

**GLOBAL PARTNERSHIPS AND COMMUNITY ENGAGEMENT WHEN
IMPLEMENTING EVIDENCE-BASED HIV INTERVENTIONS IN
ZAMBIA: A SCOPING REVIEW**

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Table of Contents

Abstract	V
List of figures and tables	VI
List of acronyms	VII
1 Introduction.....	1
1.1 Background	1
1.2 Current experience of HIV prevalence, prevention and treatment in Zambia	2
1.3 Purpose of the study and its contribution to health promotion.....	2
1.4 Objectives and research questions	3
1.5 Structure of the thesis.....	3
2 Literature review	4
2.1 Global partnerships in health promotion	4
2.2 Community engagement.....	5
2.3 The effect of peer education in health promotion.....	7
3 Theoretical framework: Bergen Model of Collaborative Functioning	8
4 Data and Methods	9
4.1 Research design.....	9
4.2 Methods of data collection, management and search strategy	10
4.3 Methodological framework and data analysis stages	10
4.4 Trustworthiness of research.....	12
4.4.1 Role of the researcher.....	12
4.5 Ethical considerations.....	13
4.5.1 Informed consent.....	13
4.5.2 Instances of ethical clearance	13
5 Findings.....	13
5.1 Chosen studies	13
5.2 Inputs	19
5.2.1 Partnership resources	19
5.2.2 Mission	21
5.2.3 Financial resources	22
5.3 Throughputs.....	23
5.3.1 Input interaction	24
5.3.2 Leadership	26
5.3.3 Communication	27
5.3.4 Roles/structure	27
5.3.5 Maintenance and production tasks	28

5.3.6	Context	30
5.4	Outputs	31
5.4.1	Additive results.....	31
5.4.2	Synergy	32
5.4.3	Antagony	34
6	Discussion.....	35
6.1	In what ways are the community engaged in the implementation of evidence-based practice?	35
6.2	How do the partners collaborate in implementing these interventions?	37
6.3	Does the engagement of the community matter to the cultural relevance and acceptability of the interventions?.....	37
6.4	Does the engagement of the community matter in the effectiveness of HIV interventions?	39
6.5	Limitations of the study.....	42
7	Conclusion	42
	References.....	43
	Appendices.....	48
	Appendix A: Search terms.....	48
	Appendix B: Questions guided by the BMCF	51
	Appendix C: Ethical clearance from NCRD	54

Abstract

Background and objective: In Zambia, 11% of the adult population is people living with HIV. To address this issue, collaborations are developed to implement interventions and scale up services to increase access to treatments and spread awareness about HIV to modify risk behaviors. In recent years after the Ottawa Charter, stakeholders and partners in these global health collaborations have acknowledged the benefits of engaging the community to culturally adapt the intervention to fit the communities` needs. The overall objective of the thesis is to get an overview and map out approaches used to engage the community in the implementation of evidence-based practice in HIV interventions in Zambia, and to understand how these partnerships functioned and if these efforts lead to meaningful improvements.

Theoretical framework: The Bergen Model of Collaborative Functioning provides the theoretical framework for this study.

Methods: A scoping review with a total of 12 articles with different research designs, both qualitative, mixed methods and quantitative. The data was charted by meta-synthesis methodology to extract knowledge and evidence found in the dataset to answer the research questions.

Findings: The studies report how multiple methods can be used for engaging the community. Northern partners funded most of the studies. Antagonistic processes included participants dropping out due to employment, school, moving or being discouraged by low incentives. Some participants did not fulfill expectations of condom distribution. Overall, the vast majority had synergetic outputs, one had additive.

Conclusion: The review of studies revealed that community engagement increased acceptability and effectiveness of the interventions described. Collaborations should focus on utilizing existing resources, including local leaders, training community members and building capacity to make sustainable changes.

Key words: BMCF, community engagement, evidence-based practice, health promotion, HIV, interventions, north-south partnerships, peer education, scoping review, Zambia

List of figures and tables

Figures

Figure 1: The Bergen Model of Collaborative Functioning.....	8
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Tables

Table 1: Chosen studies.....	14
Table 2: Partners.....	19
Table 3: Recruitment.....	20
Table 4: Funders.....	22
Table 5: How the community was engaged.....	28

List of acronyms

AIDS	Acquired Immune Deficiency Syndrome
ART	Antiretroviral Treatment
BMCF	the Bergen Model of Collaborative Functioning
CHC	Community Health Centers
EBP	Evidence-Based Practice
FGD	Focus Group Discussion
HB-VCT	Home-Based Voluntary HIV Counseling and Testing
HCW	Health Care Workers
HIV	Human Immunodeficiency Virus
NGO	Non-Governmental Organization
NSP	North-South Partnership
NUFU	the Norwegian Programme for Development, Research and Education
OPD	Open Public Drama
PEPFAR	the United States President's Emergency Plan for AIDS Relief
PLWH	People Living With HIV
PMTCT	Prevention of Mother-To-Child Transmission
UNAIDS	the joint United Nations programme on HIV and AIDS
USAID	the United States Agency for International Development
VCT	Voluntary HIV Counseling and Testing
VMMC	Voluntary Medical Male Circumcision
VPE	Volunteer Peer Educators
WHO	World Health Organization
ZDHS	Zambian Demographic Health Survey

1 Introduction

1.1 Background

According to the joint United Nations programme on HIV and AIDS (UNAIDS), almost 37 million people across the world are living with human immunodeficiency virus (HIV) (UNAIDS, 2018). Nineteen millions of these people living with HIV (PLWH) reside in the eastern and southern part of the continent Africa. (WHO, 2016). Zambia, a low-income country in the southern part of Africa is no exception, and approximately 11,5% of the adult population aged 15-49 is living with HIV according to the World Health Organization (WHO) (UNAIDS, 2017). To address this issue, governments and non-governmental organizations (NGOs) are implementing interventions and scaling up services trying to increase access to treatments and spread knowledge and awareness about HIV and AIDS to modify risk behaviors (Central Statistical Office, 2014). In order to overcome this challenge in international development and global health, collaborations with multiple partners are often developed. In recent years, stakeholders and partners in these global health collaborations have acknowledged the benefits of engaging the community, referred to as “a group of people with diverse characteristics who are linked by common ties including shared interests, social interaction and/or geographical location” (Gulaid & Kiragu, 2012, p. 2). Community engagement is often used to culturally adapt the intervention to fit the communities` needs, as previous research shows that cultural adaptation in health interventions produce better outcomes (Domenech Rodriquez, Baumann & Schwartz, 2010). In medicine and health promotion, evidence-based practice (EBP), a problem-solving approach, is often used in developing these interventions. The EBP process include five steps: (i) asking the clinical question, (ii) searching for empirical evidence, (iii) critically appraise the evidence, (iv) addressing the sufficiency of the evidence, and (v) evaluating the outcome of evidence implementation (Fineout-Overholt, Melnyk & Schultz, 2005). Combined with knowledge about the community, its members and its cultural context, evidence-based interventions could be very successful (Cordeiro & Soares, 2016). This study is a scoping review which seeks to explore how the community was engaged in these interventions, how the collaboration was done, if engaging the community made the interventions cultural relevant, and if the engagement mattered in the effectiveness of the HIV intervention. Twelve studies are included in the review, all involving interventions related to HIV in Zambia with community members as partners in the collaboration.

1.2 Current experience of HIV prevalence, prevention and treatment in Zambia

At the moment of writing this review, the Zambian Demographic Health Survey (ZDHS) 2018-2019 conducted by the Central Statistical Office is an ongoing project. Most data used in this review is consequently from the ZDHS published in 2014 or WHO/UNAIDS. According to the ZDHS 2014, almost half of the women and men have extensive knowledge about HIV and AIDS. The HIV prevalence is insignificantly higher in rural areas than urban, and even though the number of residents taking an HIV test is slightly higher for people with higher education, the statistical difference between individuals with education and those with no education, are inconsequential (Central Statistical Office, 2014). This raises some questions as to why people are not undergoing voluntarily HIV counseling and testing (VCT). On a positive note, there has been a decrease of 24% in HIV infections rate since 2010, and roughly 75% PLWH are receiving antiretroviral treatment (ART) (UNAIDS, 2017). ART is a drug used for treating PLWH; it makes a person less infectious and therefore also works as a prevention method on pregnant women to prevent mother-to-child-transmission (PMTCT). Other typical HIV prevention methods that we will see in the review include condom use and male circumcision. While 50% of the adult population report using condoms, only 21,9% males reported that they were circumcised (Central Statistical Office, 2014).

1.3 Purpose of the study and its contribution to health promotion

The purpose of the study is to understand how to adapt evidence-based practice to unique settings so they are relevant for the communities involved. The review will also examine how these collaborations are coordinated and working together. A review is an accepted method for exploring what is missing in the literature and point to what needs to be further researched.

When it comes to its contribution, the study adds to broader health promotion goals first defined in the Ottawa Charter. The charter is an international agreement developed in the first international conference on health promotion in 1986, and was a response to the need for a global health movement. The charter has five action areas: (i) to build healthy public policy, (ii) create supportive environments, (iii) strengthen community action, (iv) develop personal skills, and (v) reorient health care services (WHO, n.d.). Strengthening community actions specifically refers to how community development should rely “on existing human and material resources”, and to “develop flexible systems for strengthening public participation”

(WHO, n.d.). The charter also states that “Health promotion strategies and programmes should be adapted to the local needs and possibilities” (WHO, n.d.). This study intended to contribute to the field of health promotion and global health by further reviewing evidence for community participation in health interventions, and explore how collaborations could reach vulnerable groups and achieve equity.

The thesis will be contributing to a project in Zambia, where there is a need for cultural adaptation in implementing interventions, and a desire to understand and explore the best approaches to involve the community.

1.4 Objectives and research questions

Based on the information and topic of interest, the overall objective of the thesis is to get an overview and map out approaches used to engage the community in the implementation of evidence based practice in HIV interventions in Zambia, and to understand how these partnerships functioned and if these efforts lead to meaningful improvements.

The research questions are:

- In what ways are the community engaged in the implementation of evidence-based practice?
- How do the partners collaborate in implementing these interventions?
- Does the engagement of the community matter to the cultural relevance and acceptability of the interventions?
- Does the engagement of the community matter in the effectiveness of HIV interventions?

1.5 Structure of the thesis

The thesis is organized into six main chapters. The introduction provides a general presentation of what the thesis is about. Next, a review of relevant empirical literature is given, followed by the theoretical framework used for this study; the Bergen Model of Collaborative Functioning (BMCF). After presenting the guiding theory, the design, methods, data management and ethical considerations are discussed. Further, findings based on the theoretical framework are described, before the research questions and limitations are discussed and the review concludes with recommendations and suggestions for further research.

2 Literature review

2.1 Global partnerships in health promotion

According to UNAIDS report from 2013, 1,2 million people in the sub-Saharan Africa had already died from AIDS in 2012 (UNAIDS, 2013). The high number of deaths is caused by how HIV spreads through a community; in silence through infections between members of a community, slowly developing into AIDS that there is no cure for (Whiteside, 2002). Even though there is no cure for HIV, ART can reduce transmission risks and control symptoms and prevent HIV to develop into AIDS. (WHO 2018) As with much global health work, efforts to address HIV in Sub-Saharan Africa involves collaborations, also called health research partnerships or global health partnerships (GHPs), where “governments, foundations, NGOs and international NGOs establish partnerships to get diverse people and organizations working together, to create the synergy required to accomplish the goals of health promotion” (Corbin & Mittelmark, 2008, p. 365). It gives the partners involved in the arrangement a chance to divide the tasks and offer different kind of resources - e.g. financial support, the practical work, management etc. - that needs to be done in order to have a successful outcome.

Global health partnerships is collaborations where governments, NGOs, global health funders, private companies etc. works together to address national health issues in low- and middle income countries (LMICs) by providing funding, assistance of some sort or training (Herrick, 2017). One of the SGDs created by the UN to be reached by 2030 involves increasing the quality and effectiveness of collaborations. Goal #17 calls to: “strengthen the means of implementation and revitalize the global partnership for sustainable development” (Madeley, 2015, p. 33). The goal is a response to the Paris Declaration on Aid Effectiveness in 2005, where multiple countries gathered and agreed on improving the structure of collaborations and improve the effectiveness of aid interventions by donors using existing government structures in a sector-wide approach (Ruckert & Labonté, 2014).

The majority of these collaborations are north-south partnerships (NSPs) that unite important stakeholders to join forces, and almost 90% of all funding for health research comes from the north. While southern partners could contribute with other resources, the collaboration could face challenges such as power differentials or communication barriers (Matenga et al., 2019). There are also other concerns regarding the development of GHPs. Ruckert and Labonté

(2014) asks why we need them in the first place, and states that the initiatives are too narrow and only address specific diseases with GHPs funding more than 75% initiatives targeted at infectious diseases (Ruckert & Labonté, 2014, p. 1603) instead of looking at the whole health system. Other influences that will be explored in the theoretical framework and findings, might also impact the collaboration. In Katisi et al.'s (2016) research on partnerships from a case in Botswana, the Government of Botswana and U.S Center for Disease Control and Prevention and Africa Comprehensive HIV/AIDS Partnership collaborated on preventing HIV by medical male circumcision (Katisi, Daniel & Mittelmark, 2016). They concluded with antagonistic results due to “the link between financial contribution and ownership expectations” (Katisi et al., 2016, p. 1)”; two factors that might influence each other and impact the collaborations negatively.

On the other hand, Ruckert & Labonté (2014) and Lorenz (2007) agree that GHPs have had some positive impacts on the issue or area of intervention. These global partnerships have brought international awareness to global health problems, changed policies in some settings by strengthening the health system, and decreased the infectious disease prevalence (Lorenz, 2007), as NSPs enable African governments or NGOs to do work that would not otherwise happen without the funding or expertise from the north (Matenga et al., 2019).

2.2 Community engagement

As a lot of the work is done through NSPs, there is a considerable chance that some of the partners are not familiar with the context the intervention is being implemented in - this might be especially true for Northern partners. Consequently, someone involved is trying to implement an intervention in a context that is foreign to them, which may result in programs or interventions not being adapted or culturally relevant for the community the intervention is targeting. Lorenz (2007) argues that GHPs have a tendency to think that “one size fits all”, but “one size rarely fit all circumstances” (Lorenz, 2007, p. 567), similar with Domenech Rodríguez, Baumann & Schwartz (2010) who emphasizes that interventions must be cultural adapted, meaning intervention leaders must have knowledge about the community's belief system, norms, practices, values, etc.

A solution to these kinds of problems might be to include the community in the partnership and engage them in the implementation of these interventions or programs in order to gain knowledge about the context (Minkler & Wallerstein, 2008). While most HIV interventions

focus on the biomedical aspects including transmission risks and causes of infectious diseases, this study seeks to address the impact of community engagement, which is “a process of working collaboratively with and for groups of people affiliated by geographical proximity, special interest or similar situations to address issues affecting the well-being of those people” (Tindana et al., 2007, p. 1452). As Kreuter (2003) explains, the challenge of HIV infection and illness results from a causal chain – a chain of environmental, political, financial and behavioral factors contributing. This therefore varies from community to community, and it is “safe to say that programs and policies aimed at preventing such problems are not likely to be effective without the informed, active involvement of individuals, families, and local groups and institutions” (Kreuter, 2003, p. 61).

As an example, there is project Adult Identity Mentoring (AIM) implemented in Botswana by a collaboration between researchers, the Ministry of Health, Ministry of Education and Skills Development, youth organization, schools and chiefs. It was an evidence-based, youth focused development intervention at schools where life skills classes were already implemented, and intervention arms had AIM plus life skill classes. During the intervention period, they found out that the community was not motivated to participate, and the effects of the classes were therefore highly limited (Miller et al., 2016). The AIM project was implemented through cluster randomized control trials and measured through self-report behavioral survey and testing participants for herpes virus type 2. They additionally had focus groups discussion (FGDs) and in-depth interviews with school staff, parents and community leaders to adapt the study information and curriculum to be relevant for the participants.

Even though the content of AIM seemed to be culturally adapted, there were significant low rates of parental permission forms. Eventually after seeing the lack of engagement, the partners recruited school staff as ambassadors to undergo training so they were able to provide more information to other teachers, parents or students. Together with the ambassadors, partners arranged meetings with chiefs in the community and asked them to host a Kgotla meeting (community meeting) (Miller et al., 2016, p. 1440). This gave outstanding results, as these meeting are well attended and the chiefs have a significant influence as leaders. Miller et al. (2016) concludes that careful planning, cultural adaptation, engaging the community and having multiple strategies to reach the community is the recipe for success.

A similar conclusion was made after a review commissioned by UNAIDS to help inform stakeholders on promising practices in community engagement (Gulaid & Kiragu, 2012). The community was engaged in various ways in all research, including participation in program monitoring, peer support, community activism and government leadership. Results from the review reveals that community health workers (CHWs) and counselors could provide one third of the tasks to prevent, care and treat HIV, and that participatory research is crucial for changing behavior and social norms. Based on the review, UNAIDS provides ten recommendations on community engagement: (i) expand the frontline health workforce, (ii) increase engagement with community- and faith-based organizations, (iii) engage communities in programme monitoring and accountability, (iv) promote community-driven social and behavior change communication including grassroots campaigns and dialogues, (v) expand peer support, (vi) empower communities to address programme barriers, (vii) support community activism for political commitment, (viii) share tools for community engagement, (ix) develop better indicators for community involvement, and (x) conduct cost analyses of various community engagement strategies. They also remind stakeholders to acknowledge what efforts that is already present in the community, and strengthen these instead of overseeing them (Gulaid & Kiragu, 2012), which correlates with the content of the Ottawa Charter and the Paris Declaration of Aid Effectiveness.

2.3 The effect of peer education in health promotion

As many researchers have acknowledged the benefits of engaging the community in the implementation of HIV interventions, several authors highlight the use of voluntary peer educators in initiatives in schools, community health centers (CHCs) or at a workplace for HIV prevention in LMICs (Maticka-Tyndale & Barnett, 2009). Peers are people similar in age and status, and peer-led interventions are known to be successful because people are more likely to identify with people that are comparable to them (Turner & Shepherd, 1999). Related to peer education and often referenced to when talking about peer-led interventions is the Social Learning Theory (SLT). Two of SLT's main features describes how people easily learn from modeling and observing when learning new behavior, and involves the concept of empowerment and self-efficacy (Turner & Shepherd, 1999). According to Turner and Shepherd (1999, p. 239), "this concept relates to a person's confidence in performing a particular behaviour and their expectations of success. It is more likely for a person to put into

practice socially learned behaviour if they think it will be effective”. Maticka-Tyndale & Barnett (2009) agrees that behavior is more likely to change when learning and observing from a peer.

An example is the peer-led Teen Prevention Education Program (Teen PEP) in North Carolina high schools. In Layzer, Rosapep & Barr (2014), they found that the participants preferred the peer-led education rather than ‘awkward’ classes with a book or an older teacher (Layzer et al., 2014). Students stated that: “it is easier to get information about sex from peers, as they are not as far removed from the freshman experience as adults” (Layzer et al., 2014, p. 275). After the workshop, the majority of participants answered “very much” when asked if Teen PEP was helpful, while the questions that got the lowest score were if Teen PEP helped them “talking with parents or caregivers” about HIV and sex (Layzer et al., 2014).

3 Theoretical framework: Bergen Model of Collaborative Functioning

For the theoretical framework, I will use the BMCF seen in figure 1 to guide my research. The model can be used to examine the inputs, throughputs and outputs of collaborations to help identify the pathways of functioning that produce positive and negative results (Corbin, Mittelmark, & Lie, 2012).

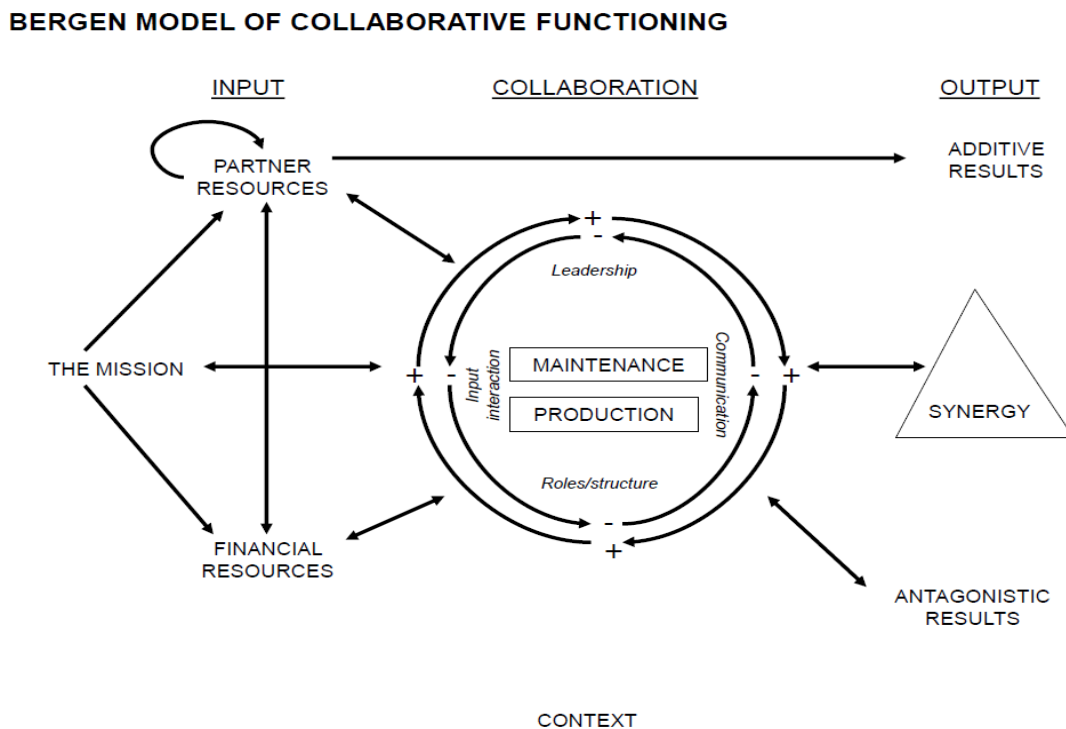


Figure 1: the Bergen Model of Collaborative Functioning

The inputs consist of partner resources, the mission and financial resources. All these inputs influence and motivate each other. Partner resources could be skills and knowledge, while the mission is the goal of the partnership, and financial resources involve monetary support. The mission can motivate partners and financial resources, but partners can also recruit financial resources without any motivation from the mission. It is also a possibility that the financial resources motivate partners to join the mission. All of these inputs go into the collaborative context including a cycle of leadership, communication, roles/structure and input interaction. Leadership refers to how the collaboration is led, though the roles and specific structure of it is not important. Communication is how the partners are communicating, while input interaction refers to factors like power differentials, trust, and also motivational drives. In the middle of the collaborative context are the practical components of the model: the production tasks and maintenance tasks. The production tasks are directly connected to the mission, while maintenance tasks is about keeping the partnership going – e.g. administration, planning, etc. (Corbin, Jones & Barry, 2018)

All of these inputs and throughputs lay the ground for the outputs. If the output is additive, it means that the collaboration had no effect on the project, and the collaboration did not make a change ($2+2=4$). Synergy is the output we want and refers to a successful collaboration – the partners made something happen that was not possible without the collaboration ($2+2=5$). Negative outcomes would result in antagonistic outputs ($2+2=0$), where the goals of the mission were not reached, and the resources were wasted. The partnership might even have made the situation worse. Every part of the model is constantly an ongoing process, as the arrows in the model shows. Outputs are not only results from the beginning part of the model - it could also feedback into the collaboration and affect functioning, funding or potentially new partners (Corbin & Mittelmark, 2008).

4 Data and Methods

4.1 Research design

The design chosen for this research is a scoping review, which “is a form of knowledge synthesis that addresses an exploratory research questions aimed at mapping key concepts, types of evidence and gaps in research (..) by systematically searching, selecting, and synthesizing existing knowledge” (Colquhoun et al., 2014, p. 1294). Other types of reviews were considered in the early planning, especially considering a systematic review. A scoping

review was preferable because of its ability to address broader topics and may include different types of designs, while it “maps out” the literature (Arksey & O’Malley, 2005). Due to funding, labor and time, a systematic review (often used in quantitative studies) did not seem achievable, as it is more comprehensive and might include grey literature, as well as it should be very detailed and contain studies with the same type of research design. (Foster & Jewell, 2017) According to Moher, Stewart & Shekelle (2015), the reviews are within the same family, but the scoping review, also called a rapid review by some, is better suited for mapping out the evidence in the literature of a broad field as needed for this project. (Moher et al., 2015)

4.2 Methods of data collection, management and search strategy

Using the databases; Cinahl, EBSCO, ERIC, Medline, ProQuest, PsycInfo, PubMed, Social Services and Web of Science, I searched for studies and articles according to the search terms (Appendix A) developed by me, my supervisor J. Hope Corbin, and the librarian at the Western Washington University. The studies were put into an Excel sheet or extracted into Zotero if possible, which is a software to store, organize and cite references. In order to identify search terms, basic criteria for inclusion were developed early on. First, the studies would have to document the implementation of evidence-based interventions aimed at reducing the HIV prevalence. Second, community members had to be engaged somehow in the implementation. Third, the studies had to be conducted in Zambia and written in English, and studies published prior to 1990 were excluded. I did not exclude quantitative or mixed methods, the review therefore includes qualitative, mixed and qualitative research designs. This is also one of the reasons the scoping review was more appropriate.

4.3 Methodological framework and data analysis stages

The scoping review follows the methodological framework from Arksey & O’Malley (2005), which was one of the first to publish a methodological framework for the scoping review (Colquhoun et al., 2014). They list five stages for conducting a scoping study:

1. Identifying the research questions
2. Identifying relevant studies
3. Study selection
4. Charting the data
5. Collating, summarizing and reporting the results

In the first stage, research questions and objectives were identified and developed as stated above. In the second stage, we developed search terms and searched in the databases for studies meeting those search terms. At this point, there were 1148 articles. The third stage included three processes: a) excluding by title (this was possible when it was clear the study was not about HIV or in Zambia, b) excluding at the abstract, c) excluding by full text. For studies I wanted to include, the references were checked as they could lead me to other studies I might want to include in the review (Arksey & O'Malley, 2005), something that happened on two occasions, and might have resulted in some repeating authors.

During the process of excluding, most of the studies were not included due to the community not being engaged in the implementation of the intervention. The interventions would be about reducing the HIV prevalence in Zambia, but none of the community members were in any way participating in the intervention or had any inputs. Most of the studies explored the community members' feelings during an evaluation after an intervention the community was not a part of - these studies were not included. On November 6, the inclusion stage was complete, and thirteen studies were identified to be included in the scoping review.

In stage four, the data was charted by meta-synthesis methodology that can “.. rebuild increasingly credible understandings of the patterns and themes that can be detected” (Given, 2008, p. 3). In other words, meta-synthesis is about the combination of knowledge and evidence found in the dataset. The methodology is to some extent a new type of qualitative research, and was first introduced by Stern and Harris in 1985, which wanted to develop a methodology that could illustrate the findings in a group of related studies (Walsh & Downe, 2005). During this stage, one of the studies originally included was excluded. When charting the data, the article turned out to focus on strategies used for engaging community members in several different kinds of interventions in Zambia. This was problematic considering there was no evaluation or reporting of results of any specific intervention or collaboration. Consequently, 12 studies were included in the final review.

The studies were further thoroughly reviewed and coded by content analysis according to the codes and questions developed from the BMCF (Appendix B). For example, if there were anything in the study documenting where the funding came from, the explicit text would be coded `financial resources`. If something answered the question “Were people assigned clear roles?” the text was coded `roles/procedures`. After coding the data, the codes were extracted

into sheets to compare and highlight the relevant information, where some of the text coded based on the BMCF was coded again in more detail. Key information was then put into a table (table 1). After mapping out these questions and analyzing by meta-synthesis and codes, stage five consisted of collating, summarizing and reporting the results.

Arksey and O`Malley additionally have an optional stage six to complement the review where the researcher asks stakeholders for any additional suggestions or insights apart from the literature that is already included, like a consultation (Arksey & O`Malley, 2005). This stage is not to be included in the thesis, as this is an independent research project to be evaluated and the review is only to be conducted by me.

4.4 Trustworthiness of research

A weakness of the study might be the exclusion of studies in other languages than English. While likely resulted in the exclusion of relevant studies in other languages, the review aims at exploring the implementation of evidence-based interventions involving north-south partnerships. The official language in Zambia is also English (Kula, 2006), which means that the likelihood for these studies being in other languages is fairly small. Additionally, searching in specific databases could have limitations. To reduce this possibility, I searched in several databases that cover overlapping fields. For studies I wanted to include, the references and journals were checked to ensure the legitimacy of it (Arksey & O`Malley, 2005). Meta-synthesis as a methodological framework also bears the potential to generalize its findings (Finfgeld-Connett, 2010).

4.4.1 Role of the researcher

My role as the researcher is as an outsider. As the thesis is a review, the researcher had no contact with participants in the studies as they are already anonymous in the articles. When it comes to the researcher as an individual and a Norwegian, there are some limitations with respect due to cultural differences – e.g. not understanding how and why the engagement of the community is organized. When it comes to the epistemological standpoint, the scoping review is to be found somewhere between the post-positivistic where the researcher only works as an instrument for data collection, and the interpretative, where the researcher co-construct knowledge with subjects, which is the included studies. Even though the researchers job is to gather and analyze data to answer research questions according to the BMCF, the analyzing is somewhat affected by my interpretation of what the studies are saying.

4.5 Ethical considerations

In regards to ethical considerations, the grey literature is not included in the review. Grey literature are literature “that which is produced on all levels of government, academics, business and industry in print and electronic formats, but which is not controlled by commercial publishers” (Farace & Schöpfel, 2010, p. 1) In scoping reviews, a comprehensive literature search is important. Due to excluding the grey literature, the review might overlook studies that would be relevant for mapping out the existing literature on the topic. Notably, the studies included in the review had obtained ethical clearance or taken ethical concerns into account.

4.5.1 Informed consent

The review does not include any personal information, and the researcher did not communicate with any participants – informed consent was therefore not needed. The studies are referenced, and none of the studies is claimed as the researcher’s own.

4.5.2 Instances of ethical clearance

Following research guidelines and legal requirements, the notification test at Norwegian Centre for Research Data’s (NCRD) webpage was filled out in regards to what kind of information I would be collecting and accessing. As there were no recording or personal information collected, the NCRD immediately gave full clearance and did not any ask for any additional information (Appendix C).

5 Findings

The findings of this scoping review are divided into four main sections based on the BMCF; an overview of the chosen studies, inputs, throughputs and outputs. The researcher would like to point out that none of the studies were able to answer all of the questions based on the BMCF. There were still significant findings from these studies.

5.1 Chosen studies

Table 1 shows the important information and key findings from the twelve studies included in the review.

Author(s)	Design & methods	Intervention	Participants & sample	Partners	Key findings
<i>Denison, J.A., Tsui, S., Bratt, J., Torpey, K., Weaver, M.A. & Kabaso, M. (2011)</i>	A non-randomized quasi-experimental design with interviews.	An evaluation of Restless Development's School HIV/AIDS Education Program (SHEP) implemented in schools using volunteer peer educators to organize a weekly classroom lesson about HIV and sexual behavior.	2133 students from thirteen intervention schools and thirteen matching control schools. Number of peer educators unknown.	Restless Development, USAID, Ministry of Health, Ministry of Education, School and school staff, Family Health International, Peer educators.	Students from SHEP-schools had significantly more knowledge about HIV/AIDS and prevention methods than students from the control schools. They were almost twice as likely to have a positive attitude towards PLWH, and had a higher level of self-efficacy and skills on how to refuse unwanted sex.
<i>Fylkesnes, K., Sandøy, I.F., Jürgensen, M., Chipimo, P.J., Mwangala, S. & Michelo, C. (2013)</i>	A cluster randomized control trial using interviews.	Rural villages in Monze district, Southern province. Scaling up and testing for acceptance of VCT by offering home-based VCT (HB-VCT) by lay counselors at intervention sites.	Members from thirty-six communities were asked to participate. Baseline survey participants = 1501. Intervention participants = 450 counseled and tested. Follow-up survey = 1220.	The ZAMACT Study Group, Lay counselors, Participating community members, Local leaders, the NGO Chikuni Outreach Programme, The district medical officer, University Teaching Hospital Lusaka, NUFU, the Research Council of Norway, the Swedische Norwegian Regional, HIV/AIDS Team for Africa	Significantly higher acceptance of lay counselors and couples counseling and testing in intervention arm than in the control arm. HB-VCT both feasible and effective.
<i>Hüsken, S. & Heck, S. (2012)</i>	Qualitative methods. Interviews, questionnaires, FGDs, observations and	Exploring fisher folk's vulnerability to HIV and AIDS in seven fishing communities in the Kafue Flats, by VCT and community needs	Four hundred fisher folks participated in the questionnaires and FGD's. Thousands were reached through radio and fishing communities.	The World Fish Center, Food and Agriculture Organization, Society for Family Health, Zambia Self-Help Group Programme, members from seven fishing	Participants had extremely limited access to healthcare services. Females were highly vulnerable to HIV. After intervention, openness and awareness of HIV and AIDS had

	participatory rural appraisal, situation analysis and rapid rural appraisal.	assessment in two of the selected communities. Intervention: The Fisher Trade+ model was developed and included self-monitoring saving groups.	Ten saving groups with six to fourteen members participated in the intervention.	communities, community leaders/chiefs, the Swedish International Development Cooperation Agency, Norwegian Ministry of Foreign Affairs	increased for group members. Participants were willing to go for VCT. In all savings groups, members said their savings had increased, and some wanted to invest.
<i>Jeanes, R. (2013)</i>	A qualitative evaluation using FGDs with a semi-structured interview guide	Exploring youths` experiences with multiple peer-led sport activities as a tool for discussing HIV and risky behavior in Lusaka.	Sixty-eight young (aged 8-19) people across six focus groups. They were either participants or peer leaders of sports activities.	NGO`s, Youth peer educators, Community members, The researcher, Schools and school staff.	The sessions provided them with useful information and helped the females address peer pressure and discuss solutions. Participants like the sport sessions and recognize the benefits. However, the majority expressed the challenges of having a non-supportive family, and acknowledged that the information had no use when the family encourage and believes differently.
<i>Jones, D., Weiss, S.M., Arheart, K., Cook, R. & Chitalu, N. (2013)</i>	Quantitative comparison research using participatory action and questionnaires.	The Partner Project intervention in Lusaka. Training CHC staff and examine and compare results from HIV interventions sessions between CHC staff and RES (research) staff.	Six urban community health clinics. 150 participants in RES-led interventions, 170 in CHC staff-led intervention. 74 control participants.	The Partner Project team, the CHC staff including clinical officers and community advisory boards, community members as patients, The Lusaka District Health Office.	The quality and results of CHC-led interventions had positive results and could be compared to RES-led interventions in means of quality and outcomes. Both interventions were superior to the control group. Use of condoms increased, while violence decreased among the entire sample. No change in measures of alcohol use.

<i>Molassiotis, A., Salaris-Avis, I., Nyirenda, W. & Atkins, N. (2004)</i>	A qualitative process evaluation using FGDs.	An evaluation of a peer education programme in southern Zambia; the Peer Education Project. Peer educators trained to use activities for empowering the community and spreading information.	Ten peer educators and forty-four club members participated in five FGDs.	The NGO “The Simalelo AIDS Peer Education Programme”, peer educators.	Participants except those from newly started clubs had a higher level of HIV-related knowledge and a more positive attitude towards PLWH. Community members were debating religious beliefs and cultural norms. Rituals may be changing. Other community members were also interested and voluntarily participated in the intervention.
<i>Mwale, S., Hachiboloma, B., & Stringer, J. (2009)</i>	Qualitative participatory rural appraisal (does not specify)	Open public dramas (OPDs) developed and based on a community assessment to engage and spread information about HIV. Q&A after the public drama.	One drama group as the main participants, the audience gave feedback and inputs.	CIDRZ, A study team, The drama group, the community working group, Community leaders.	The number of attendances increased during a three-day performance at one location. The audience consisting of other community members, were engaged and asked questions. Positive feedback from audience.
<i>Sandøy, I.F., Zyaambo, C., Michelo C. & Fylkesnes, K. (2012)</i>	Mixed methods: baseline survey, quasi-experiment, interviews and FGDs.	Maramba (intervention) & Dambwa (control) in Livingstone. The PLACE-method. Baseline survey – asking locals where they meet new sex partners. Intervention - peer educators visited venues to distribute condoms and poster, and to discuss HIV and sex with peers.	Baseline survey = 434. Resulted in fifty-eight venues. Seventy-two peers educated before the intervention, fifteen disengaged ahead and twenty-three quit during the interventions. Eleven peers were recruited during the interventions due to drop out's. Follow-up survey = 537. One nurse, one counselor	Peer educators including two local supervisors and one external monitor, Bar owners and workers, Researchers, Locals answering the survey, University of Zambia, University of Bergen, NUFU, Norwegian Research Council	Availability of condoms in places where people meet new sexual partners increases condom use. Increase on reports in both intervention and control communities on condom availability. In follow-up survey, condoms and HIV-related posters were more accessible in the intervention community. A significant increase in people stating they used a condom last time they had sex in the

			and 1-2 peer educators from health clinics and staff of NGO's were interviewed.		intervention community, non-significant in the control community.
<i>Sanjana, P., Torpey, K., Schwaller, A., Simumba, C., Kasone, P., Nyirenda, L., Kapanda, P., Kakungu-Simpungwe, M., Kaboso, M. & Thompson, C. (2009)</i>	Mixed methods: quantitative and qualitative data collected. Examining record books and collecting semi-structured interviews and FGDs.	An evaluation of an on-going programme on training and placing community volunteers as lay counselors in health facilities in Luapula and Copperbelt province to provide VCT.	Ten selected health facilities. Nineteen lay counselors, sixteen health care workers (HCWs), ten health facility managers and ninety-five health facility clients.	Family Health International, USAID, Ministry of Health, researchers, clients and staff from selected health facilities.	High quality of lay counselors' work. Clients who received VCT from a lay worker had a shorter waiting time. Other staff members from health facilities highly appreciate the volunteers. Lay counselors contributed to reducing the workload of HCWs, and the error rate in data collection was lower for lay counselors than HCWs.
<i>Torpey, K., Kabaso, M., Kasonde, P., Dirks, R., Bweupe, M., Thompson, C. & Mukadi, Y.D. (2010)</i>	Quantitative data collected with a participatory approach.	Thirty-eight sites in five provinces: Northern, Luapula, Copperbelt, Central and North Western. Intervention: increasing the uptake of PMTCT by creating facilities and reaching out to the communities with HCWs, community motivators, lay counselors and religious leaders.	34 780 people divided between the four years of data collected. Number of lay counselors and HCWs is unknown.	Ministry of Health, USAID, Family Health International, CHW's and lay counselors, Community leaders, Health Communication Partnership (HCP).	Significant increase in women accessing PMTCT services, as well as an increase in the case of acceptance of VCT. Improvement in women referred to clinical care. Women receiving complete course of antiretroviral prophylaxis increased to 97% by year three.

<i>Wiginton, J.M., King, E.J. & Fuller, A.O. (2018)</i>	Qualitative participation during the intervention, in-depth interviews in follow-up.	Lusaka, Livingstone and the Copperbelt Province. The “Trusted Messenger” approach and workshops used to teach religious leaders about HIV and AIDS in a biomedical and a science-focused educational way. VCT was offered at most of the workshops.	Thirty-four individual interviews. The number of participants in the workshops is unknown.	Researchers, religious leaders as participants, The Trusted Messenger collaboration, Zambia officials of the African Methodist Episcopal Church and the Council of Churches of Zambia, the African Studies Center, the International Institute, the Center for Research on Learning and Teaching and the School of Public Health-Department of Health Behavior & Health Education at the University of Michigan	Uptake in VCT among religious leaders. They also encouraged other community members to undergo VCT. Religious leaders felt empowered and could take action in their communities. New scientific knowledge made participants re-evaluate beliefs about HIV and condom use without compromising other beliefs.
<i>Zanolini, A., Bolton, C., Lyabola, L-L., Phiri, G., Samona, A., Kaonga, A. & Thirumurthy, H. (2016)</i>	A non-experimental study using participatory research during intervention, quantitative data for measuring the effect, and questionnaires during evaluation.	Intervention using incentives as the motivator for peer-referrals to promote and scale-up voluntary medical male circumcision (VMMC) in the Southern Province.	Six intervention clinics and twenty-two comparison clinics. 699 men (age 18+) participated in the intervention.	CIDRZ, researchers, voluntary community members, Society for Family Health, Southern Province Provincial Medical Office, Technical Working Group on Male Circumcision, the International Initiative for Impact Evaluation, the Fogarty International Center of the US National Institutes of Health	Intervention led to an increase of 7.60 circumcisions per month – it was not effective, even though study participants had referred 30% of the respondents for circumcision. Participants said they tried to refer an average of five men, but succeeded with an average of 0.8.

5.2 Inputs

5.2.1 Partnership resources

Partnership resources refer to what the partners are bringing into the collaboration, such as time, skills, competence and expertise. Since all studies in the review were conducted in Zambia, there are some repeating partners that stand out even though different intervention needs different kind of partners. Funders are not included in this table (table 2), as it will be discussed in the section on financial resources.

Table 2: Partners

Partners	Author(s)
Center for Infectious Disease Research in Zambia	<i>Mwale et al. (2009), Zanolini et al. (2016)</i>
Community leaders	<i>Fylkesnes et al. (2013), Hüsken & Heck (2012), Mwale et al. (2009), Wiginton et al. (2018), Torpey et al. (2010)</i>
Community members (lay counselors, health workers, patients, peer educators, etc.)	<i>Denison et al. (2011), Fylkesnes et al. (2013), Hüsken & Heck (2012), Jeanes (2013), Jones (2013), Molassiotis et al. (2004), Mwale et al. (2009), Sandøy et al. (2012), Sanjana et al. (2009) Torpey et al. (2010), Zanolini et al. (2016)</i>
Council of Churches of Zambia	<i>Wiginton et al. (2018)</i>
Family Health International	<i>Denison et al. (2011), Sanjana et al. (2009), Torpey et al. (2010)</i>
Food and Agriculture Organization	<i>Hüsken & Heck (2012)</i>
Health Communication Partnership	<i>Torpey et al. (2010)</i>
Ministry of Education	<i>Denison et al. (2011)</i>
Ministry of Health	<i>Denison et al. (2011), Sanjana et al. (2009), Torpey et al. (2010)</i>
NGOs	<i>Fylkesnes et al. (2013), Jeanes (2013), Molassiotis et al. (2004)</i>
Partner Project team	<i>Jones (2013)</i>
Restless Development	<i>Denison et al. (2011)</i>
School and school staff	<i>Denison et al. (2011), Jeanes (2013)</i>
Society for Family Health	<i>Hüsken & Heck (2012), Zanolini et al. (2016)</i>
Southern Province Provincial Medical Office	<i>Zanolini et al. (2016)</i>
The district medical officer	<i>Fylkesnes et al. (2013)</i>
The Lusaka District Health Office	<i>Jones (2013)</i>
The World Fish Center	<i>Hüsken & Heck (2012)</i>
The ZAMACT Study Group	<i>Fylkesnes et al. (2013)</i>
University of Bergen	<i>Sandøy et al. (2012)</i>
University of Zambia	<i>Sandøy et al. (2012),</i>
University Teaching Hospital Lusaka	<i>Fylkesnes et al. (2013)</i>

Zambia officials of the African Methodist Episcopal Church	<i>Wiginton et al. (2018)</i>
Zambia Self-Help Group Programme	<i>Hüsken & Heck (2012)</i>

Family Health International (FHI) developed a cooperative agreement called Zambia Prevention, Care and Treatment Partnership (ZPCT) funded by the U.S. President`s Emergency Plan for AIDS Relief (PEPFAR) through United States Agency for International Development (USAID), and cooperates with the Zambian Ministry of Health (MoH). In five of Zambia`s nine provinces, ZPCT is the main partner of PEPFAR (Torpey et al., 2010, p. 2). Due to this agreement, those having Family Health International as a partner (Denison et al., 2012; Sanjana et al., 2009; Torpey et al., 2010) also has the Ministry of Health involved. The Center for Infectious Disease Research in Zambia (CIDRZ), which is an independent organization in Zambia with programme supports in more than 300 clinics in the Western and Lusaka provinces (“CIDRZ”, n.d.), is involved in two of the studies (Mwale et al., 2009; Zanolini et al., 2016).

As for the community members` resources, they can contribute with knowledge, social network, influence, cultural insight or potential existing resources. Authors give different reasons for community participation – e.g. Mwale et al. (2009) who used drama groups to culturally adapt the script and contribute with musical performances. On the subject of how the community members are recruited, there is no consistent method used across the articles included in the review. Table 3 summarizes the diverse strategies employed.

Table 3: Recruitment

Author(s)	Recruitment method
<i>Denison et al. (2012)</i>	The article addresses recruitment as one of the biggest costs, but does not specify how the recruitment took place.
<i>Fylkesnes et al. (2013)</i>	The counselors were selected by the local communities for voluntary work.
<i>Hüsken & Heck (2012)</i>	Through a participatory process of wealth ranking and self-selection.
<i>Jeanes (2013)</i>	FGDs were arranged through teachers and NGO staff where they invited participants who either were involved or had been involved with sport and HIV/AIDS interventions.
<i>Jones et al. (2013)</i>	CHC senior staff at intervention facilities selected the staff members. Recruitment for patients was integrated with the program; clinic attendees were invited to participate in the study with their partner following HIV testing.
<i>Molassiotis et al. (2004)</i>	No information.

<i>Mwale et al. (2009)</i>	Researchers recruited participants for each drama group by local advertisement, they further had auditions and recruited the best performing drama group.
<i>Sandøy et al. (2012)</i>	Youth peer educators who were working at the health clinics in Livingstone or had been involved in other peer education activities were invited to participate in the intervention study.
<i>Sanjana et al. (2009)</i>	Health facility staff selected participating lay counselors among volunteers with existing ties to the facility for at least one year.
<i>Torpey et al. (2010)</i>	No information – HCWs selected based on chosen health care facilities
<i>Wiginton et al. (2018)</i>	Purposive sampling was used to recruit participants directly from Trusted Messenger workshops. Some prior workshop participants were recruited as several were repeating attendees. Following the sampling frame, other prior attendees randomly selected from registration records of workshops were contacted via telephone.
<i>Zanolini et al. (2016)</i>	After completion of each circumcision at the intervention facilities, study staff provided peer referral vouchers to VMMC clients <18 years of age who were interested in enrolling in the study.

While Zanolini et al. (2016) tried to recruit every male client who came into the selected health clinics, Hüsken & Heck (2012) chose a unique way of recruiting through a participatory approach of wealth-ranking and self-selection to create savings groups. Even though Denison et al. (2011) explained that the volunteer recruitment was one of the biggest costs of the program, they do not specify how this actually was done. Some had local partners helping with recruitment, and some used advertisement and community meetings to promote participation.

5.2.2 Mission

Mission refers to the reasons why the collaboration is formed in the first place - the intention and goal to be achieved when the collaboration is executed and complete. Considering this is a review of literature regarding HIV interventions in Zambia, all the studies somewhat share the same goal: reducing the HIV prevalence in Zambia. Whether the intervention involves scaling up PMTCT or VCT services, or educating youth through peers, the main goal is still the same. In the majority of the studies (Denison et al., 2011; Jeanes, 2013; Jones et al., 2013; Molassiotis et al., 2004; Mwale et al., 2009; Sandøy et al., 2012; Sanjana et al., 2009; Torpey et al., 2010; Wiginton et al., 2018; Zanolini et al., 2016), involving community members was part of the mission, particularly in interventions based on peer education. Jeanes explained that: “A key priority of the research was to engage participants and provide them with a voice to share their experiences” (Jeanes, 2013, p. 393).

5.2.3 Financial resources

Financial resources may include any financial or material inputs provided by partners. Some of the interventions are funded by same cooperative agreement or mechanism, while institutes or NGOs supported others. Table 4 lists sources of funding as indicated in the articles.

Table 4: Funders

Author(s)	Funders
<i>Denison et al. (2011)</i>	Funded by USAID under Family Health International's (FHI) Cooperative Agreement #GPO-A-00-05-00022-00 with the Contraceptive and Reproductive Health Technologies Research and Utilization (CRTU) program
<i>Fylkesnes et al. (2013)</i>	Funded by the Norwegian Programme for Development, Research and Education (NUFU), the Research Council of Norway, and the Swedish Norwegian Regional, HIV/AIDS Team for Africa.
<i>Hüsken & Heck (2012)</i>	This programme was made possible through the financial assistance of the Swedish International Development Cooperation Agency (SIDA) and the Norwegian Ministry of Foreign Affairs
<i>Jeanes (2013)</i>	"A number of NGOs" – do not specify
<i>Jones et al. (2013)</i>	This study was supported through a grant from the National Institutes of Health, R01HD058481.
<i>Molassiotis et al. (2004)</i>	Run by local people under auspices of a non-governmental organization; the Simalelo AIDS Peer Education Programme
<i>Mwale et al. (2009)</i>	The Center for Infectious Disease Research in Zambia
<i>Sandøy et al. (2012)</i>	The programme has been funded by NUFU (Norwegian Council for Higher Education's Programme for Development Research and Education) during the period 2002-2011. IFS is funded by the Norwegian Research Council, while the three other authors are funded by their respective Universities.
<i>Sanjana et al. (2009)</i>	Support for this paper was provided by Family Health International (FHI)/ Zambia Prevention Care and Treatment Partnership with funds from the United States President's Emergency Plan for AIDS Relief (PEPFAR) through the United States Agency for International Development (USAID)
<i>Torpey et al. (2010)</i>	The partnership is a six year cooperative agreement funded by the U.S. President's Emergency Plan for AIDS Relief (PEPFAR) through United States Agency for International Development (USAID); it works in collaboration with the Zambian Ministry of Health (MoH)
<i>Wiginton et al. (2018)</i>	This work was funded by the African Studies Center, the International Institute, the Center for Research on Learning and Teaching and the School of Public Health-Department of Health Behavior & Health Education at the University of Michigan.
<i>Zanolini et al. (2016)</i>	Supported by the International Initiative for Impact Evaluation (3ie). Additional trainee support came from the Fogarty International Center of the US National Institutes of Health (R25 TW009340).

As we can see, the three studies (Denison et al., 2011; Sanjana et al., 2009; Torpey et al., 2010) who were involved with ZPCT, was funded by USAID`s PEPFAR. Additionally, Scandinavian partners fund three of the studies (Fylkesnes et al., 2013; Hüsken & Heck, 2012; Sandøy et al., 2012), while Wiginton et al. (2018) and Jones (2013) received funds from the US National Institute of Health. In Jeanes (2013) who did an evaluation of peer-led activities, the interventions were funded by different NGOs where none are mentioned, while in Molassiotis et al. (2004) the intervention is funded by a local NGO: the Simalelo AIDS Peer Education Programme. Mwale et al. (2009) was funded by CIDRZ, and while CIDRZ was also involved in Zanolini et al. (2016), they did not fund the intervention.

When it comes to incentives, eight of the studies (Denison et al., 2011; Fylkesnes et al., 2013; Jones et al., 2013; Sandøy et al., 2012; Sanjana et al., 2009; Torpey et al., 2010; Wiginton et al., 2018; Zanolini et al., 2016) gave participants some kind of incentive, stipend or gift, even though the majority only provided reimbursement to cover transportation costs. Jones et al. (2014) specifically stated that even though counselors were reimbursed for transport costs and “a modest stipend for providing the intervention” (Jones et al., 2014, p. 153), those participating in the intervention as health facility clients to undergo testing, were not compensated. In Zanolini et al. (2016), incentives were based on how many peers the participants were able to convince to undergo VMMC. Denison et al. (2011) stands out with having voluntary peer educators (VPEs) at the school for an academic year and receiving a monthly stipend of 80-90 dollars. Denison et al. is also the only one who specifies the budgeting and how much the annual cost of the program when discussing the feasibility of it. He also stated that “the largest cost components were volunteer recruitment, training and subsistence, salaries and benefits of Restless Development administrative staff *and* SHEP permanent staff” (Denison et al., 2011, p. 244). In Hüsken & Heck (2012), participants were able to save money by participating in the intervention (savings groups), but were not compensated by other partners for participation.

5.3 Throughputs

All of these inputs - mission, partner resources and financial resources - go into the collaborative context, which consists of input interaction, leadership, communication, roles/structure and maintenance and production tasks.

5.3.1 Input interaction

Input interaction does not only refer to the interaction between partners, but it also involves the matters of the partners' motivation (partner to mission), what role the funding played in motivating the partner (partner to financial interaction), if there was enough or too little to finance the intervention (mission to financial interaction), or if there is any power differentials or trust concerns between the partners (partner to partner).

5.3.1.1 Partner to mission interaction

Funder's motivation for joining the mission is not discussed in any of the papers. Sanjana et al. (2013) and Fylkesnes et al. (2013) stated that the sponsors of the intervention and research had no role in study design, data collection, or paper writing, while all three of the studies where FHI was involved (Denison et al., 2011; Sanjana et al., 2009; Torpey et al., 2010), it is specified that "the contents of the final report do not necessarily reflect the views of FHI" (Denison et al., 2011, p. 246). Some also described a desire to engage community members as motivation for community acceptance of programs by tapping into their cultural knowledge. Jeanes (2013) declared that "peers who are respected and looked up to can have a strong influence over the behavior of young people" (Jeanes, 2013, p. 391), while Torpey et al. (2010) stated that "to specifically increase the acceptability of HIV testing among pregnant women and reduce stigma, traditional and religious leaders were engaged in community sensitization and mobilization" (Torpey et al., 2010, p. 3-4). Fylkesnes et al. (2013) contrarily were not motivated by skills and expertise, but said that "the main reasons for involving lay counsellors were the low costs and the limited number of local health care workers" (Fylkesnes et al., 2013, p. 10), but then later argues that the lay counselors might have been an important positive contributor to the intervention.

Most studies do not document the motivational drives for community members to participate, except for the few that specifically explore the participants' motivation in some way. Learning, contributing to the community, and knowledge were identified as the main motivators, as well as financial incentives in some cases.

*Five main reasons to be included in the programme were given by the club members: to learn and gain knowledge, to teach others, to fight AIDS, to protect those not infected, and to gain support from the group.
– Molassiotis et al., 2004, p. 186.*

Wiginton et al. (2018) said that the main motivator for the active church leaders participating in the “Trusted Messenger” intervention was the opportunity to help community members who are constantly seeking their guidance. Participants wanted to improve their knowledge about HIV and AIDS in order to have enough insight about the subject when approached by community members so they were able to take action and refer them to the right place for VCT, PMTCT or VMMC services. In Mwale et al. (2009), motivational drives were not documented or explored, but by looking at how many drama groups auditioned to be a part of the intervention (an average of six groups at every location), the community members seems to be motivated to participate even though no incentives or compensation was mentioned.

5.3.1.2 Partner to financial interaction

Several of the studies discussed if the lack of incentives might have had an impact on the participation and recommended the community members should be compensated, even though they necessarily do not document any problems. Financial incentives were not a big motivator in most of the studies given that the incentives offered were either non-existing or limited only to cover transport costs. For Zanolini et al. (2016) who intentionally used incentives to scale-up peer-referrals among male and VMMC, found that:

65% reported that the referral incentive motivated them to refer friends for VMMC “a lot,” and 35% reported that it motivated them “only somewhat” (29%) or “not at all” (6%). Out of the total, 18% reported that the incentive did not motivate them enough because the amount was too low.
- Zanolini et al., 2016, p. 267

In Denison et al. (2011) where the peers received a monthly stipend to live and work at campus for two full terms, it is a possibility that it was a motivator for the participants, given that it was almost a full time paid job, but authors do not address it.

5.3.1.3 Mission to financial interaction

Moreover, even though the authors state where the funding came from, very few discuss if there was enough financial resources to do what was needed. Exceptions are Sandøy et al. (2012) who had problems with peer educators dropping out of the intervention due to low incentives, which might indicate that there were not enough financial resources to increase incentives, which potentially could have made the participants stay. Sanjana et al. (2009) who evaluated a programme with community volunteers as lay counselors was concerned this was

going to be a futuristic problem, something the participants expressed as well. One health center manager said the following about the voluntary lay counselors: “What they receive is too little. We may lose them if they find better payment in the future. If they leave us, this will impact negatively” (Sanjana et al. 2009, p. 5). Authors then discuss:

We can further speculate, although additional research would be needed, that more formalized job and payment structures are desired, given the extent of the training required for the provision of high-quality, HIV-specific services and in the context of strong beliefs regarding the important contributions that lay counsellors are making at the community level. These factors may serve to increasingly foster a professional identity around lay counselling.
- Sanjana et al., 2009, p. 6

5.3.1.4 Partner to partner interaction

As for power differentials, community participants did not necessarily have any outstanding power but were able to drop out at any point during the intervention. Overall, the researcher's seems to have the power, and might be due to the interventions being planned ahead, as community members are recruited later on and assigned specific tasks. There is therefore some level of power differentials. One of the studies, Sandøy et al., (2012), used an external monitor for intervention follow-up. The monitor visited the venues on three occasions during the intervention period to check if the peer educators had visited the venues for hanging up posters and distribute condoms. The monitor also asked staff if they had observed the participants engaging in discussion with peers when present, which indicates trust issues.

5.3.2 Leadership

The leadership component of the BMCF and an important part of the collaboration was almost absent in all of the studies in forms of information about who the leaders were. The leader should be a partner who delegates and organizes the collaboration focusing on the mission. While it is possible to make assumptions about who was leading the collaboration, the majority of the studies did not specifically address this issue, even though it is clear that it was not the community members as they were recruited. Community participants do not seem to be involved in the planning of interventions either, only engaged in the implementation. The exception is Jones et al. (2014), who explained that CHC senior staff at intervention facilities selected staff members they thought were most appropriate for training, which also gives them some sense of power. Researchers also had meetings with staff clinic officers and staff from each clinic to outline the duties and goals of the intervention.

For those few who do indicate leadership, Hüsken & Heck (2012, p. 25) stated that “the study and intervention is implemented and coordinated by The World Fish Center in collaboration with the FAO”, while Mwale et al. (2009, p. 25) writes: “The CIDRZ community department coordinated the open dramas and other strategies to assist with both recruiting research participants and providing community mobilization and health education”. Sandøy et al. also acknowledge “.. great leadership, management and patience of the local supervisors..” (2012, p. 11).

5.3.3 Communication

Unfortunately, there is little to say about the communication between partners. Communication refers to how the partners are communicating, and while some of the studies do document meetings with stakeholders or the community members, they do not say anything about the communication between those meetings. Denison et al. (2011, p. 238) said they “have monthly supervisory visits”, while Fylkesnes et al. (2013, p. 11) reported that “The counsellors and supervisors met with the scientific coordinator once a week for reporting, clarifications and open discussions based on experiences”.

5.3.4 Roles/structure

The roles and structure of the BMCF indicates if processes were clearly articulated, if the various partners were assigned clear roles and how the collaboration was evaluated. When it comes to the articulated processes, the majority of the articles describe how the intervention and data collection was structured and gathered, respectively. In most of the studies, the procedures seem to be clearly organized and the roles assigned to specific partners. Denison et al. (2011) clearly defined the specific roles and procedures:

Restless Development’s role during the evaluation was the implementation of the SHEP model, facilitation of access to schools and Ministry of Health officials and the dissemination of study findings in the participating schools. In order to ensure impartiality, the evaluation, including the development of the protocol, identifying and hiring of research staff, data collection, management and analysis, was conducted independently by Family Health International.
- Denison et al., 2011, p. 236

Even though few studies illustrated *how* the roles were assigned for all partners in the collaboration, the community participants were asked to do specific tasks, and it is therefore expected that the community members were aware of and prepared for their role before they joined the collaboration. On the question of what kind of tools were used to evaluate the

programme and if any data was collected, these findings differ significantly in all included studies, though all reported what kind of data was collected and how they evaluated the intervention. When looking at the design and methods (table 1), the majority of the studies used a mixed methods approach with quantitative and qualitative methods – e.g. Sanjana et al. (2009) who examined record books and additionally had FGDs and interviews. Several of the studies especially those regarding scaling up VCT, VMMC or PMTCT services (Fylkesnes et al., 2013; Torpey et al., 2010; Wiginton et al., 2009; Zanolini et al., 2016) collected data on how many community members accessed those services.

5.3.5 Maintenance and production tasks

As mentioned when presenting the BMCF, the model contains two kinds of tasks. Production tasks covers tasks associated with producing results related to the mission, while maintenance tasks is about keeping the partnership going, but is not directly connected to the mission – e.g. grant writing, reporting or evaluation (Corbin, Jones & Barry, 2016). Very few report any grant writing or specific reporting, even though some of the funders indicate that grants proposals had to be submitted. Engaging the community, which also is a maintenance tasks, was done in all collaborations and varies significantly. Table 3 summarizes how the community was engaged in the implementation of the evidence-based intervention in the specific study.

Table 5: How the community was engaged

Author(s)	How the community was engaged in the intervention
<i>Denison et al. (2011)</i>	VPEs was trained to have weekly forty minute classroom sessions with students to talk about HIV prevention and sexual health. The peers participated in residential training, have monthly supervisory visits and attend a one-week of refresher training during the intervention period. The peers also offered extracurricular activities for students.
<i>Fylkesnes et al. (2013)</i>	Local lay counselors were trained to offer HB-VCT. Village Headmen’s and other community leaders were interviewed in the beginning process. Local radio stations and cultural drama groups were used to spread awareness about potential home visits.
<i>Hüsken & Heck. (2012)</i>	A participatory needs assessment in two fishing communities. Used traditional leaders to assemble community members and organize ten gender specific self-regulating savings groups where they could save money, share experiences and have HIV or other health related activities. The group members were trained and supervised by community facilitators and participated in skills-building sessions.

<i>Jeanes. (2013)</i>	Youth VPEs was trained through a peer leadership model to have HIV/AIDS educational programs using sport and other activities where participants talked about sexual health.
<i>Jones et al. (2013)</i>	CHC staff participated in hands-on practical training and workshops before they led intervention sessions as group leaders with patients on intervention sites. CHC staff counseled patients as well. Train-the-trainer model was used. CHC eventually trained new group leaders.
<i>Molassiotis et al. (2014)</i>	VPEs trained through workshops led anti-AIDS clubs using different kinds of sports and activities. Peer-leaders reached out to isolated villages and mobilized youth. Members of the clubs can contribute with plays or music around themes of HIV and AIDS.
<i>Mwale et al. (2009)</i>	The drama group reviewed the results from the needs assessment, developed the script for the OPDs, study protocols and consent forms. Community leaders including chiefs and officers were asked for suggestions and final approval. Drama group performed OPDs with sketches and music about HIV/AIDS and sexual health.
<i>Sandøy et al. (2012)</i>	VPEs were trained to talk to peers about HIV, sex and condoms. They visited venues based on community responds on where they met sexual partners. Peers engaged in discussion, as well as placed condoms and posters about HIV/AIDS at the venues.
<i>Sanjana et al. (2009)</i>	Community volunteers were trained through classroom sessions and role-play as lay counselors and further placed in health care facilities. They provided VCT, and some assisted in other services including early stage child health days.
<i>Torpey et al. (2010)</i>	Existing HCW participated in skill building. Non-health care workers like lay counselors were trained to provide PMTCT services and motivational talks. Some were also trained to do VCT. Traditional leaders were engaged in the community mobilization.
<i>Wiginton et al. (2018)</i>	Religious leaders participated in science-focused interactive educational workshops about HIV and AIDS. The leaders spread knowledge in the community and counseled church members.
<i>Zanolini et al. (2016)</i>	Males who visited the CHCs was given referral vouchers to refer up to five male peers to undergo VMMC. Participants used their social network to discuss HIV.

As for how the community input was gathered, these findings vary in the studies. Regardless of the study design of the intervention, the vast majority of the studies used interviews or FGDs in order to get input from the community members. Questionnaires were also a common method. A small sample of the selected studies did a community assessment before implementing the intervention, like Hüsken & Heck (2012) who developed the Fisher Trade+ model and intervention based on their findings from the community assessments. Sandøy et al. (2012) used the PLACE-method and for this reason explored and chose the selected areas for the intervention solely based on what the community members said when asked about sexual behaviors and where they met new sexual partners. Zanolini et al. (2016) also based

the amount of incentives given to the community participants based on what community members said was a fair amount, while Mwale et al. (2009) intervention was almost exclusively based on the community's input. The latter did a community assessment beforehand, developed the script with the participating drama group, in addition to asking community leaders' approval for the script and then changing and adjusting the script for the OPDs according to what the audience asked during the Q&A after the dramas.

A second strategy is to record the number and nature of questions asked during the OPD question and answer session. These questions provide important insights into the level of understanding of the messaged presented in the dramas, as well as the myths, misconceptions, and any other concerns from the audience. This information can be used to modify the dramas, and to develop a list of the frequently asked questions that can be addressed in subsequent drama presentations.
– Mwale et al., 2009, p. 27

5.3.6 Context

The context of the collaboration involves the environment the partnership occurs within, and includes economic, social, political and cultural context (Corbin et al., 2016). Several of the studies include background information that gives a good presentation of the context the collaboration and intervention was carried out in. As Zambia is a low-income country, authors often describe how there are challenges in reducing the HIV prevalence and other health related issues. While some discuss the economic and social context, none of the articles address any political issues. Hüsken & Heck explains the context in Zambia as:

Zambia has a mature, persistent and heterogeneous HIV epidemic driven by social and cultural norms that encourage multiple concurrent partnerships, infrequent and inconsistent use of condoms, and low levels of male circumcision in most of the provinces. This is compounded by numerous structural factors, such as a high level of poverty, high mobility and labour migration, alcohol abuse, gender inequality and unequal distribution of wealth.
- Hüsken & Heck, 2012, p. 18

Across all literature in this review, the areas and context of the interventions varies between urban and rural places, often in both. Three of the studies are placed in Copperbelt, which is the province with highest HIV prevalence with 18% (Central Statistical Office, 2014). Torpey et al. (2010) also mentions Copperbelt as being the province with highest poverty index. Among Molassiotis et al.'s (2004) participating club members, 75% were unemployed, while only 13,6% were active workers and 11,4% attended school. Authors also stated that unemployment rates in deprived areas can rise up to 80%. Similarly, 63% of the participants

in Jones et al. (2014) were unemployed. Both of these findings illustrate the economic situation particularly in rural areas in Zambia. Jeanes (2013) had participants speaking English, but according to “Global North standards, live in considerably poor conditions and experienced poverty” (Jeanes, 2013, p. 396).

5.4 Outputs

When all of these components of the BMCF collide together and affect each other it creates outputs. It could be additive, synergetic or antagonistic. It is also possible that synergy and antagonism can feedback into the partnership, where outputs might improve implementation.

5.4.1 Additive results

Additive results means that the collaboration had no effect on the intervention ($2+2=4$), and the community could have done or experienced something similar without the collaboration. In Zanolini et al. (2016), the intervention of incentives to scale-up peer-referrals led to an increase of only 7.60 circumcisions per month. The collaboration had no particular effect on the mission, and very few participants made a change in behavior because of the intervention.

After implementation of the 8-month period intervention, a difference-in-difference analysis that compared trends in the number of male circumcisions performed in intervention and nonintervention facilities indicated that the intervention did not result in a significant change in the number of circumcisions.
- Zanolini et al., 2016, p. 267

In Jeanes (2013) where youth was taught about HIV and sexual behavior in peer-led activities, participants expressed that they learned a lot, but had problems changing their behavior because of their family. Even though the interventions might not have made a significant change in the means of cultural or behavioral change, the participants gained a lot of benefits that they would not have if there were no collaboration to implement the peer-led interventions.

Participants were in agreement that peer-led education was unlikely to significantly influence behaviour if the values discussed and advocated within this setting were not replicated in young people’s everyday lives. As one boy (15) commented: If the family is not in agreement with our views and the youth is determined that he will be behave as he is doing, then we may not change that. We have to keep on and try but without the family it is not easy.
- Jeanes, 2013, p. 398

Participants in Wiginton et al. (2018) also explained that the workshops were positive contributions and they developed valuable knowledge, but there are still obstacles, as poverty in their case.

Trusted Messenger participants indicated that a barrier to success of the intervention stemmed from poverty. Several stated that poverty inhibited their ability to disseminate the information. One clergy stated: 'you might know where the information is supposed to go, but how do you take it there? You need resources to move to certain areas, and you find...you do not have the resources' (male, age 18–33, Lusaka). Others proposed that the knowledge provided held little relevance for the poor [such as those who live in shanty towns, compounds or slums].
– Wiginton et al., 2018, p.

Some also had additive results as a small part of the bigger picture – e.g. Jones et al. (2013) who discovered that there was no stand-alone change in measure of alcohol use, and Denison et al.'s (2011) intervention on peer educators with sexual behavior classes discovered that there was no compelling difference in respondents stating they ever had sex between SHEP-students and non-SHEP students.

5.4.2 Synergy

Synergetic results means that the intervention was a success (2+2=5), the collaboration made a positive impact, and it created outputs better than if the collaboration never had taken place. The majority the studies included in this review had synergetic outputs. Denison et al.'s (2011) intervention, though having some additive results, caused the SHEP-students to have a higher level of self-efficacy and skills on how to refuse unwanted sex:

First, the behavioral evidence supports implementing the SHEP model to increase knowledge and reduce sexual risk behaviors among students. SHEP students had higher levels of knowledge and better attitude and self-efficacy scores on several outcome measures than non-SHEP students.
- Denison et al., 2011, p. 245

Fylkesnes et al. (2013) on scaling-up and testing for acceptance of VCT by delivering HB-VCT using lay counselors, discovered a significantly higher acceptance at intervention sites.

The lay home-based counsellors achieved very high acceptance and rating of their counselling. The high acceptance of couple counselling identifies the home-based approach as having particular HIV prevention potential.
- Fylkesnes et al., 2013, p. 14

Torpey et al. (2010) with a similar intervention using lay counselors and CHWs to scale-up PMTCT services, also experienced synergetic outputs and high acceptance of VCT.

In spite of limited resources, uptake had clearly increased in the 38 sites since the introduction of the interventions, particularly in the case of acceptance of counseling and HIV testing, receipt of complete course of ARV prophylaxis, and referral for clinical care beyond PMTCT.
- Torpey et al., 2010, p. 4

For Hüsken & Heck (2012) who offered VCT and created savings groups with participants from the fisher communities, openness and awareness of HIV and AIDS had increased for group members, in addition to the savings groups` members being able to save up and invest their money in useful equipment for their businesses. Molassiotis et al. (2014) also reports synergetic outputs:

Ongoing open debate and community discussion reflect empowerment and perhaps self-efficacy, as people believe they will not be infected with the virus if they follow certain practices they have learned from peer educators, and so modify some of their cultural norms. The fact that certain rituals and cultural norms are changing, as suggested during the interviews, suggests that the peer education programme has caused people to consider risks to their own health and make informed decisions about risks taken.
- Molassiotis et al., 2014, p. 187

Wiginton et al. (2018) reported uptake in VCT among religious leaders, and participants declared they were able to help more church members and guide them to the right service. For Sanjana et al. (2009) and Jones et al. (2013) who used CHC staff and lay counselors, the quality of the local workers was excellent and resembled the work of professional staff.

*Sexual barrier use outcomes achieved by the CHC staff were comparable to or better than those achieved by the Partner Project research staff, and both were superior to the control group. A reduction in IPV *intimate partner violence* was observed for the entire sample.*
- Jones et al., 2014, p. 151

Sandøy et al. (2012) also experienced synergetic outputs, and revealed “there was a decline in the proportion of men and women engaging in transactional sex in the previous 3 months” (Sandøy et al., 2012, p. 8). Authors also stated that:

Just over half the respondents in the baseline survey reported having used a condom with the previous partner from the venue where they were interviewed, and this increased significantly to 82% in the intervention community and non-significantly to 68% in the control community.
- Sandøy et al., 2012, p. 7

5.4.3 Antagony

Even though none of the studies had clear antagonistic results ($2+2=0$), which means that the collaboration and intervention made it worse than it was in the beginning, minor difficulties and occasional obstacles were met by several. As it is not uncommon to face challenges during collaborations, it does not necessarily mean that negative processes or obstacles result in antagonistic outputs.

As briefly mentioned earlier, Sandøy et al. (2012) had a total of 38 peers dropping out ahead or during the intervention period which made them recruit and immediately train eleven new peers one-on-one. The most common reasons for dropping out during intervention was employment, school, moving and being discouraged by low incentives. They also experienced that peers was not able to distribute condoms corresponding to the communities needs and level they wanted.

It is likely that lack of knowledge among new staff explained why not all representatives interviewed in the intervention venues in the follow-up survey reported that condom distribution had taken place there. At the same time, the external monitor revealed that continuous availability of condoms was not fully achieved although this was one of the most important objectives of the intervention.
- Sandøy et al., 2012, p. 10

Jones et al. (2013) experienced that one of the participating clinics disbanded after two years, and Denison et al. (2011) discovered during data collection that two of the comparison sites in the quasi-experiment were affected by the intervention schools.

During data collection, it was discovered that two of the selected comparison schools had transitioned into SHEP extension schools in 2008, with peer educators located in an intervention school nearby visiting the extension schools and providing some of the program elements. Given that these two extension schools, originally selected as comparison schools, were receiving some of the intervention directly from the program implementers, they and their matched intervention schools were removed from the analysis.
- Denison et al., 2011, p. 239

6 Discussion

As I have presented the findings guided by the BMCF, it is time to discuss them. The discussion chapter is divided into the identified research questions, as well as a section on limitations of the study.

6.1 In what ways are the community engaged in the implementation of evidence-based practice?

Having the opportunity to include research with different types of research designs is one of the perks of choosing the scoping review, and different research designs means different methods. Consequently, the community is engaged in different ways in the implementation of evidence-based HIV interventions across the studies included in the review, as we can see in table 5.

Training of lay counselors and workshops with VPEs are common in the vast majority. The familiar method of using peers as elaborated in the literature review, is frequent. Surprisingly, none of the studies mentions Social Learning Theory, but they do argue and defend use of peers in the intervention, similar to Maticka-Tyndale & Barnett (2009). Both Jeanes (2013) and Molassiotis et al. (2014) had VPEs using sport for promoting healthy behavior and discussing HIV/AIDS and sexual health. Hüsken & Heck (2012) also had their participants doing activities, but seems to include other activities than physical. While the first two specifically used peers, Hüsken & Heck (2012) does not mention that as the intention, even though members of the savings groups are peers as they consists of people of the same gender with similar occupations. Denison et al. (2011) and Sandøy et al. (2012) intentionally trained peers to be a part of the intervention, and while Zanolini et al. (2016) also used peers, they had males using their own already established social network, practicing a more accessible and straightforward approach without employing resources on training.

Fylkesnes et al. (2013), Torpey et al. (2010) and Sanjana et al. (2009) on the other hand trained and used lay counselors. While Fylkesnes et al. and Torpey et al. trained already established lay counselors or non-health care workers to offer PMTCT and VCT, Sanjana et al. trained community volunteers through classroom sessions to provide VCT. They were subsequently placed at different health care facilities, while in Fylkesnes et al. (2013); participants were already employed at the facilities. Mutual method of engaging the community for Torpey et al. and Fylkesnes et al. were to supply additional training for

already established lay counselors so they could provide services they were not able to before the intervention. Jones et al. (2013) stands out with training CHC staff with a particular method, namely the train-the-trainer model. First, research staff had workshops with CHC staff from the intervention clinics, teaching them hands-on practice-based strategies. After the workshop, research staff led community sessions at intervention clinics with CHC staff co-leading. In stage two, CHC staff led the sessions with research staff co-leading and supervising, before CHC staff led sessions with another CHC staff co-leading, and so on. Authors expressed that this trainer model was successful, and CHC-led interventions were comparable or better than RES-led intervention sessions.

Several of the studies also included community leaders, namely religious, traditional or village headmen, during their intervention. Mwale et al. (2009) had community chiefs and local officers give their final approval for the OPD before performance, as well as they could make suggestions for changes. Fylkesnes et al. (2013) interviewed local leaders in the beginning process, whereas Wiginton et al. (2018) only had religious leaders as participants. Fylkesnes et al. also used OPDs to spread awareness about the upcoming HB-VCT, similar to Mwale et al (2009), but this is only mentioned without giving details. Hüsken & Heck (2012) used traditional leaders to mobilize community members for creating savings groups.

When it comes to how the studies are related to what is recommended for implementation of EBP, I will use Fylkesnes et al. (2013) as an example. As we saw in the introduction, The EBP process should include five steps. Asking the clinical question (step i) refers to asking the question in PICO format (patient population, intervention or area of interest, comparing intervention or comparison group, outcome). By looking at Fylkesnes et al. (2013), it is possible to create a clinical question: In rural villages in Monze (p), will HB-VCT by lay counselors (i) result in uptake (c) and acceptance (o) of VCT? Further, Fylkesnes et al. refers to literature on HB-VCT in other settings (step ii) where it has been feasible and effective, but argues that there is not many published articles on cluster randomized control trials with a population-based HIV survey (step iii), which is one of the strongest levels of evidence (Fineout-Overholt, Melnyk & Schultz, 2005). Fylkesnes et al. then address the sufficiency of the evidence (stage iv), before the intervention is implemented and researchers evaluate the outcome of evidence implementation (stage v). Authors conclude by stating that there is convincing evidence from the trial that HB-VCT is feasible and effective, as we saw earlier in the findings.

6.2 How do the partners collaborate in implementing these interventions?

Almost all of the interventions are funded by northern partners, which is consistent with the previously stated fact that almost 90% of all health research comes from the north. As we have seen in the findings, the vast majority had synergetic outputs, even though some experienced obstacles due to troubles at intervention sites or participants dropping out. Authors do not address any challenges they met regarding the collaboration or problems within the partnership, it is therefore insinuated that the collaborations were successful, even though specific target was necessarily not met. Due to the papers inconsistency in the way the collaborations are described, it is difficult to compare and understand what worked and what did not work. If influences such as power differentials due to financial contributions and anticipations as in Katisi et al. (2016) did make a remarkable impact, it would most likely had been reflected on, even though it is hard to say.

It is worth motioning that the researchers conducting the studies were in some cases outside partners and not associated with any NGOs, official departments or companies, while others are researchers from partners involved in the collaboration – e.g. Denison et al. (2011) where all authors are employed at FHI, and in Zanolini et al. (2016) where some of the authors works at CIDRZ. In all the studies, community members are naturally involved in all the collaborations in some way, whether it is clients at a health clinic, young peer educators, village leaders or lay workers.

6.3 Does the engagement of the community matter to the cultural relevance and acceptability of the interventions?

One of the reasons for choosing this topic for the review, were the ambition to explore if engaging local community members mattered to the cultural relevance and made the community more accepting towards the intervention. As presented in the findings – none of the studies had antagonistic outputs (2+2+0). This research question aims at examining and discussing to which extent the community`s involvement played a part in those outputs.

Related to literature on peer education and community engagement in health promotion, many of the authors` raises their case as to why locals are involved in the intervention. Some do not argue for community participation before after presenting the results, while others discuss it as one of the key features of health promotion. Denison et al. (2011) is one of those who argues for acceptability of peers before intervention results, and said, “In this cultural context,

it is more acceptable for students to learn about sensitive topics from trained older youth than from teachers, who tend to be uncomfortable talking about sex, pregnancy and HIV with their students” (Denison et al., 2011, p. 238). While Denison et al. do not discuss acceptability of the intervention later in the article; the intervention had clear synergetic outputs and positive results. Jones et al. (2014) also concludes that community involvement might have been “beneficial for promoting and increasing acceptability” (Jones et al., 2014, p. 157), and argues that community engagement may have a greater chance of changing behavior, corresponding with literature on effect of peer education by Maticka-Tyndale & Barnett (2009) and Turner & Shepherd (1999).

As for Hüsken & Heck (2012), authors discuss that social norms and cultural context is one of the key factors that contribute to fisher folks, especially women, being vulnerable to HIV and other sexually transmitted diseases. They state that many women engage in transactional sex and are exposed to violence and alcohol abuse, and further argue that empowering women is essential for positive social change. Even though Hüsken & Heck does not mention acceptability or cultural relevancy, the Fisher Trade+ model is based on their findings from the needs assessment. As they developed these savings groups, they were created gender-specific. Although authors do not argue specifically why, it is clear that community members in the fisher communities are exposed to gender inequalities, and the researchers most likely made the savings groups gender-specific to make it more acceptable and cultural appropriate, maybe even safer for participants. Fylkesnes et al. (2013) also stresses the importance of having acceptable methods and approaches to succeed, and created their model on four principles: (i) cultural relevance, (ii) maximizing individual autonomy, (iii) emphasis on HIV prevention, and (iv) protection of confidentiality. As seen in the findings, Fylkesnes et al. had FGDs and in-depth interviews with local leaders and community members to learn how to achieve trust and reach out to households for HB-VCT. Authors even clarify that households would not participate without village leaders accepting the intervention. Fylkesnes et al. concludes with high acceptance of VCT with 85% acceptance of counseling and 66% acceptance of testing. Torpey et al. (2010, p. 4), who also engaged traditional leaders, argued that synergetic outputs were due to community engagement, and said that “by using a participatory approach, the program has been successful in increasing the uptake of PMTCT services throughout the cascade”.

In Zanolini et al. (2016) where the researchers used incentives as the motivator for peer-referrals to promote VMMC, 78% of those who came in for VMMC with a referral-voucher said what influenced them the most was talking to a circumcised friend. Still, since results from this study showed insignificant increase in VMMC, Zanolini et al. discuss if the incentives might have been too low for participants to overcome social norms and stigma talking about sex and HIV. As a result of the percentage of people stating that talking to a friend was important, Zanolini et al. concludes with peer-referral incentives being acceptable, and they further recommend implementing similar interventions with larger incentives, arguing the benefits of using peers to promote and scale-up health services. Sandøy et al. (2012) who also used peers to talk about HIV at intervention venues had synergetic outputs, but also experienced having peers dropping out of the intervention. Authors explains that participants were accused of promoting promiscuous behavior in initial stages by other peers, but were accepted when bar attendees learned about the intention of the intervention. One peer educator said: “This time they’ve accepted the study. So, we’re welcome to each and everyone” (Sandøy et al., 2012, p. 5). Wiginton et al. (2018) also stated that the participating religious leaders expressed their positive experience after the workshops, as they were able to help church members.

All of these examples are great illustrations of how community engagement could make the intervention acceptable among other community members, and correlates with literature on effects of peer education. Literature on community engagement and peer education alongside findings in the scoping review proves that NSPs should incorporate engagement of community members, as it increases the acceptability of the intervention.

6.4 Does the engagement of the community matter in the effectiveness of HIV interventions?

The final research question intents to discuss if the community mattered to the effectiveness of the evidence-based HIV interventions found in the articles. As we have discussed, community participants were able to make the intervention cultural appropriate in many of the intervention settings, but does that mean that it was effective? Many of the authors explains that they planned to measure the effectiveness, for example Denison et al. (2011) who explicitly said that the purpose of the study was to evaluate effectiveness. As seen in the findings section under synergetic outputs, Denison et al. with peer-led classroom sessions on HIV and sexual behavior, showed that having peers teaching about such sensitive topics was

effective for intervention schools where “behavioral evidence supports implementing the SHEP model to increase knowledge and reduce sexual risk behaviors among students” (Denison et al., 2011, p. 245). Similar did Fylkesnes et al. (2013), who wanted to evaluate the effectiveness of HB-VCT. As we saw, Fylkesnes et al. focused on making the intervention cultural relevant by particularly including lay counselors, community members and local leaders. Mwale et al. (2009) also wanted to evaluate the effectiveness of OPDs, and concluded with OPDs being effective as the number of audience increased and they frequently asked questions and showed interest. Looking at Fylkesnes et al. (2013) and Mwale et al. (2009), the two interventions engaged the community in different ways and specifically aimed at effectiveness and acceptability. They discussed the importance of culturally adapting the interventions, so it is probably not a coincidence that these interventions were effective with synergetic outputs.

As we saw with Zanolini et al. (2016), the intervention was not particularly effective, and since the peer-referral method seems to be acceptable, authors discuss if the inadequate results might be due to other barriers uncircumcised men experiences. Authors explain: “Given the likely influence of peers on individuals’ health behavior, identifying more effective ways to encourage interactions between circumcised clients and their peers could hold the key to overcoming barriers to male circumcision and increasing demand” (Zanolini et al., 2016, p. 267). In other words, this specific intervention might not have been the most effective, but it has great potential. Jeanes et al. (2013) had synergetic outputs with participants having confidence amongst their peers, they were willing to talk about HIV and they gained valuable knowledge. Unfortunately, participants expressed that HIV/AIDS peer-led sport interventions are “unlikely to be effective if targeting young people as if their health behavior played out within a vacuum” (Jeanes, 2013, p. 400). In summary, youth peer-led interventions are a great contribution to fighting the HIV epidemic, but are not stand-alone effective, at least not immediately.

Molassiotis et al. (2004) might be only one who explicitly stated that “the aim was not to evaluate the effectiveness of the programme” (Molassiotis et al., 2004, p. 184). They explain throughout the article that effectiveness of peer education interventions is manifested in previous literature, the aim of their study was therefore to investigate methods and components what works and what does not work. Wiginton et al. (2018) did not intended to measure effectiveness either, but stated that “religious leaders who have influence and access

to community members can and should be trained to effectively address health issues” (Wiginton et al., 2018, p. 11). Even so, participants explain how poverty is a barrier for success, something Molassiotis et al. (2004) also acknowledges as a barrier for changing behavior. They have the knowledge of what to do and where to go, but financial resources made the situation impossible for many community members to access services. They still conclude with somewhat synergetic outputs.

The Trusted Messenger approach of providing in-depth science through engaging religious leader networks seems to effectively address some obstacles common to HIV-prevention efforts when working within faith networks in Zambia, and perhaps in other countries.
- Wiginton et al., 2018, p. 10

Consequently, authors said the intervention “seems to be effectively addressing obstacles”, even though they did not measure effectiveness in any way other than exploring the religious leaders thoughts and beliefs after participating in the intervention. Even though many participants underwent VCT and declared that they were able to spread valuable and accurate information about HIV and AIDS, it is unknown to what extent that the intervention actually affected the community members the religious leaders advised, or if it increased VCT or ART statistics. In this case, the intervention was probably very helpful for spreading awareness of HIV even though many community members might not be able to access health care services. This could also be applicable to Mwale et al. (2013), who may have thought that the intervention using OPDs was a success, but there is no concrete evidence showing uptake in any HIV related service.

However, consistent with literature and UNAIDS` review on promising practices on community engagement, participatory research is crucial for changing behavior and social norms, and all interventions included in the review was definitely a step in the right direction. As many of the authors discuss in the articles, health related interventions should be implemented at community level with a participatory approach. Authors, similar to the Ottawa Charter, declares that interventions should take advantage of existing resources and current infrastructures to make it sustainable.

6.5 Limitations of the study

Limitations of the study could mainly be a consequent of the limitations in the studies included in the review. Bias in sampling, participant selection or participants dropping out during intervention period could affect the findings from the studies, and therefore limit the results in the scoping review – e.g. Jeanes (2013) who only had participants who could speak a certain level of English, resulting in only having participants with some kind of education. The lack of information about communication between partners and how they are collaborating, also strongly limited answering those questions. One of the questions the thesis aimed at answering was how these collaborations are functioning, and even though I was able to analyze how the community was engaged and how it mattered to the acceptability and effectiveness of the intervention, little is to say about how all partners are collaborating, especially in regards to funders. Additionally, grey literature is not included, which might have eliminated important and relevant literature. As for the researchers' role, the results in the scoping review could be bias or misconceived related to interpretation of results. The researcher also acknowledges that the sample size of the review is not representative and extensive enough to be generalized. When it comes to accessible literature, there is existing research on peer education including youth in development and benefits of community engagement, but there is no existing review on the specific topic in Zambia. There is consequently a lack of research to support this review. Still, the methodology was appropriate for the written dissertation. The researcher has been as objective as possible, and was not affected by participants in the study in means of body language, communication, etc. The theoretical framework helped the researcher maintain an objective perspective on the collaborations.

7 Conclusion

The findings from this scoping review suggest that community engagement increases the acceptability and effectiveness of evidence-based HIV interventions. Nevertheless, many interventions will not be effective as stand-alone actions, and many interventions will not show immediate results: changing a community's norms and social values takes time. NSPs should focus on collaborating with local leaders and utilize existing resources - for example by providing training for non-health care workers or expand facilities. Initiatives should focus on knowledge and stigma, and further research should compare effectiveness of different interventions and multiple-method interventions.

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Appendices

Appendix A: Search terms

Zambia

AND

(HIV/AIDS or

HIV or

AIDS or

“human immun* virus” or

“human immun* deficien*” or

“acquired immun* syndrom*” or

“acquired immun* deficien* syndrom*”)

AND

(EBP or

“evidence based practic*” or

“evidence-based practic*” or

“best practic*” or

program* or

evaluat* or

“HIV prevent*” or

“HIV test*” or

“health educat*” or

“sex educat*” or

“health litera*” or

“health promot*” or

“patient education as topic*” or

“health knowledge” or

“preventive medicine*” or

“health attitude*” or

“health behav*” or

“health advoca*” or

“clinical competen*” or

“social stigma” or

“consumer participat*”)

AND

(interven* or

interfer* or

“early interven*” or

“crisis interven*” or

“family interven*” or

“group interven*” or

“school based interven*” or

“prevent* interven*” or

treatment* or

“treatment plan*” or

“treatment outcome*” or

“home based care” or

“home-based care” or

“home care service*” or

“home visiting program*” or

“home visiting programme*” or

“palliative care” or

“house call*” or

“community health work*” or

implement or

deliver* or

provi* or

execut* or

“put into effect*” or

“put into action*” or

“disease control”)

AND

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“communit* involv*” or

“communit* servic*” or

“communit* develop*” or

“communit* collaborat*” or

“communit* participat*” or

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“communit* partner*” or

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“communit* sanction*“ or
“communit* support*“ or
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“public servic*“ or
“public network*“ or
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“public participat*“ or
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“population develop*“ or
“population empower*“ or
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“population authoriz*“ or
“population permi*“ or
“population consent*“ or
“population inspir*“ or
“population input*“ or
“population approv*” or
“population endors*” or
“population sanction*“ or
“population support*“ or
"private partner*" or
"public partner*" or
"public initiativ*” or
“local partner*” or
“Southern partner*” or
collaborat*)

Appendix B: Questions guided by the BMCF

Background:

1. A bit about the intervention and where

Inputs

Partners

Who was involved?

What is their motivation for being involved?

What skills/knowledge/expertise do the partners contribute to the program?

Is everyone that should be, involved?

How were community members recruited to be a part of the program implementation?

Mission

What was the mission of the program, what were the goals, how did they do it?

How was the community involved implementing the intervention?

Could there be any changes made?

Financial Resources

Who were the funders?

Are there enough financial resources to do what is needed?

Are there particular requirements for the use of these resources? (e.g., reporting requirements, restrictions on the use of the resources for particular activities, etc.)

How much time?

Were community members compensated for their participation, and if so, how?

Throughput

Input Interaction

What are the funder's thoughts on the efforts to involve the community?

Are the community partners motivated by the mission of the program?

What role did the funding plays in motivating people's involvement?

How are the partners collaborating in implementing these interventions?

Is there evidence of power differentials in the report of the project?

Leadership

Who were the leaders?

Did the community accept the leadership?

Communication

How was the communication, and how were they communicating?

What mechanisms were in place to inform the implementation team of the community recommendations?

What was the best mode of communication?

Roles/Procedures

Were people assigned clear roles?

Were processes clearly articulated?

How was community input gathered/collected?

How was that input integrated into the program?

How was the program evaluated? Were any tools used? Data collected? Etc.

Output

Additive

Would the community be doing this anyway, if there were no other partner?

Synergy

Is the implementation a success?

How can you tell?

An example of something that worked/works well?

Did the engagement of the community in the implementation of EBP positively affect the HIV intervention?

Did the involvement of communities matter to the cultural relevance and acceptability of the interventions?

Were community members empowered (or otherwise benefitted) as a result of their inclusion in this work?

Was anyone hired or elected?

Antagony

Were there any problems?

What happened?

What have they learned from that?

How could the collaboration be improved?

Is the initiative still going on?

Appendix C: Ethical clearance from NCRD

Meldeskjema for behandling av personopplysninger

Page 1 of 1


Which personal data will be processed?

What are personal data?

What is processing?

Name (also with signature/written consent) 

Yes	No
-----	----

National ID number or other personal identification number 


Yes	No
-----	----

Date of birth


Yes	No
-----	----

Address or telephone number

Yes	No
-----	----

Email address, IP address or other online identifier 

Yes	No
-----	----

Photographs or video recordings of people 


Yes	No
-----	----

Sound recordings of people 

Yes	No
-----	----

GPS data or other geolocation data (electronic communications) 

Yes	No
-----	----

Background data that can identify a person 


Yes	No
-----	----

Genetic data 

Yes	No
-----	----

Biometric data 

Yes	No
-----	----

Other data that can identify a person 

Yes	No
-----	----

You have indicated that no personal data will be processed in the project.

If you will only be processing anonymous data you should not notify your project. Anonymous data are data where individual persons are not/no longer identifiable; not directly, indirectly or via email/IP address or scrambling key.

Note that this is not a formal assessment but is guidance based on the answers you have given above.

Continue