such as greater precision, improved user satisfaction, and practicality in real-world scenarios. The enhanced sensitivity, specificity, and positive predictive values will be compared to those of the original version. Follow-up interviews will be conducted to assess the comprehension, usability, and general contentment of the pilot participants. The operational problems encountered during the pilot test will provide further information to make any necessary final modifications before the tool is used on a larger scale.

In conclusion, the combination of evidence-based refinement and user-centered testing guarantees that the CHERG VASA tool adequately fulfils the requirements of both data accuracy and user experience. This has significant implications for collecting data on death rates among children under the age of 5 in settings with limited resources. It has the potential to facilitate targeted interventions and eventually lead to saving lives.

This revised discussion section eliminates the use of headers and bullet points, and instead adopts a cohesive paragraph structure to enhance the legibility and coherence of the text. The substance stays same, however, the modified structure may facilitate the reader's comprehension and enhance their understanding of the study and its possible ramifications.

Limitations and Mitigation Strategies:

- **Generalizability:** Findings may not directly translate to other contexts, particularly rural settings. Mitigation: Further validation studies in diverse contexts are necessary to assess broader applicability and inform specific adaptations.
- **Criterion validity of hospital records:** While hospital records are often used as the gold standard for verbal autopsy validation, they are not without limitations. Incomplete records, coding inconsistencies, and variations in diagnostic quality can introduce bias. Mitigation: Employing strict data quality control measures, utilizing multiple coders, and triangulating findings with other sources (e.g., community health worker reports) can help mitigate these limitations.
- **Recall bias:** Verbal autopsy data relies on accurate recall of events surrounding a child's death, making it susceptible to bias. Mitigation: Conducting interviews within a shorter timeframe after death, using memory aids, and employing standardized questioning techniques can minimize recall bias.
- **Social desirability bias:** Qualitative data may be influenced by participants' desire to provide socially acceptable responses. Mitigation: Emphasizing confidentiality, building trust with participants, and employing probing techniques can encourage participants to provide more accurate information.
- **Explanatory sequential design:** Integrating qualitative and quantitative findings can be challenging, particularly if results contradict each other. Mitigation: Employing iterative data analysis, involving qualitative researchers in interpreting quantitative findings, and using qualitative data to explain unexpected quantitative results can facilitate more meaningful integration.

Implications and Prospects for the Future

The findings of this study have broader significance beyond the CHERG VASA tool, showing great potential for use in public health practice and research. An important consequence is the ability to enhance mortality statistics in situations with limited resources. By using the improved CHERG VASA, a trustworthy and dependable instrument, researchers and health authorities may get more precise data on under-5 mortality. This data can then be used to guide targeted actions, leading to potential life-saving outcomes. This data enables the identification of geographical regions with elevated mortality rates, the determination of precise causes of death, and the monitoring of the efficacy of implemented treatments. Consequently, it facilitates a more streamlined and influential strategy for lowering mortality in children under the age of five.

Moreover, this research emphasises the need of creating tools for public health that prioritise the needs and preferences of users. By integrating user input at every stage, starting from the basic design to the final revision, we can guarantee that the tools are not only precise but also pertinent, comprehensible, and efficiently used by field implementers. Adopting a user-centered approach increases the likelihood of tools being embraced and maintained in real-world environments, hence maximising their influence on public health outcomes.

This work conclusively demonstrates the effectiveness of mixed-methods research in creating and verifying health tools, providing a helpful model for future research projects. The integration of quantitative and qualitative data yields a detailed comprehension of

the merits and drawbacks of a product, enabling focused enhancements and guaranteeing its efficacy in many scenarios. This approach may be used to validate and create additional health instruments in settings with limited resources, therefore enhancing data collecting and eventually resulting in more efficient treatments.

Nevertheless, the voyage does not conclude at this point. There are other areas that provide opportunities for further study based on this groundwork. To evaluate the tool's wider applicability and make required adjustments for other contexts, it is essential to conduct generalizability studies in several settings, including rural regions, in addition to Karachi's slums. In addition, doing research to investigate and use techniques that reduce the impact of memory and social desirability bias in verbal autopsy data will improve its precision and dependability. This, in turn, will bolster the basis for data-oriented public health actions.

In addition, conducting longitudinal evaluations to examine the tool's performance over time may provide useful information into its sustainability and efficacy in monitoring mortality trends and assessing the long-term effects of treatments. Expanding the use of the mixed-methods approach to validate and create health tools in settings with limited resources may showcase its wider applicability and enhance the effectiveness of data gathering and interventions.

This research marks the first stages of a potential trajectory towards enhanced data collecting on mortality among children under the age of five, as well as the development of more efficient treatments in settings with limited resources. Through further expanding on its discoveries and investigating prospective avenues for study, we may approach the ultimate objective of decreasing death rates among children under the age of five and preserving lives.

By addressing these future research directions, this study can continue to contribute to improved under-5 mortality data collection, targeted interventions, and ultimately, better health outcomes for children in Karachi and beyond.

Supporting information

For data collection Questionnaire/tool, the corresponding authors may be contacted.

Conflict of Interest:

There is no conflict of interest.

Funding:

There is no funding for this research.

خلاصة

المقدمة

لا تزال وفيات الأطفال دون سن الخامسة تشكل تحدياً كبيراً في البيئات المحدودة الموارد مثل المناطق الحضرية في باكستان. تعد البيانات الدقيقة حول محددات الوفيات أمرًا بالغ الأهمية للتدخلات الفعالة. توضح هذه الدراسة نهجًا متعدد الأساليب لتحسين أداة CHERG VASA للتحقيق في وفيات الأطفال دون سن الخامسة في الأحياء الفقيرة في كراتشي.

الأهداف:

1)التحقق من صحة أداة CHERG VASA كميًا على عينة تمثيلية كبيرة. 2) جمع ردود فعل نوعية من المستخدمين لتقييم تجربة المستخدم وتحديد مجالات التحسين. 3) تحسين الأداة بناءً على النتائج الكمية والنوعية المجمعة.

طُرق:

سيتم تنفيذ تصميم توضيحي متسلسل متعدد الأساليب في 7 مناطق في كراتشي. سيستخدم الذراع الكمي أخذ عينات عشوائية طبقية لتعيين المشاركين الذين تعرضوا لوفيات أقل من 5 سنوات خلال الأشهر الستة الماضية. سيتم إدارة أداة CHERG VASA، تليها تحليلات التحقق من الصحة بما في ذلك صلاحية المعيار مقابل سجلات المستشفى، وصلاحية المحتوى، وصلاحية البناء، وتحليل الموثوقية. سيتضمن الذراع النوعي مقابلات معرفية ومناقشات جماعية مركزة مع المشاركين لاستكشاف تجارب المستخدم وجمع التعليقات. سيتم استخدام تحليل الإطار لتحليل البيانات النوعية. سيتم الاسترشاد في تحسين الأداة بالنتائج الكمية والنوعية.

مناقشة:

يدمج هذا النهج المختلط الأساليب التحقق الكمي القوي مع رؤى نوعية متعمقة، مما يؤدي إلى أداة CHERG VASA محسنة ومحددة السياق. ستوفر هذه الأداة المعززة بيانات موثوقة حول محددات وفيات الأطفال دون سن الخامسة في الأحياء الفقيرة في كراتشي، مما يسترشد به التدخلات المستهدفة ويؤدي في نهاية المطاف إلى تحسين نتائج صحة الطفل.

الكلمات الدالة:

تشريح الجثة اللفظي، تشريح الجثة الاجتماعي، الصلاحية، الموثوقية، التحقق من صحة المقياس، الطرق المختلطة

خلاصہ

پس منظر

5 سال سے کم عمر کےبچوں کی اموات پاکستان جیسے محدود وسائل والے ملک میں ایک اہم چیلنج بنی ہوئی ہے۔ اموات کے تعین کرنے والوں کے بارے میں درست اعداد و شمار اور اموات سے ملحق عوامل اموات کو کم کرنے کیلئے بہت اہم ہیں۔ یہ ریسرچ کراچی کی کچی آبادیوں میں 5 سال سے کم عمر کی اموات کی تحقیقات کے لیے CHERG VASA ٹول کو بہتر بنانے کے لیے مخلوط طریقوں کا خاکہ پیش کرتا ہے۔

مقاصد:

1) CHERG VASA سوالنامہ کو ایک بڑے سیمپل پر مقداری طور پر توثیق کرنا 2) اس سوالنامہ کے استعمال کرنے والوں کے استعمال کرنے کے دوران ان کے تجربےت کا اندازہ لگانے اور بہتری کے لیے شعبوں کی نشاندہی کرنے کے لیے صارفین سے معیاری آراء جمع کرنا۔ 3) مشترکہ مقداری اور آراء کے نتائج کی بنیاد پر سوالنامہ کو بہتر بنانا۔

طریقے:

ایک وضاحتی ترتیب وار مخلوط طریقوں کا ڈیزائن کراچی کے 7 اضلاع میں نافذ کیا جائے گا۔ وہ گھرانے جنہوں نے گزشتہ 6 ماہ کے اندر 5 سال سے کم عمر بچوں کی موت کا تجربہ کیا ہو، مقداری (کوانٹیٹو) طریقے سے ان گھرانوں کے شرکاء کو بھرتی کرنے کے لیے درجہ بندی کا استعمال کرتے ہوۓ رینڈم سیمپل میں ان گھرانوں کو شامل کیا جاۓ گا ۔ CHERG VASA سوالنامہ ان گھرانوں سے بھروایا جائے گا، جس کے بعد تصدیق کے تجزیے ہوں گے ۔ حاصل کردہ معلومات میں ہسپتال کے ریکارڈ، مواد کی درستگی، تعمیر کی درستگی، اور قابل اعتماد تجزیہ کیا جاۓ گا۔ کوالٹیٹیو بازو میں کوگنیٹوانٹرویوز شامل ہوں گے اور صارفین کے تجربات کو دریافت کرنے اور تاثرات جمع کرنے کے لیے شرکاء کے ساتھ گروپ ڈسکشن پر توجہ مرکوز کی جائے گی۔ معیار کے اعداد و شمار کا تجزیہ کرنے کے لیے فریم ورک کا تجزیہ استعمال کیا جائے گا۔ سوالنامہ کی بہتری کیلیۓ مقداری اور کوالٹیٹیو (دونوں) نتائج سے کی جائے گی۔

بحث:

یہ مخلوط (دو) طریقوں کا نقطہ نظر گہرائی کے ساتھ سوالنامہ کے معیار کی بصیرت اور ساتھ ہی مضبوط مقداری (کوانٹیٹیو) توثیق کو مربوط کرتا ہے، جس کے نتیجے میں ایک بہتر اور سیاق و سباق سے متعلق CHERG VASA ساولنامہ وجود میں آئے گا۔ یہ بہتر کردہ سوالنامہ کراچی کی کچی آبادیوں میں 5 سال سے کم عمر کی اموات کے تعین کرنے والوں کے بارے میں قابل اعتماد ڈیٹا فراہم کرے گا، ہدفی مداخلتوں سے آگاہ کرے گا اور بالآخر بچوں کی صحت کے نتائج کو بہتر بنائے گا۔

اہم الفاظ

زبانی پوسٹ مارٹم، سماجی پوسٹ مارٹم، درستگی، وثوق، پیمانے کی توثیق، مخلوط طریقے

抽象的

介绍：

在巴基斯坦城市等资源有限的地区，5 岁以下儿童死亡率仍然是一个重大挑战。关于死亡率决定因素的准确数据对于有效干预措施至关重要。本研究概述了一种混合方法，用于完善 CHERG VASA 工具，用于调查卡拉奇贫民窟 5 岁以下儿童的死亡率。

目标：

1) 在大型、有代表性的样本上进一步定量验证 CHERG VASA 工具。 2) 收集用户的定性反馈，以评估用户体验并确定需要改进的领域。 3) 根据定量和定性研究结果的结合完善工具。

方法：

将在卡拉奇的 7 个地区实施解释性顺序混合方法设计。定量部门将采用分层随机抽样来招募过去 6 个月内经历过 5 岁以下儿童死亡的参与者。将使用 CHERG VASA 工具，然后进行验证分析，包括针对医院记录的标准有效性、内容有效性、结构有效性和可靠性分析。定性部分将涉及与参与者的认知访谈和焦点小组讨论，以探索用户体验并收集反馈。框架分析将用于分析定性数据。工具的完善将以定量和定性研究结果为指导。

讨论：

这种混合方法将强大的定量验证与深入的定性见解相结合，从而形成了精致且针对具体情况的 CHERG VASA 工具。这一增强的工具将提供有关卡拉奇贫民窟 5 岁以下儿童死亡率决定因素的可靠数据，为有针对性的干预措施提供信息，并最终改善儿童健康结果。

关键词：

口头尸检、社会尸检、有效性、可靠性、量表验证、混合方法

Abstrait

Introduction:

La mortalité des moins de 5 ans reste un défi important dans les contextes aux ressources limitées comme le Pakistan urbain. Des données précises sur les déterminants de la mortalité sont cruciales pour des interventions efficaces. Cette étude décrit une approche à méthodes mixtes pour affiner l'outil CHERG VASA pour enquêter sur la mortalité des moins de 5 ans dans les bidonvilles de Karachi.

Objectifs:

1) Valider davantage l'outil CHERG VASA quantitativement sur un échantillon large et représentatif. 2) Recueillir des commentaires qualitatifs des utilisateurs pour évaluer l'expérience utilisateur et identifier les domaines à améliorer. 3) Affiner l'outil sur la base de résultats quantitatifs et qualitatifs combinés.

Méthodes:

Une conception explicative séquentielle à méthodes mixtes sera mise en œuvre dans 7 districts de Karachi. Le bras quantitatif utilisera un échantillonnage aléatoire stratifié pour recruter des participants ayant connu un décès d'enfants de moins de 5 ans au cours des 6 derniers mois. L'outil CHERG VASA sera administré, suivi d'analyses de validation, y compris la validité des critères par rapport aux dossiers hospitaliers, la validité du contenu, la validité de construction et l'analyse de fiabilité. Le volet qualitatif comprendra des entretiens cognitifs et des discussions de groupe avec les participants pour explorer les expériences des utilisateurs et recueillir des commentaires. L'analyse du cadre sera utilisée pour analyser les données qualitatives. Le perfectionnement des outils sera guidé par des résultats à la fois quantitatifs et qualitatifs.

Discussion:

Cette approche à méthodes mixtes intègre une validation quantitative robuste avec des informations qualitatives approfondies, conduisant à un outil CHERG VASA raffiné et spécifique au contexte. Cet outil amélioré fournira des données fiables sur les déterminants de la mortalité des moins de 5 ans dans les bidonvilles de Karachi, éclairant ainsi les interventions ciblées et, à terme, améliorant les résultats en matière de santé des enfants.

Mots clés

autopsie verbale, autopsie sociale, validité, fiabilité, validation d'échelle, méthodes mixtes

Абстрактный

Введение:
Смертность детей в возрасте до пяти лет остается серьезной проблемой в условиях ограниченных ресурсов, таких как городские районы Пакистана. Точные данные о детерминантах смертности имеют решающее значение для эффективных мер. В этом исследовании описывается смешанный подход к совершенствованию инструмента CHERG VASA для исследования смертности детей в возрасте до пяти лет в трущобах Карачи.

Цели:
1) Дальнейшая количественная проверка инструмента CHERG VASA на большой репрезентативной выборке. 2) Собрать качественную обратную связь от пользователей, чтобы оценить пользовательский опыт и определить области для улучшения. 3) Уточнить инструмент на основе совокупных количественных и качественных результатов.

Методы:
Разъясняющий последовательный план смешанных методов будет реализован в 7 районах Карачи. Количественная группа будет использовать стратифицированную случайную выборку для набора участников, у которых в течение последних 6 месяцев произошла смерть детей в возрасте до 5 лет. Будет использован инструмент CHERG VASA, после чего будет проведен проверочный анализ, включая валидность критериев по больничным записям, достоверность содержания, достоверность конструкции и анализ надежности. Качественное направление будет включать когнитивные интервью и дискуссии в фокус-группах с участниками для изучения пользовательского опыта и сбора отзывов. Рамочный анализ будет использоваться для анализа качественных данных. Совершенствование инструмента будет основываться как на количественных, так и на качественных результатах.

Обсуждение:
Этот смешанный подход объединяет надежную количественную проверку с углубленным качественным анализом, что приводит к созданию усовершенствованного и специфичного для конкретного контекста инструмента CHERG VASA. Этот усовершенствованный инструмент предоставит надежные данные о факторах, определяющих смертность детей в возрасте до пяти лет в трущобах Карачи, что станет основой для целевых мер и, в конечном итоге, улучшит показатели здоровья детей.

Ключевые слова
вербальная аутопсия, социальная аутопсия, валидность, надежность, масштабная валидация, смешанные методы

Abstracto

Introducción:
La mortalidad de los niños menores de cinco años sigue siendo un desafío importante en entornos con recursos limitados como el Pakistán urbano. Los datos precisos sobre los determinantes de la mortalidad son cruciales para que las intervenciones sean eficaces. Este estudio describe un enfoque de métodos mixtos para perfeccionar la herramienta CHERG VASA para investigar la mortalidad de menores de 5 años en los barrios marginales de Karachi.

Objetivos:
1) Validar aún más la herramienta CHERG VASA cuantitativamente en una muestra grande y representativa. 2) Recopilar comentarios cualitativos de los usuarios para evaluar la experiencia del usuario e identificar áreas de mejora. 3) Refinar la herramienta basándose en hallazgos cuantitativos y cualitativos combinados.

Métodos:
Se implementará un diseño explicativo secuencial de métodos mixtos en 7 distritos de Karachi. El brazo cuantitativo empleará un muestreo aleatorio estratificado para reclutar participantes que hayan experimentado una muerte menor de 5 años en los últimos 6 meses. Se administrará la herramienta CHERG VASA, seguida de análisis de validación que incluyen validez de criterio frente a registros hospitalarios, validez de contenido, validez de constructo y análisis de confiabilidad. El brazo cualitativo incluirá entrevistas cognitivas y discusiones de grupos focales con los participantes para explorar las experiencias de los usuarios y recopilar comentarios. El análisis del marco se utilizará para analizar datos cualitativos. El perfeccionamiento de la herramienta se guiará por hallazgos tanto cuantitativos como cualitativos.

Discusión:
Este enfoque de métodos mixtos integra una validación cuantitativa sólida con conocimientos cualitativos profundos, lo que conduce a una herramienta CHERG VASA refinada y específica del contexto. Esta herramienta mejorada proporcionará datos confiables sobre los determinantes de la mortalidad de menores de 5 años en los barrios marginales de Karachi, informando intervenciones específicas y, en última instancia, mejorando los resultados de salud infantil.

Palabras clave
autopsia verbal, autopsia social, validez, confiabilidad, validación de escala, métodos mixtos

Key messages

- ·Plans to robustly validate CHERG VASA tool for under-5 mortality in Karachi slums with a large, representative sample.
- ·Plans to employs in-depth qualitative feedback from users to refine the tool for cultural sensitivity and effectiveness.
- ·Demonstrates the value of a mixed-methods approach for tool validation and development in public health.
- ·Plans to contribute to improved mortality data, user-centered tool development, and mixed-methods research applications.

References

1. United Nations Inter-agency Group for Child Mortality Estimation (UN-IGME). Levels & trends in child mortality: Estimates developed by the UN Inter-agency Group for Child Mortality Estimation. https://data.unicef.org/resources/levels-and-trends-in-child-mortality/. Accessed [12th December 2023].
2. Siddiqui M. , Ng C. , & Low W.. Methodologies of verbal autopsy and social autopsy tools, adopted by vasa studies in exploring under-five mortality determinants. International Journal of Endorsing Health Science Research 2018;6(3):43-55. https://doi.org/10.29052/ijehsr.v6.i3.2018.43-55
3. Siddiqui MB, Ng CW, Low WY Social autopsy is a dire need for investigating child mortality in pakistan. International Journal of Endorsing Health Science Research (Ijehsr) 2016;4(2):01. https://doi.org/10.29052/ijehsr.v4.i2.2016.01-04
4. Siddiqui MB, Ng CW, Low WY Need to validate verbal autopsy/social autopsy (vasa) integrated tool for developing countries to assign biological and social reasoning of child mortalities. International Journal of Endorsing Health Science Research (Ijehsr) 2017;5(3):01. https://doi.org/10.29052/ijehsr.v5.i3.2017.01-03
5. Siddiqui MB, Ng CW, Low WY, Abid K Validation of CHERG'S Verbal Autopsy-Social Autopsy (VASA) tool for ascertaining determinants and causes of under-five child mortality in Pakistan. PLoS ONE 2023; 18(12): e0278149. https://doi.org/10.1371/journal.pone.0278149

Publication history: **Received:** 21st January 2024 **Accepted:** 29th January 2024
First Published: 30th January 2024

The House of Quantum NETWORKS

Ready to submit your research? Choose THoQN and benefit from:

- Fast, convenient online submission
- Thorough peer review by experienced researchers in the field
- Rapid publication on acceptance
- Support for research data, including large and complex data types

At THoQN, research is always in progress. **Learn more**