Research Square
Preprints are preliminary reports that have not undergone peer review.
They should not be considered conclusive, used to inform clinical practice,
or referenced by the media as validated information.

Specifying implementation strategies used in delivering services for HIV, gender-based violence and sexual and reproductive health to adolescent girls and young women in community health systems in Zambia

Joseph Mumba Zulu
University of Zambia
Patricia Maritim
University of Zambia
Adam Silumbwe
adam.silumbwe@umu.se
University of Zambia
Bo Wang
University of Massachusetts Medical School
Malizgani Paul Chavula
University of Massachusetts Medical School
Margarate Munakampe
University of Zambia
Hikabasa Halwiindi
University of Zambia
Alice Ngoma Hazemba
University of Zambia
Tulani.Francis L. Matenga
University of Zambia
Mable Mweemba
Ministry of Health
J. Anitha Menon
University of Zambia
Deogwoon Kim
University of Massachusetts Medical School
Mwiche Musukuma
University of Zambia
Cosmas Zyambo
University of Zambia
Karen MacDonell
Florida State University
Oliver Mweemba

University of Zambia
Matilda Kakungu Simpungwe
Ministry of Health
Henry Phiri
Florida State University

Research Article

Keywords: Implementation strategies, Community health systems, Adolescent girls and young women, HIV, gender-based violence, sexual and reproductive health services, Zambia

Posted Date: April 8th, 2024

DOI: https://doi.org/10.21203/rs.3.rs-4184603/v1

License: This work is licensed under a Creative Commons Attribution 4.0 International License. Read Full License

Additional Declarations: No competing interests reported.

Abstract

Background

Adolescent girls and young women (AGYW) in Zambia experience challenges including gender-based violence (GBV) and difficulty obtaining care for sexual and reproductive health (SRH) and treatment for HIV. Implementation strategies for delivering GBV, SRH and HIV services targeted to AGYW in community health systems (CHS) have not been fully specified. We sought to define and specify common implementation strategies being used in Zambia.

Methods

In a qualitative case study in 3 districts, we interviewed 29 key informants from government bodies, NGOs, and community leaders; we also conducted 23 in-depth interviews with AGYW aged between 10 and 24 years. Analysis of the data used thematic analysis based on the four CHS lenses (programmatic, relational, collective action, and critical lenses) and on the Expert Recommendations for Implementing Change (ERIC) compilation of implementation strategies.

Results

Implementation strategies identified under the *programmatic lens* were 1) changing infrastructure, which included increasing health facilities and delivering adolescent- and young people-friendly services; 2) training and educating stakeholders, which consisted of increasing capacity building, developing and using educational materials, ongoing training and educational outreach visits; and 3) adapting and tailoring services to context, which included delivering integrated services and developing by-laws. *Relational lens* strategies were 1) developing stakeholder interrelationships such as building a coalition of service providers; and 2) using new funding through cost-sharing among stakeholders. Under the *collective action lens*, implementers mainly engaged consumers, by increasing demand using community networks, using mass media to share information, and intervening with patients to enhance uptake of services. The *critical lens* showed that effective implementation of GBV, SRH and HIV services was affected by structural and socio- cultural factors such as social stigma and cultural norms.

Conclusion

This study builds on the ERIC compilation of implementation strategies by identifying and specifying implementation strategies used in the delivery of HIV, GBV and services for AGYW in community health systems. We provide additional evidence on the importance of relational and collective-action approaches in strengthening community-engaged implementation and dissemination.

Contribution to literature

- Several implementation strategies to address adolescent girls and young women HIV, gender-based violence (GBV), and reproductive health (SRH) are delivered in dynamic community contexts that may or not support such implementation efforts.

- Community health systems, which are networks of local actors and community structures that function in alignment with formal health service structures, provide an opportunity to promote the acceptability and sustainability of integrated strategies for HIV, SRH, and GBV.
- Implementation strategies applied to community health systems that are necessary for the successful implementation of HIV, GBV, and SRH services are rarely or inconsistently described in most low and middle-income country settings.
- This study builds on the ERIC compilation of implementation strategies by identifying and specifying implementation strategies used in the delivery of HIV, GBV, and services for adolescent girls and young women in community health systems in low income settings.

Background

Adolescent girls and young women (AGYW) in low- and middle-income countries (LMICs), experience challenges that impact their health and well-being, including HIV, poor sexual and reproductive health (SRH), and gender-based violence (GBV) (1–4). Zambia is among the most affected countries in Africa (5). These public health concerns are interlinked in a complex cycle (5, 6), perpetuated by poverty, gender inequality, and social marginalization (5, 7). For instance, most HIV infections in the sub-Saharan region are associated with SRH-related issues such as pregnancy and sexually transmitted infections (5, 7). Violence and the threat of violence can compound HIV or SRH problems by undermining AGYW's ability to negotiate equal decision-making within relationships, including safer sex practices (2, 7, 8).

AGYW in Zambia continue to experience several HIV, SRH, and GBV challenges (9). For instance, teenage pregnancy has been consistently high: 29.0% in the two most recent rounds of the Demogaphic and Health Surveys 2013–2014 and 2018 (10, 11). In 2021, 5.9% of young women and 1.8% of young men aged 20–24 years were living with HIV (12, 13). Further, young people in the 15–24 age cohort account for the lowest levels of viral load suppression: 80.5% of females and 81% of males (12, 13). Comprehensive knowledge of HIV remains low, at 40.5% of girls and 38.6% of boys aged 15–19 years (12, 13). Moreover, condom use at most recent sexual encounter is still low, at 36% for girls and 41% for boys (12, 13). Further, among AYP with an STI, only 45.0% were receiving treatment in 2021 and 2022 (12, 13). A substantial majority (61.3%) in 2021 and 58.0% in 2022) of adolescents aged 10 to 19 were diagnosed and treated for sexual and gender-based violence (SGBV) (13).

The Zambian Ministry of Health, through the 2015 National Guidelines for SRH, HIV and GBV services, is seeking to address these interrelated public health problems by implementing integrated prevention, management, and treatment strategies (2, 7, 14). Integrated service delivery is vital as it promotes satisfaction and potential gains in health outcomes by reducing the chance of missed opportunities through timely and convenient service delivery (2). Further, integration reduces HIV-related stigma and discrimination, duplication of activities, inefficiency of, and competition for scarce resources, thereby enhancing program effectiveness and efficiency (5, 6, 8, 15). To promote acceptability and sustainability of the integrated strategies, it is important to consider community health systems (CHS) in the implementation process (2, 7, 14). A CHS is defined as "*the set of local actors, relationships, and processes engaged in producing, advocating for, and supporting health in communities and households outside of, but existing in relationship to, formal health structures*" (16). Evidence suggests that LMICs that have invested in CHS have recorded some positive public health gains (17, 18). CHS have attracted increased interest because of their potential to leverage diverse community resources and advance population well-being (4, 14, 19–21). The gains are partly due to the ability of CHS to widen participation and collective action and promote trust in health

services (20, 22). Investment in CHS is also important because HIV, GBV, and SRH problems are often *"caught between the formal health system and the community and often in a "grey zone" between public, non-governmental and private health systems"* (23).

CHS can be viewed through the programmatic, relational, collective action, and critical lenses (24, 25). The four lenses are used to approach, understand, and dissect or evaluate CHS. The programmatic lens entails looking 'into CHS' as the site of formal programming (design) (24, 25). It is concerned with health systems building blocks such as human resources, financing, technologies, and infrastructure (24, 25). The *relational* lens shifts the focus from the what (design) of programmes to the how (implementation). It views the CHS as a 'peopled' system of relationships – formal or informal. It focuses on multiple interactions and feedback loops, interests and expressions of power among the actors that together constitute a social system (24, 25). The *collective action* lens is concerned with mechanisms and processes that enable actors in the CHS to mobilize, collaborate, and act collectively in identifying, prioritizing, and owning solutions to health problems (24, 25). The critical lens examines CHS issues from a political-economy perspective, including what lies behind programmes and how to decolonize programmes or make them contextually relevant (24, 25). CHS thinking is useful in accounting for actions and processes often overlooked in the delivery of health services (24, 25).

Meanwhile, implementation strategies being applied in CHS that are necessary for quality implementation of HIV, GBV, and SRH services have been inconsistently described in many LMICs (17, 26, 27). Implementation strategies can be defined as "methods or techniques used to enhance the adoption, acceptability, and sustainability of a clinical program or public health services" (26). The Expert Recommendations for Implementing Change (ERIC) study aimed to refine a published compilation of strategies that can be used in isolation or in combination in implementation research and practice (28). However, Powell et al (28) called for better contextualising of the ERIC implementation strategies in various settings, as the strategies could be more applicable in clinical settings in the US or North America, given the focus of the ERIC project and the composition of the expert panel that developed the strategies.

For HIV, GBV, and SRH services, these strategies include community sensitization, gender empowerment, adolescent- and youth-friendly health services, and HIV testing (14, 29). Comprehensively documenting and specifying implementation strategies can provide lessons on how the strategies facilitate realizing public health benefits in the CHS (26), including promoting the uptake of health services (26, 30, 31). Further, such evidence can contribute toward promoting penetration and sustainability of services by promoting community participation in delivering public health services (9, 17, 27, 30, 32). This study aimed to contribute toward addressing this knowledge gap by exploring strategies used in the implementation of HIV, GBV, and SRH services for AGYW in community health systems in Zambia.

Methods

Study design

As part of a broader formative assessment of HIV, gender-based violence, and sexual and reproductive health status among AGYW (results reported elsewhere), this qualitative case study focused on strategies used during implementation of HIV, GBV, and SRH services in community health systems. The methodology section has been organised inline with key aspects of the criteria for reporting qualitative research (COREQ) guidelines such as description of study setting, selection and recruitment of participants, data collection and analysis.

Study setting

The study was conducted in three purposively selected districts: Chongwe, Mazabuka, and Mongu. According to the 2020 UNAIDS estimates, they are among the districts that accounted for over 90% of new HIV infections among AYP in Zambia. The three districts also provide integrated HIV, GBV, and SRH services for AGYW.

Selection and recruitment of participants

Participants were recruited using purposive sampling. Sample selection for AGYW aged 10–24 years was guided by key considerations such their experiences in accessing the services. For key informants, inclusion was contingent on their experience in delivering HIV, GBV, and SRH services to both in-school and out-of-school AGYW (Table 1). An attempt was made to include informants from all the key services in the district.

Table 1
Numbers of participants by category and district

Category	District 1	District 2	District 3	Total
District Officials* (DO)	4	5	5	14
Implementing partners* (P)	2	2	2	6
Community leaders* (CL)	2	2	2	6
Religious leaders* (RL)	1	1	1	3
SUB TOTAL	9	10	10	29
Sex workers** (SW)	2	3	2	7
GBV Survivors/ Child Abuse** (GBV/CA)	3	3	3	9
Persons Living with HIV** (PLWHIV)	3	3	3	9
SUB TOTAL	8	9	8	25
Total Participants	17	19	18	54
*Key Informant Interviews - Actors Implementing SRH, HIV and GBV programmes				
**In-depth interviews - Adolescent Girls and Young Women				

Data collection

Data were collected in September and October 2022 in Chongwe, Mazabuka and Mongu districts. For 29 key informant interviews (KII), the participants were district officials, implementing partners, community leaders and religious leaders. In-depth interviews were conducted with 25 sex workers, GBV or child abuse survivors, persons living with HIV (Table 1). Data collection tools were developed by a team of researchers with experience in conducting research and implementing HIV, GBV, and SRH services. Pilot testing preceded data collection.

Data analysis

All interviews were recorded digitally and later transcribed verbatim by trained transcribers. We followed a thematic analysis approach, “a method for identifying, analysing and reporting patterns (themes) within data. It minimally

organizes and describes a dataset in (rich) detail and goes further to interpret various aspects of the research topic" (33).

While we became familiar with the data, using about 10 percent of the transcripts, two members of the team deductively developed a code manual, based on the community health systems lenses and the ERIC compilation of implementation strategies (25, 28, 34). A team of researchers from the University of Zambia and the Ministry of Health with experience in implementation science, anthropology and public health (adolescent health), SRH, GBV, and HIV reviewed the code manual, systematically comparing it with the dataset to arrive at the final code manual.

Trained and experienced research assistats and study team members then proceeded with the actual coding, using NVIVO version 7 (QSR Australia). The process involved matching the codes with segments of data selected as representative of the code. The coded data, which focused on discrete implementation strategies, were then collated into potential themes, which were the main implementation strategies. These were then reviewed, through "checking if the themes work in relation to the coded extracts and the entire dataset", before arriving at the final themes (33).

As shown in Table 2, categorizing implementation strategies according to the ERIC compilation led to extraction of those relevant to HIV, GBV, and SRH services for AGYW (28, 34). The clusters of implementation strategies were: (i) change infrastructure, (ii) train and educate stakeholders, (iii) adapt and tailor services to context, (iv) develop stakeholder interrelationships, (v) use new funding, and (vi) engage consumers(26, 34, 35). These strategies were then mapped on to the community health systems lenses. The discrete strategies, main strategies, and codes were finalized in a series of virtual meetings.

Table 2
Summary themes

Community health systems lenses	Clusters of implementation strategies	Discrete strategies
Programmatic lens	Change infrastructure	Increase new health facilities
		Deliver adolescent- and young people- friendly services
	Train and educate stakeholders	Increase capacity of staff to deliver adolescent- and young people-friendly services
		Develop and use educational materials on SRH, HIV, and GBV
		Conduct ongoing AGYW training for peer educators
		Conduct educational outreach visits
	Adapt and tailor services to context	Deliver integrated HIV, GBV and SRH services at the health facility
		Develop by-laws in the community to protect victims
Relational lens	Develop stakeholder interrelationships	Build a coalition of service providers through role specification
	Use new funding	Use cost-sharing to distribute the financial burden among relevant stakeholders
Collective action lens	Engage consumers	Increase demand using community networks
		Use mass media to share information
		Intervene with patients to enhance uptake of services

Ethical considerations

Ethics approval was granted by the University of Zambia Biomedical Research Ethics Committee (UNZABREC) (REF. 2460 – 202). Informed consent was obtained from all the participants prior to participation, and we ensured the confidentiality of the data obtained. For adolescents younger than age 18 years, we obtained consent their parents and assent from the adolescent.

Results

Our description of the strategies used in the implementation of HIV, GBV, and SRH services targeted towards AGYW is organized around the programmatic, relational and collective action lens. Under each lens, we present the cluster of stategies and the discrete implementation strategies. The main ERIC clusters were: (i) change infrastructure, (ii) train and educate stakeholders, (iii) adapt and tailor services to context, (iv) develop stakeholder interrelationships, (v) use new funding, and (vi) engage consumers. Under the critical lens, we present structural and socio- cultural factors that affected effective implementation and utilisation of the services.

Programmatic lens

Implementation strategies identified under the programmatic lens comprised three clusters: i) change infrastructure, (ii) train and educate stakeholders, (iii) adapt and tailor services to context.

Change infrastructure

Increase new health facilities

Respondents reported an increase in the number of health facilities that were built to provide HIV, GBV, and SRH services to AGYW, particularly in rural areas. Building the facilities increased space for health workers to provide services. Those services included family-planning commodities such as condoms and contraceptives, HIV counselling, testing, and treatment, as well as GBV assessment and counselling. The government constructed more health facilities in rural areas to bring services closer to communities, as distance is a major barriers. A participant explains how they benefited from that effort:

Even the time I go to the facility for HIV testing, I don't face any challenges, because the services are now closer, and because I find the nurses welcoming, the tests are always done so in my case I do not see any challenges [IDI, Sex Worker, District 1].

Deliver adolescent- and young people-friendly services

One strategy for promoting responsiveness in delivering adolescent services was the creation of adolescent- or youth-friendly spaces in the health facilities, which trained staff could use to provide AGYW-friendly services. Previously, adolescents felt uncomfortable accessing services together with adults at the hospital. By providing age-appropriate or nonjudgmental SRH services, the spaces increased acceptability. Some health facilities also had spaces specifically for attending to adolescent needs:

The services are there. Yeah, we have the adolescent and youth friendly health corner at different points in the district, though not everywhere. We have the services at our hospital here, we have another one clinic, even other rural clinics that are providing the same services… [*KII, DEBS, District 3].*

The adolescent- and youth-friendly health centres were preferred as they allowed adolescents to freely discuss their health problems privately with health workers. The centres also provided various counselling services, treatment facilities, and information communication and education services, including GBV services:

In terms of GBV (Gender Based Violence) we talk to these issues that come to the adolescent and youth friendly health spaces to say please if you feel abused let us know do not hesitate to come forward and talk about these issues. So, counselling services are given, information communication and education services are also given because knowledge is power without that they won't be able to make discisons [KII, Health Promotion Officer, District 2].

Many adolescents and young people explained that the good attitude of adolescent staff in the centres motivated adolescents and young people to access the services. Further, availability of the right competencies needed to deliver the appropriate services for adolescents and young people also motivated uptake of the services.

I love coming to the facility and collect the medicine myself because the doctor loves me and I enjoy talking to him. He is friendly [IDI, Adolescent Living with HIV, District 2].

Train and educate stakeholders

Increase capacity of staff to deliver adolescent- and young people-friendly services

Health workers received training on delivering HIV, GBV, and SRH services in health facilities, with a focus on providing appropriate services for AGYW. Following the training, mentorship was provided to support the health workers in delivering services in a friendly manner. One health worker echoed this, saying:

Yeah, so for this one sexual reproductive service we have no problem our staff are trained, they have got the skills, they have been mentored, oriented. [KII, HIV Coordinator, District 2].

Some teachers received short-term training in Comprehensive Sexuality Education (CSE) to enhance effective delivery of SRH information in schools. The training also covered how to identify SRH and GBV problems among students, provide counselling, and establish referral systems:

Most of the teachers are well informed, they would counsel those learners, when they fail, sometimes that's when they will refer them here, … meaning the teachers are known and they are able to help the children with SRH problems [KII// Guidance Teacher, District 3].

Develop and use educational materials on SRH, HIV and GBV

Health workers reported that the health facilities had brochures, guidelines, and policies that guided them on procedures and the right type of services to provide to AGYW. Having such guidelines facilitated standardization of services across facilities. Health workers mentioned that the Adolescent Health Strategy had, for example, provided guidance on how to deliver appropriate, accessible, efficient, and effective adolescent- and youth-friendly health services.

The issue for me is to have some kind of a multispectral because it's not just Ministry of Health that has got everything, in terms of policies, that we need around these issues so in terms of policies [KII, Local Government, District 2].

In the schools, teachers also provided information on SRH, HIV, and GBV to learners using the comprehensive sexuality framework. The framework has been integrated into the school curriculum for Grades 5 to 12. As a teacher explained, Comprehensive Sexuality Education (CSE) was taught in career subjects such as social studies and science:

If we look at SRH, we have aah…. we have comprehensive sexuality education, which is part of the syllabus, so learners they learn all those starting from grade 5…, so it is being taught in schools, GBV also there are some topics like in social studies, apart from that, we even call people from the police to come and sensitize them [KII Guidance teacher, District 3].

Conduct ongoing AGYW training for peer educators

Stakeholders provided ongoing training to AGYW on various services. AGYW were trained as peer educators to help encourage their peers to use the services. One training focused on the benefits of using PrEP in key populations, how to use it, and where to find it:

When we go to the health facility for family planning, they teach us, the new thing that just came is PrEP- and people are using these things now, because they know the benefits [IDI, Sex Worker, District 2].

Conduct educational outreach visits

Education of AGYW was done during outreach programmes in community settings. Outreach-based education focused on the forms of GBV and its effects. Education was also provided on how to cope or respond to GBV:

Then for GBV services that are being provided, we educate cause aah we also have outreaches. Like there are times that we go in the field just to educate, after giving an education we usually expect a high turnout, it could be that people never had information pertaining to GBV or what GBV is [KII, One Stop Center, District 3].

Adapt and tailor services to the context

Deliver integrated HIV, GBV and SRH services at the health facility

In line with the Adolescent Health Strategy, some health facilities started providing integrated SRH, HIV, and GBV services. It was reported that providing services in one place allowed adolescents and young women to access various services during a single visit. Integrated services were perceived as appropriate as they provided an opportunity for addressing some of the interconnected healthcare needs those adolescents and young women had. For example, when adolescents sought pregnancy services, health workers advised them to do an HIV test as well as sexual and gender based violence services.

Already these programs are already integrated, I will give an example we don't work at weekend or may be at night, so in the ward like this morning so a child came who is 14 and already pregnant, so they came for antenatal services, so the officers there noticed that mmh, this child is young, so already they referred them to one stop centre and we captured that case and it was a case of defilement by a brother or cousin within the same home [KII, CSO, District 1].

Integrated services further enhanced safety and responsiveness, especially among AGYW who had experienced GBV, as they were often attended to in a timely manner:

When you go to these facilities, so even in terms of the other services, apart from -health education -– there are also issues of HIV testing, there are issues of STI testing also, testing and treatment, GBV because I -– the whole idea is to create these safe or responsive adolescent corners [KII, Local Authority, District 2].

Develop by-laws in the community to protect victims

One approach to safeguard victims and increase their agency to access services was through the formulation of by-laws. Community leaders were instrumental in developing by-laws that stipulated various forms of punishment for individuals who perpetrated gender-based violence. These by-laws played a crucial role in protecting adolescents from early pregnancies and marriages, as well as in preventing GBV by imposing fines on perpetrators. Establishing them significantly influenced the everyday governance of local reproductive health issues.

We had community participation who came up with their own strategies on how to address the GBV and hereby making some by-laws within their chiefdoms or in communities. Just to make sure that if somebody penetrates these guidelines then they will know how to handle it from that point of view. So those are things that the community themselves came up with [KII, Department of Health, District 2].

Relational lens

Implementation strategies under relational lens fell into two clusters: i) develop stakeholder interrelationships, and (ii) ue new funding. Each cluster contained a discrete strategy.

Develop stakeholder interrelationships

Builde a coalition of service providers through role specification

Relationships were developed among stakeholders involved in delivering HIV, GBV, and SRH services, such as health workers, police officers, staff from the Ministry of Education, NGOs, community health workers, and community leaders. To enhance collaboration or external linkages, roles and tasks among the stakeholders were clearly defined. The specified roles included information sharing, providing counselling, community engagement, and managing legal issues. Below is an example of how the roles were allocated among the stakeholders.

For GBV we have ZCCP, we have got WILDAF. CCP offers information, its KWATU, they have community workers who disseminate information about HIV/AIDS, SRH of course GBV, we have WILDAF who are dealing with access to justice, so like lawyers taking cases, making sure that cases reach in court, and then we've got of course the police of course VSU department which is also stationed here, we have the courts, we have the DC, the district commissioner also helps in issues of commissioning making sure that things are running smoothly and various ministries and departments of government [KII, CSO, District 2].

Conducting tasks in a coordinated manner facilitated adoption and delivery of services, as it reduced duplication. Defining tasks also supported the implementation process of HIV, SRH, and GBV services, as it helped stakeholders plan when and how to deliver the services.

The value is that there are certain times when you offer services to the same person so if you are coordinating then you offer services in a coordinated manner. It's not like you are doing it haphazardly, this one is doing this, no because you know from health these are the services that they are going to offer so once they are done with health you know the second step just like that [KII, Social Welfare Department, District 3].

The coordinated approach to service delivery, moreover, helped in mobilizing diverse efforts toward a common goal. This process facilitated creation of a common implementation agenda that had much more impactl than working in silos:

It will benefit the community because we are working towards one goal even if we are not doing HIV, but we support them, they are doing "test and treat", and we provide the platform to give the awareness through radio community so that… the one who is benefiting is the community. We run separate programs, but we meet somewhere. Let's say them they are doing test and treat then us we are supporting with sensitization which we are doing through radio and the community and the churches through various programs yeah [KII, CSO, District 1].

Linkages among stakeholders were also enhanced through strengthening referral systems among the stakeholders. Referrals increased acceptability among AGYW by facilitating easy access to HIV, SRH, and GBV services. Access to services was made easier; some clients were escorted to service units, and others were given referral forms or letters.

So, they provide services such as counselling, referral systems where you counsel the adolescents between the ages of 10 and 19 on HIV vices, on how to prevent HIV and they also offer services with the health facilities and where the CWACs access health services where they have adolescents' friendly corners. Medical services like where an abused child or an abused adolescent you take them to the hospital for them to access those medical services, it's a bit easy. [KII, Social Welfare Department, District 3].

Those who referred cases often followed or monitored progress. Follow-up helped in improving uptake and adherence to prescribed treatment and therapy. In cases of GBV, follow-up helped in protecting the affected AGYW from victimization by perpetrators or others.

Most of the cases which we have referred, they appear to be successful because we make a follow up, we make a follow up we follow the children, we find out, how did you move, because we work in conjunction with the health, we have eeh is it a child healthy, they call it a corner, a corner, girl child friendly corner, when we take them there, they usually counsel them and sometimes they will even give us a feedback [KII, Guidance Teacher, District 2].

Despite making strides in providing adolescent- and youth-friendly health services, some gaps remained. Some health workers did not treat clients well when the clients were referred or requested referral forms. Such poor treatment discouraged clients from completing the referral process or referring others to the services.

They are those health workers who behave rudely and would chase an adolescent from the facility [IDI, GBV Survivor, District 3].

Use new funding

Use cost-sharing to distribute the financial burden among relevant stakeholders

Sharing the implementation costs further promoted collaborative approaches to delivering HIV, GBV, and SRH services. Collaboration was also said to have helped in ensuring that resources were used in the right manner during the implementation process. Stakeholders reported that they were able to apportion implementation costs, thereby reducing duplication and waste of resources.

So the values have been like I have said you maximize on the little resources that you have, so you don't get to duplicate activities and I think it just helps in terms of like the NGO supports what the government is doing, we've had partners like Copper Rose I think they bought tents, they bought benches, they bought tables for the adolescents and all those things I think it helps in terms of leveraging on each other's strengths [KII, Victim Support Unit, District 2].

Collective action lens

Engaging consumers was the clutster implementation strategy under collective action. Three discrete strategies were documented: increasing demand using community networks, using mass media to share information, and intervening with patients to enhance uptake of services.

Engage consumers

Increase demand using community networks

Demand for HIV, GBV, and SRH information and services among AGYW was promoted by engaging community-based actors. The community workers supported other providers in sensitizing the community about HIV, GBV, and SRH services. Community welfare assistants (CWACs) were one of the community actors involved in creating demand.

Mmh, mostly the CWACs will go to the households to talk about what HIV is, how they can prevent themselves and usually they also talk to the adults, maybe the mother or the father or the guardian of than adolescents [KII, Social Welfare Department, District 3].

The involvement of community leaders proved worthwhile in increasing demand for services. Community leaders participated in sensitizing community members to the availability of various services. The community leaders used various spaces, such as church and community meeting spaces, to deliver health promotion and sometimes deliver some services. Participation of these community actors enhanced legitimacy of the outreach activities, as the leaders and community health workers were respected and trusted.

We have involved the community structures where we have the headmen, religious leaders and even the chiefs. I think as a district we had an opportunity to bring these groupings together were we analysed this situation [KII, Department of Health, District 2].

Use mass media to share information

AGYW were also informed about HIV, GBV, and SRH matters through the media. Various stakeholders conducted radio and television programmes on how to deal with HIV, GBV, and SRH matters, including the use and importance of adolescent- and youth-friendly health corners. Also, brochures were given out to community members:

We have brochures, we have radio discussions, and even TV stations so these are the programs that we use to disseminate these policies…. These are platforms that we use to ensure that this information reaches the intended target, and then of course as we are using the information of these youth friendly corners facilities that the schools, so these are the ways used to disseminate the information [KII, Department of Health, District 2].

AGYW narrated how access to such information helped them make decisions about when and where to access services, as one young woman explained:

Most of them access family planning services-because they have information. Family planning services are in different forms, there are pills and injectables. There are those for two months, three months, 2 years and five years. Depending on what works for that particular person then they will go for it [IDI, Sex Worker, District 3].

Intervene with patients to enhance uptake of services

Another dimension of the people-centered approach was providing a variety of family planning methods to meet the needs of AGYW. Health facilities try to stock several types of planning methods. Having a variety of methods provides opportunities for AGYW to choose appropriate methods. Many AGYW narrated that when they visited the health facilities, health workers would often explain the various family planning methods:

You go to the health facility, at the health facility they give family planning and asked me if I wanted condoms…The time they came for counselling they also explained to me about the same things, they explained to me that they have different –methods -—to protect themselves from pregnancy. [IDI, GBV Survivor, District 3].

Development of support groups for people living with HIV was one way of actualizing this integrated people-centred health. Through this approach, support groups were able to share their challenges and coping strategies and provide support to each other.

We have a support group, so we usually come, and we meet all the adolescents who are HIV positive, we meet, and we are able to talk about these things, it really helps [IDI, Living with HIV, District 2].

Critical perspective lens

In line with the critical perspective lens, we explored structural, social, and cultural factors that affected the implementation of GBV, HIV, and SRH services. This lens was useful in unearthing barriers to implementation, linked to histories of unequal power relations and decision-making power, driven by the socio-cultural context. These barriers cannot be separated from adolescents' and young peoples' reduced agency in society when it comes to SRH matters.

Socio-cultural barriers to effective health promotion strategies

Despite ongoing health promotion activities, certain cultural practices reduced girls' ability to access GBV services. Traditional teachings, such as the belief that being beaten by a husband is a sign of love, discouraged some affected adolescents and young women from reporting instances of violence to the appropriate service providers.

When it comes to culture; that would take me to when girls are growing, other traditions say when your husband beats you, don't come out and say, no this is the head of the house. Others say, because I am the wife I need to submit even when I don't feel like to submit that day, now because you are the wife whenever your husband wants to do that you have to submit. It is like you have no say in that marriage because you are the wife so even when you are coming in to tell them there is GBV, your rights are being violated they can't report because of that [KII, CSO, District 3].

Sometimes, young people hid cases, especially when the perpetrator was a breadwinner:

When it comes to GBV and accessing services; so, I think this is where we face a lot of problems, because you try to say something, someone will say you don't know what am going through in my house. If I report my husband, who is going to provide for me? …. [KII, CSO, District 3].

Stigma as a barrier

Stigmatization surrounding sexual and gender-based violence and HIV discouraged some AGYW from accessing services. Many of them feared accessing HIV services because of the association of positive status with promiscuity. This stigmatization undermined collective action in some cases, and those who were stigmatized tended to stop accessing services. One young person experienced such stigma right in their home:

Sometimes my young siblings would laugh and mock me – because of my HIV positive status – I normally feel bad when they do that but there is nothing I can do [IDI, Young Person Living with HIV, District 3].

Similarly, misconceptions and judgments surrounding use of SRH services reduced the agency of adolescents and other young people to seek HIV, GBV, and SRH services. For example, some AGYW were always reminded that use of contraception could promote promiscuity, and this affected their uptake of the services. Further, some traditional

and community leaders discouraged survivors of GBV from reporting matters to the court but instead resolved GBV cases outside court. In some cases, church counselling was preferred:

Even through these church leaders, they would rather not go to the police, but they go for counselling at the church, yes, also to the groups that provide similar services [IDI, Sex Worker, District 2].

Gender as a barrier

In addition, the lack of available female or young health workers affected accessibility of services in some health facilities. Some adolescent girls felt shy approaching male or elderly health workers. Some health facilities did not have enough spaces for adolescents to freely access services. Inadequate availability of such spaces in some health facilities undermined confidence and agency among adolescents to access services.

So, the major gap is space, it's not every facility maybe I can say very few facilities where we have adolescent and youth friendly health space available at a facility some of them you find they end up meeting under trees even here where we are it's just that it's in the morning sometimes in the afternoon they meet under that tree [KII, CSO, District 3].

Misinterpretation of sexual and reproductive health rights as a barrier

The diverse partners lacked a unified understanding of sexual and reproductive health rights for adolescent- and youth-friendly services, indicating a need to increase sensitization efforts. Although efforts were made to increase accessibility of services, primarily in the health care, school, and community settings, the lack of staff training on delivering adolescent- and youth-friendly health services in other contexts still affected delivery and access to HIV, SRH, and GBV information and services. For example, one adolescent female sex worker who was abused reported that some police officers refused to assist her because of her involvement in sex work:

Me what I will say like they treated me at the police station I wasn't happy because number 1, the time I went to report…then I said as a complainant even him the defendant they interviewed him then they said I am just a prostitute, she just wants to implicate someone she is the one with problems that's what the police told me [IDI, Sex Worker, District 1].

This case underscores the limited agency associated with sex work and other behaviors deemed unacceptable by community members, and how these factors impact the safety of adolescents and young people. In situations where laws have been violated, law enforcers are expected to adhere to the law rather than concentrating on the nature of the sex work.

Discussion

The study aimed to document discrete implementation strategies guiding the implementation of HIV, GBV, and SRH services for AGYW in community health systems in Zambia. It builds on the work by Powell et al(28) and Waltz et al(34) on the ERIC compilation of implementation strategies by specifying the discrete strategies within a community health system in a low-resource setting. Specifying the ERIC implementation strategies in this context was important, as the strategies were developed in high-income contexts and largely applicable in clinical settings (US or North American Setting)(28). The specification process was guided by the recently developed CHS lenses: programmatic, relational, collective action, and critical (25).

Specification of the implementation strategies within CHS lenses adds value in many ways to our understanding of implementation strategies being used in community settings. First, the programmatic lens demonstrates the interdependence of implementation strategies of GBV, HIV, and SRH services in community health systems targeting AGYW (25). For example, implementation strategies such as increasing health facilities and building capacity of health workers to deliver adolescent health services enhance the adoption and delivery of adolescent-friendly and integrated HIV, GBV and SRH services in communities and health facilities. This interaction or interdepennce best illustrates the understanding of CHS as a complex, interrelated, and adaptive system embedded in other social processes and formal health systems (25). Understanding this interaction when designing and implementing strategies is vital, as the nature and form of interdepence may shape implementation processes in diverse ways(25). This information may also allow or guide implementing partners to adopt a systems-thinking approach during development and implementation. The systems approach can strengthen implementation processes by helping stakeholders to identify both intended and unintended barriers and outcomes, as well as to develop locally tailored solutions through careful, iterative, and systematic consideration of interactions between implementation strategies(36, 37).

Second, relational implementation strategies, which include building a coalition of service providers and cost-sharing among stakeholders, promote community-based efforts by promoting meaningful interaction during the implementation process. Such interactions can facilitate adaptation of services to the local context through mutual consultations among stakeholders (38–40). In this study, examples of adaptations included delivery of integrated and adolescent-friendly HIV, GBV, and SRH services. Further, relational strategies could enhance implementation processes by providing an opportunity to accommodate diverse actors, interests, and expressions of power that characterize the CHS(19, 20, 25, 31). Relational approaches can support adoption and sustainability of strategies by promoting shared communication and understanding of implementation problems and increased cohesion (38, 41).

Third, the collective action lens strategies could promote implementation by strengthening community-engaged dissemination and implementation processes. In this study, these processes included use of community networks, actors, and mass media to share information or create demand for HIV, SRH, and GBV services. Other studies have also shown that use of community-based actors and structures in delivering and disseminating services can enhance adoption and acceptability of services by promoting their relevance and legitimacy(42–44). Further, community-engaged dissemination and implementation processes can also improve penetration and sustainability by facilitating or enabling co-production and co-learning among various implementing partners (19, 20, 25, 31). This study demonstrated co-production through instances such as community involvement in developing by-laws and support groups for people living with HIV. These locally coordinated actions, such as support groups for people living with HIV, are often the ultimate triggers of sustainablility because they build on local resources(16, 24, 45, 46).

However some critical socio-cultural, social economic and local political factors affect implementation of HIV, GBV, and SRH for AGYW (critical lens). For example, some community leaders discourage reporting of GBV cases to the police, as they feel such actions can undermine their power. Others could not report cases because the perpetrators are breadwinners. Gender and sexual norms, including social stigmatization, also affect access to HIV and SRH services. In line with the critical lens, such hidden power relations, norms, and values can undermine the ability of some AGYW to access services in some communities. These findings are in line with other studies in Zambia, which have shown that many social cultural factors affect the ability of adolescents and young people to seek SRH services(9, 10, 14, 46, 47). To enhance implementation and reduce further marginalization of AGYW, it is important

to uncover wider structural systems that worsen inequalities in implementation processes (10). Thus, it is vital to adopt a critical perspective during implementation processes, as it facilitates analysis or recognition of injustices they may have internalized as ‘natural’ (25).

Limitations and strengths of the study

Devising generic strategies was complex as HIV, GBV, and SRH are public health concerns linked together in a complex cycle. To address this complexity, the team for data analysis and writing consisted of implementers from the Ministry of Health and researchers in three public health domains. However, generalization of the strategies to other LMICs is limited by the composition of the research team. Most of its members were from Zambia, with a few from the USA. However, by systematically highlighting context-specific implementation strategies informed by the ERIC compilation of implementation strategies and community health systems lenses, this work may provide a basis for analytic generalizations that could yield useful insights, not only to the Ministry of Health in Zambia but also to other LMICs. We also aimed to strengthen transferability by providing a rich description of the CHS implementation strategies and the procedures of analysis, and by providing quotations in the text representing a variety of informants(37, 48). The complementary backgrounds and qualifications of the researchers (implementation science, adolescent health, SRH, anthropology, and public health) helped in improving trustworthiness of data and analysis and interpretation. As a follow up, we recommend conducting a mixed-methods study in Zambia; it should link the CHS implementation strategies to implementation outcomes.

Conclusion

The study used the Expert Recommendations for Implementing Change (ERIC) compilation of implementation strategies to specify discrete strategies used in delivering HIV, GBV, and SRH services for AGYW in community health systems. It fills an important gap, as the ERIC implementation strategies were developed in high-income settings and would be more applicable in clinical settings, given the focus of the ERIC project and the composition of the expert panel that developed the strategies.

A number of the ERIC-related implementation strategies (such as increasing new health facilities, developing and using educational materials, increasing capacity of staff to deliver services, building a coalition of service providers, and using mass media to share information) were used to deliver HIV, GBV, and SRH services in community health systems. Specification of implementation strategies according to the CHS lenses adds value to implementation strategies used in community settings by bringing out the importance of relational approaches in supporting meaningful interaction during the implementation processes. This categorization further illustrates the relevance of collective-action implementation strategies in strengthening community-engaged dissemination and implementation of HIV, SRH, and GBV services. To further enhance implementation processes, it is important to consider structural and socio-cultural barriers, such as gender and sexual norms, when designing and implementing strategies for GBV, HIV, and SRH services in community health systems targeting AGYW.

Declarations

Ethics approval and consent to participate

Ethical clearance for this study was sought from the University of Zambia Biomedical Research Ethics Committee (UNZABREC), Reference number 3003-2022. Permission to conduct the study was obtained from Zambia National

Health Research Authority and Ministry of Health. The study was carried in line the Helsinki Declaration. Informed consent to participate in the study was obtained from participants.

Consent for publication

Not applicable.

Availability of data and materials

The datasets during and/or analysed during the current study are available from the corresponding author on reasonable request.

Competing interests

The authors declare that they have no competing interests.

Funding

We acknowledge the financial support from the Global Fund.

Authors' contributions

All the authors contributed towards the design of the study including the data collection tools and collecting data. JMZ, PM, AH, MM, HH, MPC, TM, MB participated in analysing of the results of the study. All the authors contributed towards the revision of analysis of the results, the draft manuscript, and approved the final manuscript.

Acknowledgements

We would like to extend our sincere gratitude to the study participants for their time and valuable insight/input during the interviews.

References

1. Zulu JM, Goicolea I, Kinsman J, Sandøy IF, Blystad A, Mulubwa C, et al. Community based interventions for strengthening adolescent sexual reproductive health and rights: How can they be integrated and sustained? A realist evaluation protocol from Zambia. Reprod Health. 2018;15(1):1–8.
2. Guedes A, Bott S, Cuca Y. Integrating systematic screening for gender-based violence into sexual and reproductive health services: results of a baseline study by the International Planned Parenthood Federation, Western Hemisphere Region. Int J Gynecol Obstet [Internet]. 2002 Sep 1 [cited 2023 Nov 3];78:S57–63. Available from: https://onlinelibrary.wiley.com/doi/full/10.1016/S0020-7292%2802%2900045-0
3. Kok MC, Kakal T, Berhanu Kassegne A, Hidayana IM, Munthali A, Menon JA, et al. RESEARCH Open Access Drivers of child marriage in specific settings of Ethiopia, Indonesia, Kenya, Malawi, Mozambique and Zambia-findings from the Yes I Do! baseline study. [cited 2023 Oct 29]; Available from: http://creativecommons.org/licenses/by/4.0/.TheCreativeCommonsPublicDomainDedicationwaiver
4. Wado YD, Bangha M, Kabiru CW, Feyissa GT. Nature of, and responses to key sexual and reproductive health challenges for adolescents in urban slums in sub-Saharan Africa: A scoping review. Reprod Health. 2020;17(1).

5. Subramanian S, Namusoke-Magongo E, Patrick Edwards ·, Atujuna M, Chimulwa · Teddy, Dow D, et al. Integrated Health Care Delivery for Adolescents Living with and at Risk of HIV Infection: A Review of Models and Actions for Implementation. AIDS Behav [Internet]. 2023 [cited 2023 Nov 3];27. Available from: https://doi.org/10.1007/s10461-022-03787-2
6. Mayhew SH, Hopkins J, Warren CE. Building integrated health systems: lessons from HIV, sexual and reproductive health integration Editorial. 2017;32:1–5.
7. Ghanotakis E, Mayhew S, Watts C. Tackling HIV and gender-based violence in South Africa: how has PEPFAR responded and what are the implications for implementing organizations? [cited 2023 Nov 3]; Available from: https://academic.oup.com/heapol/article/24/5/357/586504
8. Mutemwa R, Mayhew S, Colombini M, Busza J, Kivunaga J, Ndwiga C. Experiences of health care providers with integrated HIV and reproductive health services in Kenya: A qualitative study. BMC Health Serv Res [Internet]. 2013 Jan 11 [cited 2023 Nov 3];13(1):1–10. Available from: https://bmchealthservres.biomedcentral.com/articles/10.1186/1472-6963-13-18
9. Zulu JM, Kinsman J, Hurtig AK, Michelo C, George A, Schneider H. Integrating community health assistant-driven sexual and reproductive health services in the community health system in Nyimba district in Zambia: mapping key actors, points of integration, and conditions shaping the process. [cited 2023 Nov 9]; Available from: https://doi.org/10.1186/s12978-019-0788-4
10. Mulubwa C, Hurtig AK, Zulu JM, Michelo C, Sandøy IF, Goicolea I. Combining photo-elicitation and discourse analysis to examine adolescents' sexuality in rural Zambia. Int J Equity Health [Internet]. 2021 [cited 2023 Nov 9];21:60. Available from: https://doi.org/10.1186/s12939-022-01662-z
11. Zulu, J. M., Goicolea, I., Kinsman, J., Sandøy, I. F., Blystad, A., Mulubwa, C., … Hurtig AK. Community based interventions for strengthening adolescent sexual reproductive health and rights: how can they be integrated and sustained? A realist evaluation protocol from Zambia. Reprod Health. 2018;15(1):145.
12. Farahani M, Radin E, Saito S, Sachathep KK, Hladik W, Voetsch AC, et al. Population Viral Load, Viremia, and Recent HIV-1 Infections: Findings from Population-Based HIV Impact Assessments (PHIAs) in Zimbabwe, Malawi, and Zambia. J Acquir Immune Defic Syndr [Internet]. 2021 Aug 1 [cited 2024 Jan 10];87:S81–8. Available from: https://journals.lww.com/jaids/fulltext/2021/08011/population_viral_load,_viremia,_and_recent_hiv_1.14.aspx
13. Ministry of Health. The Health Management Information system of the Zambian Ministry of Health. Lusaka; 2023.
14. Silumbwe A, Nkole T, Munakampe MN, Milford C, Cordero JP, Kriel Y, et al. Community and health systems barriers and enablers to family planning and contraceptive services provision and use in Kabwe District, Zambia. BMC Health Serv Res. 2018;18(1):1–18.
15. Rapid assessment tool for Sexual & reproductive HealtH and Hiv linkageS a generic guide disclaimer. 2009;
16. Helen Schneider & Uta Lehmann. From Community Health Workers to Community Health Systems: Time to Widen the Horizon? Heal Syst Reform. 2016;2(2):112–8.
17. Scott K, Beckham SW, Gross M, Pariyo G, Rao KD, Cometto G, et al. What do we know about community-based health worker programs? A systematic review of existing reviews on community health workers. Human Resources for Health. 2018.
18. George AS, LeFevre AE, Schleiff M, Mancuso A, Sacks E, Sarriot E. Hubris, humility and humanity: Expanding evidence approaches for improving and sustaining community health programmes. BMJ Glob Heal. 2018;

19. Maritim P, Chewe M, Munakaampe MN, Silumbwe A, Sichone G, Zulu JM. Applying community health systems lenses to identify determinants of access to surgery among mobile & migrant populations with hydrocele in Zambia: A mixed methods assessment. PLOS Glob Public Heal [Internet]. 2023 Jul 18 [cited 2023 Nov 3];3(7):e0002145. Available from: https://journals.plos.org/globalpublichealth/article?id=10.1371/journal.pgph.0002145
20. Zulu JM, Maritim P, Silumbwe A, Halwiindi H, Mubita P, Sichone G, et al. Unlocking Trust in Community Health Systems: Lessons From the Lymphatic Filariasis Morbidity Management and Disability Prevention Pilot Project in Luangwa District, Zambia. Int J Heal Policy Manag [Internet]. 2022 Jan 1 [cited 2023 Oct 16];11(1):80. Available from: /pmc/articles/PMC9278397/
21. Agarwal S, Kirk K, Sripad P, Bellows B, Abuya T, Warren C. Setting the global research agenda for community health systems: Literature and consultative review. Human Resources for Health. 2019.
22. Schneider H. The Governance of National Community Health Worker Programmes in Low-and Middle-Income Countries: An Empirically Based Framework of Governance Principles, Purposes and Tasks. Int J Heal Policy Manag. 2018;x(x):1–10.
23. Tulenko K, Møgedal S, Afzal MM, Frymus D, Oshin A, Pate M, et al. Community health workers for universal health-care coverage: from fragmentation to synergy. Bull World Health Organ. 2013;
24. Michelo C, Hurtig AK, Schneider H. Working Towards Inclusive, Socially Accountable and Resilient Community Health Systems: An Introduction to a Special Issue. Int J Heal Policy Manag. 2022;11(1):1–4.
25. Schneider H, Olivier J, Orgill M, Brady L, Whyle E, Zulu J, et al. The Multiple Lenses on the Community Health System: Implications for Policy, Practice and Research. Int J Heal Policy Manag. 2022;11(Special Issue):9–16.
26. Proctor EK, Powell BJ, McMillen JC. Implementation strategies: Recommendations for specifying and reporting. Implement Sci. 2013;8(1).
27. Proctor EK, Bunger AC, Lengnick-Hall R, Gerke DR, Martin JK, Phillips RJ, et al. Ten years of implementation outcomes research: a scoping review. Implement Sci [Internet]. 2023 Dec 1 [cited 2023 Oct 16];18(1). Available from: /pmc/articles/PMC10367273/
28. Powell BJ, Waltz TJ, Chinman MJ, Damschroder LJ, Smith JL, Matthieu MM, et al. A refined compilation of implementation strategies: Results from the Expert Recommendations for Implementing Change (ERIC) project. Implement Sci. 2015;10(1).
29. Huang KY, Kumar M, Cheng S, Urcuyo AE, Macharia P. Applying technology to promote sexual and reproductive health and prevent gender based violence for adolescents in low and middle-income countries: digital health strategies synthesis from an umbrella review. BMC Health Serv Res [Internet]. 2022 Dec 1 [cited 2023 Nov 3];22(1):1–27. Available from: https://bmchealthservres.biomedcentral.com/articles/10.1186/s12913-022-08673-0
30. George AS, Scott K, Mehra V, Sriram V. Synergies, strengths and challenges: findings on community capability from a systematic health systems research literature review. BMC Health Serv Res. 2016;16:47–59.
31. Zulu JM, Chavula MP, Silumbwe A, Munakampe MN, Mulubwa C, Zulu W, et al. Exploring Politics and Contestation in the Policy Process: The Case of Zambia's Contested Community Health Strategy Short Communication. Int J Heal Policy Manag [Internet]. 2022 [cited 2023 Nov 3];11(1):24–30. Available from: https://ijhpm.com
32. Proctor E, Silmere H, Raghavan R, Hovmand P, Aarons G, Bunger A, et al. Outcomes for implementation research: Conceptual distinctions, measurement challenges, and research agenda. Adm Policy Ment Heal Ment

Heal Serv Res. 2011;38(2):65–76.

33. Braun V, Clarke V. Using Thematic Analysis in Psychology. Qual Res Psychol. 2006;3(May 2015):77–101.
34. Waltz TJ, Powell BJ, Matthieu MM, Damschroder LJ, Chinman MJ, Smith JL, et al. Use of concept mapping to characterize relationships among implementation strategies and assess their feasibility and importance: Results from the Expert Recommendations for Implementing Change (ERIC) study. Implement Sci. 2015;10(1).
35. Tetui M, Hurtig AK, Jonsson F, Whyle E, Zulu J, Schneider H, et al. Strengthening Research and Practice in Community Health Systems: A Research Agenda and Manifesto Short Communication. Kerman Univ Med Sci [Internet]. 2022 [cited 2023 Nov 9];11(1):17–23. Available from: https://ijhpm.com
36. Atun R. Health systems, systems thinking and innovation. [cited 2023 Nov 10]; Available from: https://academic.oup.com/heapol/article/27/suppl_4/iv4/620794
37. Zulu JM, Hurtig AK, Kinsman J, Michelo C. Innovation in health service delivery: integrating community health assistants into the health system at district level in Zambia. BMC Health Serv Res. 2015;15(1):38.
38. Bartley L, Metz A, Fleming WO. What implementation strategies are relational? Using Relational Theory to explore the ERIC implementation strategies. Front Heal Serv. 2022;2.
39. Metz A, Jensen T, Farley A, Boaz A. Is implementation research out of step with implementation practice? Pathways to effective implementation support over the last decade. https://doi.org/101177/26334895221105585 [Internet]. 2022 Jun 6 [cited 2024 Jan 10];3:263348952211055. Available from: https://journals.sagepub.com/doi/full/10.1177/26334895221105585
40. Metz A, Jensen T, Farley A, Boaz A, Bartley L, Villodas M. Building trusting relationships to support implementation: A proposed theoretical model. Front Heal Serv. 2022;2:894599.
41. Metz A, Kainz K, Boaz A. Intervening for sustainable change: Tailoring strategies to align with values and principles of communities. Front Heal Serv. 2023;2:959386.
42. Schlechter C, Fiol G Del, … CL. Application of community–engaged dissemination and implementation science to improve health equity. Prev Med Reports [Internet]. 2021 [cited 2024 Jan 10];24:101620. Available from: https://www.sciencedirect.com/science/article/pii/S2211335521003119
43. Nápoles, A. M., & Stewart AL. Transcreation: an implementation science framework for community-engaged behavioral interventions to reduce health disparities. BMC Health Serv Res [Internet]. 2018 [cited 2024 Jan 10];18(1):1–15. Available from: https://bmchealthservres.biomedcentral.com/articles/10.1186/s12913-018-3521-z
44. Gopalan, G., Bunger, A. C., & Powell BJ. Skills for developing and maintaining community-partnerships for dissemination and implementation research in children's behavioral health: Implications for research infrastructure and training of early career investigators. Adm Policy Ment Heal Ment Heal Serv Res. 2020;47:227–43.
45. Schneider H, Zulu JM, Mathias K, Cloete K, Hurtig AK. The governance of local health systems in the era of Sustainable Development Goals: Reflections on collaborative action to address complex health needs in four country contexts. BMJ Glob Heal. 2019;
46. Zulu JM, Blystad A, Haaland MES, Michelo C, Haukanes H, Moland KM. Why teach sexuality education in school? Teacher discretion in implementing comprehensive sexuality education in rural Zambia. Int J Equity Health. 2019;18(1):1–10.
47. Chavula MP, Zulu JM, Goicolea I, Hurtig AK. Unlocking policy synergies, challenges and contradictions influencing implementation of the Comprehensive Sexuality Education Framework in Zambia: a policy

analysis. Heal Res Policy Syst [Internet]. 2023 Dec 1 [cited 2023 Oct 16];21(1). Available from: /pmc/articles/PMC10500755/

48. Patton MQ. Enhancing the quality and credibility of qualitative analysis. Health Serv Res [Internet]. 1999 Dec [cited 2024 Jan 10];34(5 Pt 2):1189. Available from: /pmc/articles/PMC1089059/?report = abstract