



Review Article

A scoping review on health education programs for improving Men's engagement with health services in low- and middle- income countries

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ABSTRACT

Objectives: This study aimed to map evidence on health education programs (HEPs) for men engagement in health services in LMICs to guide future research.

Study design: A scoping review was conducted.

Methods: We searched Google Scholar, PubMed, EBSCOhost (CINAHL, MEDLINE, Health Source, Nursing, Academic Edition and Academic Search Complete) and WEB of Science electronic databases for publications from January 2000 to March 2019. We also searched Researchgate, the WHO library, and universities repositories for grey literature such as dissertations, theses, and reports. The search terms included "health," "education," "program," "men", with Boolean terms, AND and OR, being used to separate the keywords. Articles reporting evidence on HEPs for men aged 15 and older in LMICs and HEPs improving men's engagement in health services in LMICs published in any language between January 2000 to March 2019 were included in this review. We appraised included studies using the 2018 version of the Mixed Methods Appraisal Tool. We used thematic content analysis to extract emerging themes and presented a narrative account of the findings.

Results: Database search retrieved 8905 eligible articles. Of these, only six studies met the inclusion criteria and were included for data extraction. All included studies reported evidence of health education for men engagement in health services. The total number of men reported in the studies was 4372 with an age range of 15–54. Included studies were conducted in Uganda, Kenya, Ghana, and Zimbabwe. Included studies presented evidence on HEPs for men engagement in health services. Two main themes emerged from thematic content analysis of included studies: mode of health delivery (the process of enabling men and boys to become involved in health services as patients/clients) and health benefits to men (to achieve better health outcomes).

Conclusion: Our review revealed limited evidence of HEPs for men engagement in health service. Regardless of mode of health education delivery, notable health benefits to men were reported. We recommend implementation research on HEPs for men engagement in health services to better understand the social, cultural and economic influences in LMICs.

1. Introduction

Involvement of men in health services is key to improving health outcomes. The World Health Organization (WHO) recommended interventions to promote the involvement of men during pregnancy, childbirth, and after birth [1]. More recently, WHO has called for integrated programmes, particularly those that combine community outreach, mobilization, and mass media campaigns with group education, in engagement of men and boys in healthcare services [2]. Despite these recommendations, recent evidence reported poor uptake of health services by men [3,4]. Traditionally, health education programs (HEPs)

have been documented to increase individuals' awareness toward their health and improve health outcomes. In the past decade, scholars have published evidence on HEPs resulting in individuals adopting healthier lifestyles [5–8].

In 2017, the United Nations reported that men are less likely to access early treatment and therefore, with ripple effects on their health outcomes and burden to health system [9]. Several studies have also reported poor health outcomes such as delayed antiretroviral initiation for HIV and lower male-life expectancy compared to their female counterparts [10–12]. Male aversion of health services has been linked to the masculinity and other socio-cultural reasons [12–14]. Poor health

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seeking behaviour has also been well established as a key factor to male aversion of health services [15]. It is worth noting that in most societies in low-to middle-income countries (LMICs), men play an important role as major decision-makers in facilitating or discouraging access to needed maternal healthcare services [3,4]. To this extent, there is growing recognition of the importance of male involvement in facilitating women's access to maternal healthcare [3,4,16,17].

Elderly men who participated in HEPs were reported to be generally, in good health [5,6]. Other scholars reported HEPs to improve treatment completion in tuberculosis patients across all age groups [7,18]. For adolescents and young boys, sexual HEPs have been shown to improve their knowledge and skills necessary for them to make safer sexual choices [8]. In addition, male-targeted health interventions have been strongly associated with enhanced and better birth outcomes and increased use of skilled maternal healthcare services [19–22]. Moreover, men are most often seen as oppressors, self-centred, disinterested, or violent in health programs instead of as complex subjects whose behaviours are influenced by gender and sexual norms [23]. Other frequently cited barriers include social stigma, shyness and embarrassment, work obligations, and poor communication between husbands and wives [24,25]. However, previous reviews conducted in 2000, 2003 and 2004 have reported a mixed but generally encouraging assessment of programmes with men [16,17,26]. These previous reviews affirmed that sexual and reproductive health programmes changed attitudes, behaviour, and knowledge among men and ultimately improve their engagement in health services [16,17,26]. Two focused on engagement in sexual and reproductive health [16,17], while one was restricted to behaviour change towards partner violence [26]. There is a paucity of recent published reviews synthesising evidence on HEPs for men engagement in health services. Given the global interest in men engagement in health services and the reported poor health service usage by men, this study mapped evidence of HEPs for improving men engagement in health services in LMICs.

2. Methods

2.1. Study Design

We choose a scoping review method as the most appropriate method to address our research question 'What is the evidence on HEPs for enabling men's engagement with health services in LMICs?'. The protocol was published priori [27]. Our review was guided by the Arksey and O'Malley framework, 2005 [28], further enhanced by Levac et al., 2010 [29], which entails the following steps: identification of the research question; identification of relevant studies; study selection; charting the data; and collating, summarizing and reporting of the results. Further, as recommended by Levac et al., 2010, we appraised the quality of the included studies [29]. Here, we report results of the review guided by the 2018 Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for scoping reviews guidelines (PRISMA-Scr) [30].

2.2. Search strategy

We conducted a comprehensive literature search of relevant articles from Google Scholar; PubMed; EBSCOhost (CINAHL, MEDLINE, Health Source/Nursing/Academic Edition and Academic Search Complete) and WEB of Science electronic databases. We limited the dates of publication to January 2000 to March 2019. Our search terms were in English. The first author developed the literature search with consultation with the UKZN librarian. We searched for randomized controlled trials, non-randomized controlled trials and observational studies that reported evidence on HEPs for men engagement in health services. Review articles (narrative, scoping, systematic, meta-analysis and meta-synthesis) were excluded. The database search terms included "health," "education," "program," "men". Boolean terms, AND and OR, were used to

separate the keywords. Medical Subject Headings (MeSH) terms were also included in the keyword search. The search strategy was adapted to suit each database. We also searched Researchgate, the WHO library, and universities repositories for grey literature such as dissertations, theses, and reports. The reference lists of included articles were also searched for relevant studies.

2.3. Eligibility for research question

Our research question was: What is the evidence on HEPs for enabling men's engagement with health services in LMICs?

We used the Population, Concept and Context (PCC) framework to determine the eligibility of our research question for this scoping review study as shown in Table 1.

2.4. Eligibility criteria and study selection

We used an eligibility criteria to select relevant studies on health programs for men engagement in health services in LMICs.

2.4.1. Inclusion criteria

- Articles reporting evidence on health education programs for men aged 15 and older in LMICs.
- Articles reporting evidence on health education programs improving men's engagement in health services in LMICs.
- Articles published in any language between January 2000 to March 2019.

2.4.2. Exclusion criteria

- Articles reporting evidence on health education programs for women and children
- Articles reporting evidence of health education programs for men in high-income countries and upper-middle income countries.
- Articles published before January 2000 and after March 2019
- Review articles

Study selection occurred in three stages. First stage, one reviewer (TD) screened the titles from the databases guided by the eligibility criteria. An Endnote library using the Endnote X8 was created and all eligible articles following titles screening were exported into the library. Following title screening, two reviewers (TD and PV) undertook screening of abstracts and full articles. Discrepancies in reviewers' responses at abstract screening stage were resolved through a discussion until consensus was reached. Discrepancies in reviewers' responses at full article screening stage were resolved by involving a third screener (DK). We calculated the level of agreement between the two reviewers following full text screening.

2.5. Charting of data

We used a standardized data extraction sheet to extract data from included studies. We extracted data on the following: author and year of publication, location, aim, and study design, type of health education

Table 1
Framework for determining eligibility of the research question.

Population	Human participants; Male sex; 15 years and older in Low to Middle Income Countries as classified by World Bank
Concept	Health education programs for men implemented between January 2000 to March 2019
Context	Health service engagement We defined men engagement in health services as the process of enabling men and boys to become involved in health services as patients/clients or partners to achieve better health outcomes.

program, number and age of the men.

2.6. Collating, summarizing and reporting of the results

We used thematic content analysis to analyse findings from included articles. We employed NVIVO version 12 package to extract the themes from the included articles. The study context was men engagement in health services. We defined men engagement in health services as the process of enabling men and boys to become involved in health services as patients/clients or partners to achieve better health outcomes. Two reviewers analysed the data. First, the reviewers familiarized themselves with the content of the articles. Secondly; findings reported in the articles were coded into categories based on the study context, which were then grouped into nodes. We employed the relationships module of NVivo, to group the nodes into similar concepts.

2.7. Quality appraisal of included primary studies

We utilized the 2018 version of the Mixed Methods Appraisal Tool (MMAT) to critically appraise the included primary studies (Supplementary file 1) [31]. Two reviewers (TD and DK) independently performed the quality assessment. Differences in rating results were resolved by discussion until consensus was reached. An overall percentage quality score was calculated for included studies and scores were interpreted as $\leq 50\%$ -low quality, 51–75% -average quality, and 76–100% high-quality. We adopted MMAT for quality appraisal of the included primary studies as we sought to assess methodological rigour of the papers. The MMAT has been used elsewhere to appraise the quality of primary research based on experiment and observation [31]. It was critical to appraise quality of the evidence as our outcome involved assessing evidence of an impact (engagement) of an intervention (HEP).

3. Results

3.1. Screening results

Our database keywords search found 8905 potentially eligible articles. Following title screening 141 articles were eligible for inclusion in abstract screening. Results from each database search are presented in Supplementary file 2. Further, 15 duplicates were removed leaving 126 articles to be included in abstract screening. Following abstract screening, 110 studies were excluded leaving 16 articles for full articles screening. Ten articles were excluded after full articles screening and six articles were included in data extraction. Fig. 1 shows a flow diagram of the screening results.

Table 2
Characteristics of included cross-sectional studies.

Author (Date)	Location	Aim	Study Design	Study Population	Number of men	Age group	Type of HEP	Outcome
Chirau (2012)	Zimbabwe	To determine whether men who were circumcised in adulthood have risky sexual behaviour after being circumcised	Cross-sectional	131	131	18–49	Circumcision	There was reduced prevalence of STI among the circumcised clients. Attendance for review visits was higher than national average.
Ghanotakis (2017)	Uganda	A sub-analysis to examine the extent to which the community-based intervention component focused on male engagement achieved its aim of transforming harmful gender attitudes, norms, and behaviours among men participating in intervention activities	Cross-sectional	1122	1122	18 and older	Transform gender norms and improve family planning and HIV service uptake	The intervention resulted in some statically significant increases in reported health-seeking behaviours, including seeking clinic services for self or accompanying a partner in the past five months. There were also increases in respondents reporting condom use with main partners over the past three months, ever having been tested for HIV, and communicating with main partners on using a method to avoid pregnancy.

A total of ten articles were excluded following full article screening due to the following reasons: three papers were review articles [32–34]; two articles lacked information on health education for men [35,36]; and five studies [36–40] lacked evidence on the context of this study (health services engagement). There was fair agreement between responses from the two reviewers full article screening results (Kappa statistic = 0.152, p-value = 0.51). More details are available on.

3.2. Characteristics of included studies

Characteristics of included articles are presented on Tables 2–4. All included studies reported evidence of health education and men engagement in health services in LMICs. Of these, three were conducted in Uganda [41–43] one in Kenya [44], one in Ghana [45] and one in Zimbabwe [46]. All included studies were published between the years 2012–2017. The total number of men reported in the studies was 4, 372, however one study did not specify number of male participants [45]. The age range of men that participated in the included studies was from 15 to 54 years. Study designs for included studies were as follows: three cross sectional surveys [41,42,46], one mixed methods [43], one randomized controlled trial [44], and qualitative [45]. One study [46] was grey literature, a thesis, retrieved from an institutional repository.

3.3. Quality assessment of included primary studies

Five primary studies underwent methodological quality assessment. Three studies scored 85.7% [42,43,46] while two scored 100% [41,44]. One article [46] was not appraised as it was grey literature. More details are available in Supplementary file 1.

3.4. Study findings

Six articles were included for data extraction and thematic content analysis. The following main themes emerged from thematic content analysis of included studies: mode of health delivery (the process of enabling men and boys to become involved in health services as patients/clients) and health benefits to men (to achieve better health outcomes).

3.5. Mode of health delivery

All six included studies showed evidence of health education for men using facility-based and community-based delivery modes.

Table 3
Characteristics of included qualitative and mixed methods studies.

Author (Date)	Location	Aim	Study Design	Study Population	Number of men	Age group	Type of HEP	Outcome
Ganle (2015)	Ghana	To explore the barriers to and opportunities for men's involvement in maternal healthcare in the Upper West Region of Ghana	Qualitative	Not clear	Not clear	2015	Maternal Healthcare	The interviewed men suggested addressing barriers to male involvement in maternal services by community mobilization programmes to promote greater male involvement, health education, effective leadership, and respectful and patient-centred care training for healthcare providers.
Stern (2015)	Uganda	To examine the impact of a three-year intervention project conducted in the Hoima district of Uganda, which sought to engage men in sexual and reproductive health as clients, equal partners and advocates of change.	Mixed methods	164	164	18-54	Sexual and reproductive health as clients, partners and advocates of change	Following the intervention, a significantly greater number of men accessed, and supported their partners in accessing sexual health services, had gained sexual and reproductive health awareness, reported sharing contraceptive decision-making. Regarding engaging men as clients, the use of multiple communication and implementation strategies, including community outreach and the hosting of male targeted clinic days, was found to attract a greater number of male clients than prior to the project's implementation in the area. Peer education was also particularly effective in promoting men's sexual and reproductive health awareness,

3.5.1. Facility-based health education delivery

For facility based, two studies reported health care providers providing direct health education to men [42,46], while one reported use of mobile text messaging services [44]. In one study, health education was delivered to men individually by their health care provider [46]. HIV care and treatment providers were trained to deliver health education to men individually [43] or with their spouses [42]. Two studies targeted men who had visited health facility for voluntary male circumcision [44,46]. Odeny et al. [44], trained health workers and research staff hosted clinic days that targeted male attendance every Saturday at a clinic setting. In addition to health education, services offered included circumcision, reproductive planning, testing and treatment of sexually transmitted infections (STIs), including HIV, which were provided free of charge [43]. Men could choose whether they preferred to be seen by a male or a female service provider [43]. Health workers should be targeted in delivering health education to men [42,46]. There is a need to create opportunities through which men interact with health workers, to improve contraceptive use among couples [42]. The included evidence revealed a gap in interventions that drive men to visit the health care facility; where they can meet health workers.

3.5.2. Community-based health education delivery

For community level health education delivery, two studies reported peer education [41,43] with one highlighting use of model community members to deliver health education to fellow men [41]. The model men, "Emanzis", recruited men for health education delivery by consulting local leaders and utilizing existing groups of men, like sports teams and church groups as catchment areas [41]. Peer educators were used to engage men as advocates of change [43]. Community leaders, prominent religious and political leaders, were encouraged to publicly support men's engagement in health services [43]. Convenient for some men, advocacy spaces where peer educators could discuss male involvement in health services and its benefits including church platforms were used [43]. The evidence from the included studies reveal a gap in interventions that target men at community level to better engage them in health services.

3.6. Health benefits to men

All six studies reported health education resulting in benefits to men that lead to improved health outcomes. Of the six studies, two reported health education to improve health outcomes for men only [44,46] while four reported education aimed at also improving health outcomes for the partners [41-43,45]. Two health education programs were aimed at improving men engagement in HIV prevention services [44,46] through male circumcision and associated sexual risk behaviour. Two health education programs were aimed at improving men engagement in family planning [41,42], one in sexual and reproductive health as clients, partners and advocates [43] while one was in maternal health care [45].

Findings from the included studies present both direct benefits to men and for their partners. A direct benefit to men reported in was improved health seeking behaviour [41,43,44,46]. Health seeking behaviour was reported through improved uptake of HIV services [41], improved men attendance to health facilities as clients [43,44,46]. Decreased risky sexual behaviour [41,46] was also reported. For benefits to their partners, the studies reported improved accompanying of partner to health services [41,43] improved communication with partner on health issues [41,43], improved knowledge on contraceptive use [42, 43] and improved gender norms [43]. While men engagement in health services has evidence of improved health outcomes, the bulk of the interventions targeted men engagement in maternal health. There remains a gap on men targeted health education interventions that can have wider reach beyond engagement in maternal-related health services.

Table 4
Characteristics of included secondary data analysis and randomized controlled trial studies.

Author (Date)	Location	Aim	Study Design	Study Population	Number of men	Age group	Type of HEP	Outcome
Kabagenyi (2014)	Uganda	To examine whether discussion of family planning with a health worker is a critical determinant of modern contraceptive use by sexually active men, and men's reporting of partner contraceptive use.	Secondary data analysis	2295	1755	15 – 54	Family Planning, Modern Contraceptive use	Male respondents who had discussed family planning with a health worker were more likely to use modern contraceptives than those who had not.
Odeny (2012)	Kenya	To evaluate the effect of short message service (SMS) text messages on attendance of the scheduled seven-day post-operative visit after male circumcision for HIV prevention	Randomized controlled trial	1200	1200	18 and older	Text Messaging to Improve Attendance at Post-Operative Clinic Visits after Adult Male Circumcision for HIV Prevention	Text messaging resulted in a modest improvement in attendance at the 7-day post-operative clinic visit following adult male circumcision

4. Discussion

This scoping review mapped available literature on the engagement of men in health services in LMICs and provided a general overview of research evidence. The review findings revealed two main approaches to health education delivery for men individually or in groups in the form of health facility and community-based health education delivery. In both approaches, health benefits to men have been revealed.

The findings of this review reveal a combination of both facility and community-based health education delivery. Similar strategies have been used for health education provision in high-income countries [6, 37,47]. In these studies, HEPs were targeted at HIV prevention education [37], general health screening [6] and prostate cancer [47]. In LMICs, HIV and other STIs are a major concern with Sub-Saharan Africa having by far the highest rate of the infection and risk sexual behaviour [48]. Our findings revealed that in the context of LMICs, the effectiveness of combining both peer educator and use of model community members needs to be examined to better harness men and improve yield.

It has been argued that in many households in LMICs men are the primary decision makers therefore determine the health outcomes of everyone in the family [43]. Due to the patriarchal nature of many African societies, men often govern behaviour regarding family planning, women's access to maternal health, availability of nutritious food and access to healthcare services for their families [49,50]. Similar findings were reported in Nepal [51]. For this reason, it is of paramount importance that men are educated on issues of health including prevention and treatment of disease.

This study shows a wide range of benefits to men and their families for engagement in health services. Earlier work revealed HEPs implemented to target men reporting some success with having found a mixed but generally encouraging assessment of programs with men. Sexual and reproductive health programs changed attitudes, behaviour and knowledge among men [16,17,26]. Similar benefits to men were revealed from our review [41,46]. Further, our review revealed that involving men in maternal healthcare has beneficial consequences and could significantly influence the health outcomes of women and children. Similar findings have been reported elsewhere [52,53]. However, other scholars have reported contradicting results. For example, Riess et al. studied risk compensation and protective sexual behaviour among circumcised men in Kisumu, Kenya. In this study, most respondents reported no behaviour change, nor an increase in protective sexual behaviors post health education delivery [54]. These mixed results warrant further research to get a deeper understanding of the factors that influence men engagement in health services.

4.1. Implication for research

Our study revealed limited research on both health education and men's engagement in health services in LMICs. There remains a gap in evidence of interventions that target men engagement in health services. This shows a need for more research in this area. This review shows the need for additional primary studies; randomized controlled trials, non-randomized controlled trials and observational studies that report evidence on HEPs for men engagement in Health services in LMICs. Studies that provide measurement of impact may further provide an insight into the barriers and challenges as well as the benefits involved in engaging men in health services. Another recommendation would be not only focusing on men's health but that of their partners and family through maternal and child health interventions targeted at men.

Special attention also needs to be accorded to men who have sex with men as they are at high risk of transmission of especially sexually transmitted infections [55–57]. Some of the reasons for this being complex and include high biological risk of HIV transmission during unprotected receptive penile-anal sex (compared to penile-vaginal sex) in addition to behavioural and sexual network factors [57,58]. Health education is also key for this key population in order to address the issue of their greater vulnerability to disease and infection. Further research that target men in their institutions for example of work, study and leisure is also recommended. A study by Garcia et al. [59] reported multiple sexual partners and inconsistent condom use by truck drivers. Thus, it is important to craft tailor made interventions for all groups of men for maximum reach and effectiveness.

4.2. Implication for practice

It is imperative that men have the relevant knowledge on all health issues to make decisions, which ensure the best health outcomes for them and their families [60]. Research with men has also shown how inequitable gender norms influence how men interact with their partners, families and children on a wide range of issues, including preventing the transmission of HIV and sexually transmitted infections, contraceptive use and physical violence [61]. Therefore, policy makers need to take into consideration how to tackle these gender norms. At the time of the review, a notable paucity of data on the use of HEPs for HIV programs was revealed. HIV continues to be a public health problem in the LMICs [62,63]. In response, many countries have ramped up Differentiated Service Delivery (DSD), a care model is tailored to the local context and patients' clinical status [64]. There is an urgent need for men-tailored DSD approaches to improve engagement.

4.3. Strength and limitations

The use of a scoping review methodology ensured that there was inclusion of wide range of study types as it does not limit on study methodologies and designs as well as taking into consideration both published and unpublished literature. This study also included studies conducted in different settings (rural, urban, and semi-urban), which gives a clear view of HEPs undertaken in all settings in LMICs. However, it is worth noting the potential of having missed some articles as our search key words were in English. Despite this, our search was comprehensive and ensured a thorough review of existing literature to answer our research problem.

5. Conclusions

Our review revealed limited evidence of HEPs for men engagement in health service. Regardless of mode of health education deliver, notable health benefits to men were reported. We recommend implementation research on HEPs for men engagement in health services to better understand the social, cultural and economic influences in LMICs.

What is known about this topic?

- Men have generally been reported to have poor health seeking behaviour.
- There is a growing body of implementation research and evidence on health education for men engagement in health services.

What this study adds?

- This review presents a concise report of current state of men's engagement in health services in low- and middle-income countries.
- The review outlines that various modes of delivery of health education for men and explores reported benefits to men.

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Authors' contributions

All authors contributed equally.

Ethics approval and consent to participate

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Consent for publication

Not applicable.

Declaration of competing interest

The authors declare that they have no competing interests.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.puhip.2021.100177>.

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