

Health promotion interventions to increase cervical cancer screening uptake in sub-Saharan Africa: a scoping review protocol

Agani Afaya (✉ aagani@uhas.edu.gh)

University of Health and Allied Sciences, Ho, Ghana. <https://orcid.org/0000-0002-7918-2999>

Kennedy Diema Konlan

University of Health and Allied Sciences, Ho, Ghana

Eugenia Mensah

Maternal Health Department, War Memorial Hospital, Navrongo, Upper East Region, Ghana

Amos Nawunimali Suuk

Community Health Nursing Training College, Tamale, Northern Region, Ghana

Damata Issahaku Kombat

College of Nursing and Midwifery, Nalerigu, North East Region, Ghana

Linda Hayford

St. Anthony Hospital, Dzordze, Volta Region, Ghana

Vida Nyagre Yakong

University for Development Studies, Tamale, Ghana

Protocol

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Abstract

Introduction: Cervical cancer is the second most common cancer among women and approximately 500,000 new cases are diagnosed yearly. It is increasingly imperative to use effective methods of early detection and initialization of treatment for cervical cancer especially among women from vulnerable poor communities through the initiation of effective health promotion interventions. This study will coalesce the sporadic, and uncoordinated interventions that have been used by researchers to give a single unit that describes and assess the most effective means of health promotion interventions.

Methods: The PRISMA Extension for Scoping Reviews (PRISMA-ScR) and Joanna Briggs Institute (JBI) scoping review methodology will be used to guide the reporting of this scoping review. The three-step search strategy for scoping reviews will be adopted to electronically search databases such as PubMed, Cumulative Index to Nursing and Allied Health Literature (CINAHL via EBSCOhost), Web of Science, and EMBASE. After search completion, the citations of the articles will be imported to EndNote X9 (version 1.19.6) reference manager for screening, removal of duplicates, and storage. Two of the researchers (AA, KDK) will independently screen the titles and abstracts in accordance with the inclusion criteria specified in this protocol. The proposed review will consider primary published peer-review articles published articles in English language from 2010-2021. Data extracted from selected studies will include author(s), publication year, country, research design and aim, study population, interventions, outcome measure, and major findings. The JBI Critical Appraisal Checklist for Systematic Reviews and Research Syntheses will be used to assess the quality of the included articles.

Discussion: We envisage that the findings from this review will firstly identify the various types of interventions implemented in the sub-Saharan African countries to increase the uptake of cervical cancer screening. Secondly, the findings will provide an overview of the outcome measures and identify effective interventions implemented in all the studies to increase cervical cancer uptake in SSA. Finally, the review will guide future research in developing, implementing, and evaluating appropriate health promotion interventions tailored towards increasing cervical cancer screening uptake.

Scoping review registration: The review has been registered in the Open Science Framework with the registration number (osf.io/yad46)

Introduction

The World Health Organization (WHO) estimates over 11 million people are diagnosed with cancer globally each year with 7 million deaths [1]. It was estimated that in 2020, there will be over 15 million new cancer cases with 70% in developing countries [1]. Cervical cancer is the second most common cancer among women and approximately 500,000 new cases are diagnosed yearly [1, 2]. Some of the associated barriers include poor financial empowerment, high rate of illiteracy as women cannot afford basic screening and preventive services [3]. The case is even pejorative as there are only a few screening centers in sub-Saharan Africa (SSA) [1, 4], while about 90% of cervical cancer cases cannot be treated in

most of the sub region's health facilities due to late detection and late initiation of treatment [2, 5]. Screening activities on cervical cancer have and will continue to contribute significantly towards the alleviation of the plight of women. However, due to poor access to screening and treatment services, the vast majority of deaths occur in women living in low and middle-income countries- (LMICs) [1, 6, 7]. The case is even more pervasive as it is estimated that in sub-Saharan Africa, the prevalence of the disease is likely to increase substantially [2, 4].

It is increasingly imperative to use effective methods of early detection and initialization of treatment for cervical cancer especially among women from vulnerable poor communities [2, 3, 5] through the initiation of effective health promotion interventions. Effective methods for early detection of precancerous lesions using cytology (Pap smear) exist and have been shown to be successful in high-income countries [7]. Competing health care priorities, insufficient financial resources, weak health systems, and limited numbers of trained providers have made high coverage for cervical cancer screening in most LMIC difficult to achieve [1, 2, 4]. Health promotion interventions among these poor regions will be able to increase the likelihood of women adopting pragmatic measures towards screening, early detection, and treatment. These health promotion measures must stem from coordinated and concise research activities that are a result of efforts to minimize economic socio-cultural barriers, increase health awareness and promote access while addressing structural and policy gaps by decision-makers including government interventions. To formulate policy, research has to inform the most prudent means of prevention of cervical cancer especially in LMICs where the prevalence seems to be on the ascendency. The institutionalization of prudent and efficient health promotion measures that encourage screening, early detection, and efficient treatment remains imperative to the tenants of successful prevention and control of cervical cancer especially in poor communities in SSA. Identification of knowledge deficits paves the way for the development of educational programs targeted to health professionals and women of reproductive age with the ultimate goal of reducing the prevalence of the disease through early detection and prompt treatment. In the sub-region, several studies conducted have attempted to identify these barriers or tested the efficacy of specific health promotion interventions. This study will coalesce the sporadic, and uncoordinated interventions that have been used by these researchers to give a single unit that describes and assess the most effective means of health promotion interventions. The main research question, using the Population-Concept-Context (PCC) framework to guide this scoping review is: what is the research evidence available regarding cervical cancer screening interventions (concept) for women (population) in SSA (context)?

Methods

This scoping review protocol is registered within the Open Science Framework database (Registration No: osf.io/yad46). This current protocol is reported in line with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses Protocols (PRISMA-P) statement [8, 9]. The PRISMA Extension for Scoping Reviews (PRISMA-ScR) will be used to guide the reporting of the scoping review [10]. Also, the scoping review will be reported in line with the Joanna Briggs Institute (JBI) scoping review methodology [11] which includes the framework of PCC and the three-step search strategy to guide the review process [11].

Eligibility criteria

The PCC framework will be used to direct the study selection as well as the research question [11]. This review will consider all interventional studies (Quasi-experimental studies and randomized controlled trials) that target the promotion of cervical cancer screening within health facilities or at the community level. The population will include women with or without cervical cancer. The concept of this review is to increase cervical cancer screening by health promotion interventions among women in SSA. The communities and hospital settings will be the context of this study. The hospital refers to all health facilities providing cervical cancer screening and treatment services. The communities are areas where health promotional activities do take place other than the hospital. For the purpose of this proposed scoping review, all original research that investigates health promotion interventions for cervical cancer screening within communities or health facilities will be included. The proposed review will consider primary published peer-review articles including grey literature. This review will include all published articles in English language from January 2000 to 2021. Studies excluded will be based on the following criteria: not published in English language, articles published before the year 2000, methodology paper/research protocol, review paper, case report, discussion paper, studies with no abstract, editorial, and conference abstract. Also, studies that are non-intervention-based will be excluded.

Information source and search strategy

The three-step search strategy for scoping reviews will be adopted to electronically search databases such as PubMed, Cumulative Index to Nursing and Allied Health Literature (CINAHL via EBSCOhost), Web of Science, and EMBASE to include published literature from January 2000 to 2021. The search strategies including the search terms for the proposed review for the various databases will be developed in consultation with a Medical Librarian. The first step includes an initial limited search of PubMed and CINAHL via EBSCOhost database with the following keywords (cervical cancer, cervical cancer screening, cervical cancer examination, cervical cancer prevention, cervical cancer promotion) and subject heading such as; (public health, health promotion, etc). Following the initial search, screening for the keywords that contained the title, abstracts, and subject headings of the relevant retrieved articles will be done. Step two will involve refined second search terms which are tailored to the various databases (PubMed, CINAHL via EBSCOhost, Web of Science, and EMBASE including Google Scholar. In step three, additional studies will be identified through searching the reference list of the identified articles.

Selection of sources of evidence

After the completion of the search, the citations of the articles will be imported to EndNote X9 (version 1.19.6) reference manager for screening, removal of duplicates, and storage. Two of the researchers (AA, KDK) will independently screen the titles and abstracts in accordance with the inclusion criteria specified in this protocol. If there are any differences and disagreements, a third researcher will be involved to discuss and resolve these discrepancies. The articles identified to be included in the review will be uploaded to the EndNote library. A full-text screening will be done by two independent reviewers to determine their inclusion in the review. Disagreements between the two independent reviewers on the full-

text inclusion will be fully discussed and if not resolved a third researcher will be involved to mediate to bring consensus. A detailed report will be written given reasons for the exclusion of those articles from the final list of articles. Details of the selection process of the included and the excluded studies at various stages will be clearly shown in the PRISMA flow chart diagram [8].

Data extraction

Data matrix will be developed by authors using a Microsoft Excel spreadsheet and used for data extraction in accordance with the JBI guideline for scoping reviews. Also, data charting forms created will be used for piloting on a small number of included articles by one of the researchers (AA). Independent data extraction will be carried out by two researchers compared and cross-checked by another researcher against the original articles to ensure the validity of the extracted information. Potential disagreements will be resolved amicably through discussion, and if not a third researcher will be invited to moderate the process and to ensure consensus. In cases where the findings are unclear to the reviewers, the primary publication authors will be emailed for further clarification of reported data. The extracted data from the studies will include information that aligns with the research questions and the aim of the proposed scoping review. Where applicable study characteristics (such as author (s), year, country, study aim, study design, study population and sample size, methods of data collection), type of intervention, and outcome measures will be extracted.

Critical appraisal of evidence

The JBI Critical Appraisal Checklist for Systematic Reviews and Research Syntheses will be used to assess the quality of the included articles. As it is recommended if included articles do not meet at least the 70% criteria they will be dropped from the final synthesis. The JBI Critical Appraisal Checklist will be used to critically appraise the quality of the studies paying attention to the study aims/objectives, inclusion and exclusion criteria, study participants, and study setting. We will also adopt other quality checks which will include the methodology employed, intervention used, outcome measures and confounders, and statistical analysis appropriateness. The JBI Critical Appraisal Checklist for Quasi-experimental and Experimental studies will also be used for non-randomized and randomized experimental studies [12]. Two reviewers will independently assess the quality of the included studies and if there are discrepancies a third reviewer (moderator) will be involved to ensure there is uniformity in the assessment.

Discussion

This scoping review is aimed at mapping the existing evidence on health promotion interventions targeted to increase cervical cancer screening among women in SSA and provide a comprehensive summary of the evidence extracted to reflect the research question. Recently in LMICs, cervical cancer is recognized as the second most frequent cancer among women [13]. In 2018, 51% of the newly diagnosed cervical cancer cases (570000) worldwide occurred among women living in LMICs [14]. This inequality in the burden of cervical cancer is expected to grow if further interventions are not prioritized because the

recent increases in the uptake of cervical cancer screening have mainly been reported only in high-income countries [15, 16]. Evidence shows that more than 60% of women in high-income countries have ever been screened for cervical cancer compared with only about 20% in LMICs [15, 16]. To address this gap, we will conduct a comprehensive review of literature to identify current existing health promotion interventions designed to improve cervical cancer screening uptake among women in SSA.

We envisage that the findings from this review will firstly identify the various types of interventions implemented in the SSA countries to increase the uptake of cervical cancer screening. Secondly, the findings will provide an overview of the outcome measure and identify effective interventions that all the studies implemented to increase cervical cancer uptake in SSA. Thirdly, the review will guide future research in developing, implementing, and evaluating appropriate health promotion interventions tailored towards increasing cervical cancer screening uptake. Though we have provided a rigorous methodological process in this scoping review protocol, some potential limitations may eventuate. First, this review will include all studies published in English which might exclude relevant studies published in other languages. Second, authors may unintentionally omit relevant studies for this review published in local databases although extensive database and hand searches will be conducted. The results of this proposed scoping review will be submitted for publication in a peer-review journal.

Abbreviations

PRISMA-ScR: The Preferred Reporting Items for Systematic Reviews and Meta-analysis for Scoping Reviews

PRISMA-P: The Preferred Reporting Items for Systematic Reviews and Meta-Analysis Protocol

JBI: Joanna Briggs Institute

SSA: Sub-Saharan Africa

LMICs: Low and Middle-Income Countries

CINAHL: Cumulative Index to Nursing and Allied Health Literature

PCC: Population, Concept, Context

WHO: World Health Organisation

Declarations

Authors' contributions

AA and KDK developed the protocol with important intellectual content from EM, ANS, LH, and VNY. AA and KDK developed the search strategies with consultation from a medical librarian. AA, KDK, and VNY

drafted and critically revised the manuscript for important intellectual content. EM, ANS, and LH contributed to the revision of the manuscript for improvement. All authors read and approved the final version for publication.

Ethics approval and consent for publication

Not applicable

Competing interests

The authors declare that there are no conflicts of interest regarding the publication of this paper.

Consent for publication

Not applicable

Availability of data and materials

Not applicable

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