UMEÅ UNIVERSITY

Battlefront Collaboration

The Role of Collaborative Governance in the Delivery of the Comprehensive Sexuality Education Framework in Zambia

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“Whatsoever your hand finds to do, do it with all your might, for there is no work, nor device, nor knowledge, nor wisdom in the grave where you are going.”

(Ecclesiastes 9:10)

We dreamed it, believed it, and made it happen.

Thank you all for making it possible.

Zikomo!

Prologue: Why this subject?

Throughout my life—during primary, secondary, tertiary education, and practical experiences—I have actively engaged in sexual, reproductive health and rights (SRHR). This account reflects my experiences with SRHR at different stages, highlighting gaps and opportunities for SRHR integration for young people. It also illustrates how my involvement in SRHR and collaborations shaped the path to this doctoral project.

In my early primary education at Kasamba School in rural Chisamba, in the Central Province of Zambia, I first learned about sexuality from my peers. Being the youngest in my peer group made it difficult for me to understand complex concepts about sex. I remember that when I was seven years old, an older boy asked my cousin and me whether a girl named Bridget (pseudonym) had reached puberty. He asked in a local language (Bemba): *Bushe Bridget aliwa icusungu?* meaning, "Has Bridget started menstruating or reached puberty?" My cousin Robert confidently answered, "Yes, she has." I naively responded, "What is puberty or menstruation?" Julius (pseudonym), the oldest boy, explained it as "falling" and demonstrated by collapsing onto the floor. I was completely unaware of the truth; I believed him because the local word for menstruation connotes “falling."

In my 5th grade, I came home excited after learning about astronauts going to the moon. I told my grandmother I wanted to go to the moon, too. She responded harshly, and I quickly ran away. Later, I discovered that "going to the moon" in the local context meant menstruation, and my grandmother was upset because discussing it was considered taboo. My grandmother's reactions show a lack of appreciation for the delivery of sexuality education to boys because of the culture.

In my primary school, sex education was not deliberately included in the school curriculum. In grades 6 and 7, the school distributed storybooks on HIV prevention, but the information was limited to HIV and condom use. Topics like gender, contraceptives, menstruation, and life skills were absent. The only thing I can remember was the headteacher and another teacher who tried to teach in the 7th grade of my primary school.

Furthermore, I recall when the headteacher visited our class and asked if we had read the books he distributed. When we said no, he punished us by making us run a long distance. Afterwards, he asked the same question again, and I was the only one who raised my hand. My classmates were likely afraid to admit they had read the book because he might ask them to explain what they had learned. Discussing HIV prevention with an older male teacher, whom we saw as a father figure, was intimidating and socially challenging. Further, in 7th grade, our teacher attempted to initiate a discussion about menstruation. He asked the class to explain how girls "go to the moon." The room fell silent until one girl tried to explain. However, her explanation was filled with local metaphors, leaving me confused. After class, I approached my peers, who finally explained the concept clearly. This was when I understood this concept. Finally, during primary education, it is also common

for some girls to drop out of school due to pregnancy or getting married. This was normal, and there were no efforts to engage them to return to school.

When I advanced to secondary education at Highridge High School in Kabwe, I joined an anti-HIV/AIDS club. Attendance was optional, and only a few pupils participated. The discussions focused mainly on HIV prevention, with no emphasis on pregnancy prevention, child marriages, or gender issues. NGOs occasionally visited the school to discuss HIV and promote youth-friendly health services, but the lack of referral forms and the distance to health centres made it challenging for students to access further assistance.

In 10th grade, I was trained as a peer educator by an NGO (Youth Alive). The training emphasised abstinence as the primary prevention method. While this approach worked for me, many students were already sexually active. Some dropped out of school due to pregnancy or early marriage. The knowledge I gained from school, magazines, and books shared by my father played a significant role in shaping my understanding. I began asking myself critical questions like, "If I engage in sexual activity, am I ready to be a parent? What about my education and future?"

When I completed high school, I had several possible career paths in mind, including becoming a pastor, joining the military, working in health, or pursuing something related to social development or teaching. After some reflection, I set aside the idea of pastoral work and decided to enroll in military school. However, during the enrolment process, I was strongly advised to consider going to university instead, a suggestion I initially found disappointing.

Despite my reluctance, I eventually left military school and redirected my efforts toward applying to university. My first choice was to study natural sciences with the long-term ambition of entering medical school. Unfortunately, I could not afford the additional fees required for the aptitude test. This financial limitation compelled me to shift to a programme that was more accessible at the time, leading me to apply for—and later be accepted into—a bachelor's degree in Adult Education.

Once admitted to the University of Zambia, my academic journey naturally expanded into community engagement and health promotion. I joined the HIV/AIDS club and became a peer educator through the SHARE programme. As a student leader in the hostels, I collaborated with health facilities and NGOs to stock condoms and disseminate essential health information. However, the demand for condoms was consistently high, and supplies were often depleted quickly.

During university vacation periods, I undertook internships and short-term jobs that deepened my understanding of community engagement and the interconnectedness of issues such as HIV, poverty, and cultural practices. My involvement with the Anti-HIV/AIDS club at Family Health Trust was particularly formative. I visited schools to discuss sexual and reproductive health

and rights (SRHR), although distributing condoms was prohibited in those settings. Later, working with Africare Zambia and the Kansanshi Foundation further strengthened my skills in participatory approaches, particularly in teaching and HIV prevention. These experiences not only broadened my practical knowledge but also reinforced my commitment to social development, community engagement, and evidence-based health promotion.

While working with Oxfam (Village Water Zambia) on stakeholder collaboration, I learned about addressing gender mainstreaming, menstrual hygiene management, and water services in SRHR interventions. Later on, I was employed as an assessor and Trainer at Miami University in collaboration with the University of Zambia. In this research, I identified teenage pregnancies, intimate partner violence, and child marriages as major contributors to HIV among adolescents. Prof Jones, the principal investigator, mentored me in qualitative analysis, report writing, and stakeholder engagement.

These experiences inspired me to pursue a master's degree in public health, focusing on how teachers and community workers implement SRHR education in schools. My dissertation emphasised the need to strengthen governance structures to deliver SRHR services in Zambia effectively. After graduating in 2019, I applied for a scholarship to study collaborative governance in maternal and child health services at Umeå University, though I was unsuccessful. Later, I was delighted when Prof Anna-Karin Hurtig, Prof Joseph Zulu, and Prof Charles Michelo reached out to ask whether I might be interested in pursuing a PhD on comprehensive sexuality education (CSE) using the same governance framework. This was exciting news for me, as the potential project aligned closely with my master's dissertation and my research experiences in adolescent health, HIV, and SRHR. I was thrilled to embark on this next phase of my journey, building on these experiences to contribute meaningfully to advancements in SRHR.

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Abstract

Background: In 2014, Zambia adopted the Comprehensive Sexuality Education (CSE) framework to promote sexual reproductive health and rights (SRHR) in schools. Effective CSE implementation requires multisectoral collaboration with diverse government sectors (education, health, etc.), the community, traditional, and religious leaders. However, research on CSE with a focus on collaboration remains scarce, especially in Sub-Saharan Africa. The overall aim of this thesis was to explore the delivery of the CSE framework in Zambia, with a particular focus on collaborative governance.

Methods: This study employed both a systematic review and a qualitative case study design. Firstly, the systematic review used the thematic analysis to identify factors influencing the integration of CSE into the education system in low- and middle-income countries (Sub-study I). Secondly, the qualitative case study aimed to understand how national policy frameworks (Sub-study II), provincial multisectoral collaboration (Sub-study III), and community system dynamics (Sub-study IV) interact to shape the delivery of CSE in Zambia. We collected data using qualitative interviews with diverse stakeholders representing government, NGOs, religious, and traditional leadership. Qualitative content analysis and reflexive thematic analysis were used as analytical approaches.

Findings: Key factors influencing the integration of CSE into education systems included the nature of the problem, actors' perceptions, attributes of the intervention, adopting systems, and broader system characteristics. While Zambia's policy environment supports CSE, contradictions—such as restrictions on contraceptive delivery in schools and social norms that promote child marriage—undermine effective implementation. In addition, the perceived inclusion of abortion and LGBTQ+ rights-related topics increases stakeholders' resistance towards the implementation of CSE. Furthermore, factors influencing multisectoral collaboration in implementing CSE at the provincial level included a supportive provincial structure that facilitated stakeholder engagement. Nevertheless, this structure was weakened by the exclusion of key groups, limited transparency, and the bypassing of institutional mandates. The study also highlights factors that influence collaborative community health system (CHS) pathways and the barriers to implementing CSE in rural Zambia. Stakeholders from the school, community, health and police sectors participated in facilitating collective delivery of CSE across settings. However, social norms contributed to community resistance in addressing SRHR-related challenges, including child abuse, early marriages, and unintended pregnancies.

Conclusion: Effective delivery of the CSE framework in Zambia requires a comprehensive multisectoral collaborative governance across all levels. However, this requires strengthening institutional mandates, improved coordination, and collective action in promoting SRHR services, including abolishing some harmful local by-laws that hinder promoting SRHR efforts.

Keywords: Comprehensive Sexuality Education, Collaborative Governance, Principled Engagement, Shared Motivation, Capacity For Joint Action.

Abstract in Chinyanja

Mbiri ya ntchito: Mu 2014, Zambia idavomereza ndondomeko ya Maphunziro okhudza Zogonana (Comprehensive Sexuality Education: CSE) kuti ithandize kukweza thanzi la chibadwidwe ndi ufulu wa ana ndi achinyamata (SRHR) m'sukulu. Kuti CSE igwire bwino ntchito, zimafuna mgwirizano wa magawo osiyanasiyana a boma (monga zamaphunziro, zaumoyo, ndi ena), anthu a m'mudzi, atsogoleri achikhalidwe, komanso atsogoleri azipembedzo. Komabe, kafukufuku wokhudza CSE wokhudzana ndi mgwirizano ukusakabe, makamaka ku Sub-Saharan Africa. Cholinga chachikulu cha thesis iyi chinali kufufuza momwe CSE ikuchitidwira ku Zambia, makamaka potanthauzira ulamuliro wogwirizana (collaborative governance).

Njira za kafukufuku: Kafukufukuyu adagwiritsa ntchito systematic review (kuwunika mwadongosolo) ndi kafukufuku wa qualitative case study design. Choyamba, kuwunika mwadongosolo kunagwiritsa ntchito thematic analysis (kusanthula mitu) kuti apeze zinthu zomwe zimakhudza kuphatikizidwa kwa CSE mu dongosolo la maphunziro m'maiko otsika ndi apakati pa chitukuko (Sub-study I). Kenako, qualitative case study inali yolingalira kumvetsa momwe malamulo a boma (Sub-study II), mgwirizano wa magawo osiyanasiyana pa mlingo wa chigawo (Sub-study III), komanso machitidwe a m'madera a m'mudzi (Sub-study IV) zimagwirizanirana popanga CSE ku Zambia. Deta idasonkhanitsidwa pogwiritsa ntchito kuyankhulana kwa mtundu wa qualitative (qualitative interviews) ndi omwe amayimira boma, NGOs, atsogoleri azipembedzo, komanso atsogoleri achikhalidwe. Kusanthula kwa zolemba (qualitative content analysis) limodzi ndi reflexive thematic analysis zidagwiritsidwa ntchito pakupanga kusanthula.

Zotsatira: Zinthu zazikulu zomwe zinapezeka kuti zimakhudza kuphatikizidwa kwa CSE mu dongosolo la maphunziro zinkaphatikizapo: momwe vutoli limvelekere, mmene omwe akhudzidwa amaonera pulogalamuyi, khalidwe la pulogalamu ya CSE, momwe machitidwe a boma amalandirira ndondomeko, komanso mikhalidwe ya dongosolo lonse la maphunziro. Ngakhale Zambia ili ndi malamulo othandiza CSE, kusiyana kwa malamulo—kuphatikizapo zoletsa monga kusapereka mankhwala oletsa mimba m'masukulu komanso miyambo yolimbikitsa ukwati wa ana—zimalepheretsa kuchitidwa bwino kwa CSE. Komanso, malingaliro oti CSE ili ndi mitu yokhudza kuchotsa mimba (abortion) kapena LGBTQ+ zimayambitsa kukana kuchokera kwa omwe akhudzidwa. Kuphatikizapo, zinthu zomwe zimakhudza mgwirizano wa magawo osiyanasiyana pa mlingo wa chigawo zinkaphatikizapo dongosolo labwino lomwe limathandiza kutenga nawo mbali kwa omwe akhudzidwa. Komabe, dongosololi limafooka chifukwa chosaphatikiza magulu ena ofunika, kusowa kwa kuwonekera kwa ntchito, komanso kuphwanya maudindo a mabungwe a boma. Kafukufukuyu awonetsanso zinthu zomwe zimakhudza njira za mgwirizano wa okhudzidwa a m'mudzi komanso zopinga pakukhazikitsa CSE kumudzi. Anthu ochokera m'sukulu, m'magulu a m'mudzi, zaumoyo, komanso apolisi anali kutenga nawo mbali polimbikitsa ntchito za CSE. Komabe, miyambo ya m'mudzi inali imodzi mwa zinthu zomwe zimayambitsa kukana kuthana ndi mavuto a SRHR monga nkhanza za ana, ukwati wa msanga, ndi mimba zosafunika.

Pomaliza: Kuti CSE igwire bwino ntchito ku Zambia, zikufunika mgwirizano wamphamvu pakati pa magawo onse kuyambira pa mlingo wa boma mpaka kumudzi. Zikufunikanso kulimbitsa maudindo a mabungwe, kusintha mgwirizano, ndi kulimbikitsa ntchito za limodzi pothandiza SRHR—kuphatikizapo kuchotsa malamulo ndi miyambo yowononga yomwe imalepheretsa kukwezedwa kwa SRHR.

Mawu ofunikira: Maphunziro okhudza Zogonana, ulamuliro wogwirizana, kutenga nawo mbali motsatira mfundo, kugawana zolimbikitsa, mphamvu yochitira zinthu limodzi.

Abbreviations

ADH-TWG	Adolescent Health Technical Working Group
AIDS	Acquired Immune Deficiency Syndrome
ASRHR	Adolescent Sexual and Reproductive Health and Rights
CHS	Community Health System
CHWs	Community Health Workers
CSE	Comprehensive Sexuality Education
GBV	Gender-Based Violence
ICPD	International Conference on Population and Development
LMICs	Low- and Middle-Income Countries
LGBTQ+	Lesbian, Gay, Bisexual, Transgender, Queer, plus other
MDGs	Millennium Development Goals
MoE	Ministry of Education
MoH	Ministry of Health
NGOs	Non-Governmental Organisations
SDGs	Sustainable Development Goals
SRHR	Sexual and Reproductive Health and Rights
STIs	Sexually Transmitted Infections
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
WHO	World Health Organization

Glossary

Adolescent: Adolescence is a period between the ages of 10 to 20 years (youth more broadly includes young people aged 10–24 years) [1].

Child: A child is defined by WHO as a person aged 10–18 years [2].

Comprehensive Sexuality Education: Comprehensive Sexuality Education (CSE) is a curriculum-based process of teaching and learning about the cognitive, emotional, physical, and social aspects of sexuality. It aims to equip children and young people with knowledge, skills, attitudes, and values that will empower them to: realise their health, well-being, and dignity; develop respectful social and sexual relationships; consider how their choices affect their own well-being and that of others; and understand and ensure the protection of their rights throughout their lives [3].

Collaborative governance: Collaborative governance as the ‘processes and structures of public policy, decision making, and management that engages people constructively across boundaries of public, private, and civic spheres in order to carry out a public purpose that could not otherwise be accomplished [4].

Principled engagement: Principled engagement refers to the interactive processes through which stakeholders with diverse interests come together to discover shared interests, define problems, deliberate options, and determine actions. It emphasises inclusivity, mutual respect, and transparency in communication.

Shared motivation: Shared motivation encompasses the relational elements that build and sustain collaboration over time. These include mutual trust, mutual understanding, legitimacy, and commitment. These elements foster a sense of shared purpose and interdependence among stakeholders [4].

Capacity for joint action: Capacity for joint action refers to the structural and procedural capabilities that enable stakeholders to act together effectively. It includes institutional arrangements, leadership, resources, and knowledge-sharing mechanisms that support coordinated action [4].

List of original articles

This thesis is based on the following four articles, referred to as Sub-studies or papers I-IV.

i. **Chavula MP**, Zulu JM, Hurtig AK. Factors influencing the integration of Comprehensive Sexuality Education into educational systems in low- and middle-income countries: a systematic review. Reproductive health. 2022 Sep 29;19(1):196.

ii. **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. Health Research Policy and Systems. 2023 Sep 14;21(1):97.

iii. **Chavula MP**, Zulu JM, Goicolea I, Hurtig AK. Exploring multisectoral collaboration in implementing Comprehensive Sexuality Education framework at the provincial level in Zambia: a qualitative study. Global Health Action. 2025 Dec 31;18(1):2547436.

iv. **Chavula MP**, Zulu JM, Goicolea I, Hurtig A-K. Collaborative community health system pathways in implementing Comprehensive Sexuality Education in rural Zambia: A qualitative study (manuscript under review).

The original publications are accessible in open-access journals.

Chapter 1 | Introduction

This chapter starts by highlighting the importance of Comprehensive Sexuality Education (CSE) in promoting adolescent sexual and reproductive health and rights (ASRHR). It discusses challenges associated with implementing CSE, presents my standpoint in this study and outlines the overall organisation of the thesis.

The importance of CSE in promoting ASRHR

CSE plays a critical role in empowering adolescents, through education, gender equality, respectful relationships, positive values, health benefits and informed decision-making. It educates them on essential knowledge and skills crucial to help them make informed and confident sexual decision-making [5]. CSE also equips them with positive health values regarding their reproductive health, puberty, sex, relationships, and family life. It also promotes values like respect, non-discrimination, empathy, value clarification and responsibility. Moreover, CSE also promotes gender equality through the demystification of stereotypes, encouraging respectful relationships, positive attitudes, diversity and inclusion [5]. On one hand, it can also contribute to better equipping adolescents to protect themselves from exploitation, violence and abuse [6]. On the other hand, exposing young people to CSE topics, including contraception and sexually transmitted infections (STIs) prevention, contributes to better sexual and reproductive health outcomes, including a reduction in rates of unintended pregnancies [7].

CSE centres around the educational system but needs to be connected to existing broader systems, including the health system, community health systems (CHS), child protection frameworks and youth empowerment initiatives. Therefore, this thesis goes beyond the delivery of CSE in the classroom to the exploration of how CSE interacts with the immediate and broad systems that influence adolescent health-related outcomes. CSE cannot be separated from its overarching aim of promoting ASRHRs, and its benefits include not only the promotion of ASRHR but also addressing ASHSR challenges, such as unintended pregnancies, adolescent marriages, and STIs, including HIV, among others.

In sub-Saharan Africa, the need to integrate CSE in schools is particularly urgent. Because many adolescents lack basic knowledge about their reproductive systems, two out of three girls are unable to recognise or interpret the onset of menstruation [3]. In 2018, fewer than half (50%) of young people aged 15-24 years reported using condoms during their last sexual encounter, which increased the risk of sexually transmitted infections [3]. Adolescent pregnancies and child marriages remain a significant global public health concern. In 2019, adolescents aged 15-19 years in low- and middle-income countries (LMICs) experienced approximately 21 million pregnancies annually. Of these, 50% were unintended, resulting in about 13 million births, with the remainder ending in abortions, which, when done in unsafe conditions, increase the risk of maternal morbidity and mortality [8, 9]. Child marriages delay social development, affecting their

education progression rate, livelihoods, and health [10]. While adolescent pregnancies and child marriages have negative effects, they are perceived, from social and cultural perspectives, as practices that promote wealth through payment of lobola or dowry, confer respect, ensure procreation, and strengthen family ties and economic stability [11]. Gender-based violence (GBV) starts early, affecting girls and young women. Globally, one out of three adolescents between 15 and 19 years perceives GBV as acceptable [12]. Such social tolerance, including acceptance of child marriages, contributes to increased GBV cases among young people.

The prevalence of STIs among young people is high. In 2023, the new HIV infections were higher among adolescent girls and young women compared to boys in sub-Saharan Africa [13]. Moreover, in 2020, there were about 374 million new STIs, including chlamydia, gonorrhea, syphilis, and trichomoniasis [10, 13]. These infections have severe consequences on their biological, psychological and social aspects, including infertility, an increased risk of HIV transmission and cancer, as well as effects on their mental health, growth, and social development [10, 13, 14].

In 2009, the United Nations Educational, Scientific, and Cultural Organisation (UNESCO) introduced CSE, marking a huge milestone in promoting ASRHR. In 2018, UNESCO, in collaboration with other agencies, updated the International Technical Guidance on Sexuality Education (2009) based on evidence and advancing the global health agenda to champion adolescent health and wellbeing [3]. CSE aims to provide young people with scientifically accurate, age-appropriate, and comprehensive knowledge and skills about their ASRHR, addressing both their physical and emotional needs [15].

Challenges to CSE implementation

Despite its proven benefits, the implementation of CSE faces considerable social and political barriers. This is largely due to resistance from various stakeholders, including the parents, religious, traditional and political leaders, which hinders its integration into education systems. These stakeholders have concerns about the appropriate age for the content and how it may contradict religious and cultural values. For instance, in many LMICs, such as Zambia, the parents, community, and leaders have opposed the teaching of the programme in schools because it is perceived as promoting sexual immorality [16]. In certain cases, this resistance from some stakeholders has resulted in restrictions or suspension of its implementation [17].

One of the major barriers to acceptance has been the exclusion of key stakeholders from the development and implementation process. Such limited and non-inclusive community engagement input from local communities undermines the ownership and legitimacy of the programme [18, 19]. This weakens trust and also the possibility of sustained buy-in from those the interventions aim to serve. The absence of collaboration among stakeholders such as educators, parents, policymakers, and health professionals hinders optimal integration of CSE in schools [20]. This controversy is further shaped by

international anti-CSE discourse, where right-centred organisations and countries champion anti-rights, abstinence-only approaches rather than comprehensive access to SRHR services and CSE. This underlines the importance of collaborative governance to ensure all stakeholders can work together to implement CSE in education systems [21].

My standpoint in this study

I am a social-behavioural, policy, governance and global public health scientist. This background shapes my understanding of SRHR. I do not view SRHR challenges as natural or inevitable. Instead, I understand them as products of structural inequalities, systemic injustice, social exclusion, poverty, illiteracy, and the enduring legacies of colonial and neo-colonial systems. These visible and invisible issues shape everyday experiences and determine how SRHR outcomes persist across generations. Addressing such challenges requires tackling both upstream and downstream determinants that influence people's lives and their well-being.

Upstream factors include poverty and economic deprivation, which have been normalised in ways that make inequality appear acceptable and normal. Addressing this requires transformative change and demands committed national leadership capable of investing in equitable development, poverty reduction, and literacy. Yet meaningful development is impossible when marginalised populations remain unaware of the roots of their oppression or lack the capacity to question prevailing power structures. Downstream interventions are consequently essential for empowering individuals and communities with knowledge of their rights and responsibilities, enabling collective awakening and more active participation in governance processes.

In Zambia, international support complements local social investment. Although this support provides short-term relief, it also creates structural dependencies that undermine self-determination, national ownership, and limit long-term wealth creation [22]. In contrast, Zambia possesses substantial mineral, wildlife, and environmental wealth that could drive national development. This is only achievable when sustainable development is anchored in strong governance and effective accountability systems. However, this requires responsive political leadership and active community mobilisation in developing institutions and laws that sustain human dignity and protect vulnerable populations. In this broader governance context, participatory and collaborative approaches become especially relevant. This may involve bringing government, civil society, and communities into a structured, participatory process that enables them to jointly address SRHR challenges and advance equitable development.

This thesis uses the metaphor "battlefront collaboration" to emphasise the need to bring together diverse stakeholders, including both those who are supportive and those who hold divergent views toward the implementation of CSE. Government leadership's active involvement is essential for advancing implementation, but sustainability depends on the engagement of all stakeholders, including various government sectors (health, education,

community development, police), parents, and religious and traditional leaders. Although achieving consensus may be difficult, all groups share a common aspiration: national development and the protection of children's well-being.

The real opponents of CSE are not stakeholders with differing views but the deeper forces of poverty, illiteracy, underdevelopment, and economic deprivation that exacerbate SRHR issues. SRHR issues should therefore not be framed narrowly as health problems; they are multidimensional, socio-political, and deeply structural. Hence, the importance of this thesis which applies the integrative collaborative governance framework to understand the delivery of CSE in Zambia.

Structure of thesis

This thesis is organised into eight (8) chapters, each contributing to an understanding of how the delivery of a CSE framework in Zambia functions, with a particular focus on collaborative governance. Chapter 1 highlighted CSE's importance and outlined the organisation of this thesis. Chapter 2 outlines the role of global and regional policies influencing CSE implementation. It also discusses key concepts, including the need for collaborative governance, the study context, governance of CSE implementation in Zambia, and the study's rationale. Chapter 3 presents the purpose, overall aim, and specific research objectives. Chapter 4 introduces the conceptual framework guiding the study. Chapter 5 highlights the methodology, including a systematic review and the case study design. Chapter 6 presents findings from all Sub-studies (I-IV), while Chapter 7 discusses these findings in relation to existing literature and methodological considerations. Finally, Chapter 8 outlines the conclusions, recommendations, and emphasises implications for future policy development.

Chapter 2 | Background

This chapter highlights the role of global and regional policies influencing CSE implementation. It also discusses key concepts, including the need for collaborative governance, the study context, the governance of CSE implementation in Zambia, and the rationale of the study.

Global and regional policies influencing CSE implementation

International frameworks related to ASRHR have significantly contributed to the development of CSE to promote adolescent health and well-being. In 1990, the International Convention on the Rights of the Child addressed their needs and protection [23], banning child exploitation through sexual abuse and child trafficking [23, 24]. This law defines a child as anyone under the age of 18 years. All states are tasked with the responsibility of protecting children from all forms of sexual exploitation, sexual abuse and child trafficking, including rape and the exploitative use of children in pornographic information [23, 24].

However, many countries have not yet incorporated some of this convention into their national laws, creating challenges in fighting against child abuse, including child marriages, harmful cultural practices such as genital mutilation and breast ironing [24]. These challenges highlight the need to integrate CSE to educate young people about their rights and sexual autonomy. Communities and institutions need to ensure they safeguard children's rights. The 1994 International Conference on Population and Development (ICPD) is yet another milestone advocating for the adoption of universal access to sexual and reproductive health services and advancing reproductive rights, which are crucial aspects of CSE [25]. Studies have shown progress towards ICPD outcomes, and since 1990, the number of women using modern contraception has doubled, and since 2000, maternal mortality has declined by about 34% [25]. However, the translation of ICPD principles into a structured, school-based CSE framework remains uneven across many contexts.

The global and local reproductive governance landscape has greatly influenced the nature of development and implementation of CSE. For example, in Argentina, abortion has been legalised as a means of achieving reproductive rights as fundamental human rights [26]. In 2024, France became one of the first countries in Europe to enshrine the right to abortion in its constitution [27].

Despite the progress made, there is global resistance towards full integration of CSE and reproductive governance-related programmes, which complicates the CSE implementation environment. Religious and far-right populist political leadership have contributed to this opposition. This has contributed to the revision of CSE to other programmes that are centred around family-centred reproductive health [28]. In Latin America, strong religious and political institutions have led to total abortion bans in countries like El Salvador and Nicaragua [29]. In North America, the 2022 Supreme Court decision in the United States has resulted in severe restrictions on abortion in many states. In Europe, Poland has a restrictive policy environment in line with the government's

nationalist and conservative political approach to reproductive rights [26]. These differences in policy landscape have huge implications for the effective implementation of CSE programmes. This global SRHR politics aligns with local contexts in the global south, limiting progress on the integration of CSE. As global debates increasingly become embedded in national discourse, they intersect with longstanding tensions around sexuality, religion, and education. This convergence has contributed to a climate in which schools and local authorities encounter significant resistance, slowing the adoption of comprehensive, rights-based curricula.

The African countries have also made progress in developing ASRHR programmes, creating a more conducive environment for the integration of CSE in schools. For instance, the African Union adopted the updated Maputo Plan of Action 2016-2030 to increase universal access to comprehensive ASRHR services [30]. The strategy outlines the importance of countries translating international laws into national legislation to address ASRHR issues, including fighting HIV/AIDS and reducing maternal and infant mortality. It also emphasised increasing contraceptive use and reducing unsafe abortions. Nevertheless, this strategy lacks clear language and limited operational guidance for the education sector to adopt CSE, undermining its effectiveness in promoting CSE.

In 2015, the African Union developed a strategy which highlights the need to prevent early and forced child marriages, eliminate female genital mutilation, and prevent GBV [30]. This revised framework stresses the need for political commitment, governance and leadership to ensure optimal and effective implementation of ASRHR programmes [31]. This framework calls for countries to increase health financing, human resource development, and strengthen health services delivery. This crucial approach facilitates advancing adolescent and women's reproductive health outcomes in the entire continent [32]. International and regional ASRHR strategies, policies and programmes affecting the advancement of CSE are shown in Table 1.

Table 1. International and regional SRH strategies, policies and programmes and their relevance for adolescents' health

Year	**Policy/ programmes**	**Policy issues relevant to adolescent health**
1990	International Convention on Children's Rights	Addresses the needs and protection of children under 18, banning child exploitation through sexual abuse and trafficking.
1994	International Conference on Population and Development (ICPD)	Advocates for universal access to sexual and reproductive health services and advancing reproductive rights.
2006/2016	Maputo Plan of Action	Aims to increase universal access to comprehensive ASRHR services in Africa, addressing issues like HIV/AIDS, maternal and infant mortality, and gender-based violence
2009/2018	International Guidelines on Comprehensive Sexuality Education (CSE)	Provides evidence-informed guidance on sexuality education to prepare young people for a safe, productive, and fulfilling life.
2015	Sustainable Development Goals (SDGs)	The strategy is crucial for addressing global challenges such as poverty, inequality, climate change, environmental degradation, peace, and justice.
2015	Universal Health Coverage (UHC)	Ensure that all people have access to the full range of quality health services they need without financial hardship.
2022	Abortion & Reproductive Rights Supreme Court Cases	The judgment allows states to regulate, including or even ban abortion at will. Many states responded by imposing harsh restrictions on abortions.

Need for collaborative governance

Collaborative governance goes beyond mere collaboration because it establishes shared decision-making and accountability mechanisms among diverse stakeholders to address complex SRHR problems. Whereas collaboration often involves working together informally, collaborative governance creates formal process where government institutions, private sectors and community stakeholders jointly set priorities, allocate resources, co-implement and monitor outcomes [4].

This approach is critical in addressing interconnected challenges that cannot be solved by single, isolated or fragmented efforts. Adolescent SRHR challenges arise from multiple interlinked social, cultural, economic, political, educational,

and health-related factors. Although CSE provides an important opportunity to promote awareness and informed decision-making, it cannot succeed in isolation from other broader systems. Collaborative governance becomes a crucial way to promote CSE as well as actualising and achieving its intended outcomes. While adolescents require both education and community engagement to challenge harmful gender norms, the need for enforcement of child protection, empowerment, and economic development ensures a sustainable livelihood for families and reduces vulnerabilities to unintended pregnancy, early marriages, STIs and HIV [33]. Preventing these challenges also improves the health system's responsiveness by making sure that relevant services are available. Hence, collaborative governance is one of the essential keys enabling delivering a comprehensive response. Currently, there are limited government resources for social and economic support mechanisms to protect vulnerable populations. While the education sector plays a critical role in providing CSE, strengthening the broader system will ensure that young people have access to support systems and can fully enjoy their rights. It can be argued that without collaborative governance, many needs will remain unmet, leading to inequality, injustice and violation of their rights.

Collaborative governance supports the idea that CSE should be delivered through a collective effort in delivery within the school. The involvement of teacher subject specialists across disciplines strengthens an integrated and holistic approach. However, some topics within CSE make teachers uncomfortable, leading them to avoid or skip certain content. This highlights the need for external stakeholders to contribute to comprehensive delivery. Yet external support alone is not sufficient in promoting adolescent SRHR. Holistic delivery of CSE must be linked to wider adolescent SRHR services, including counselling, mental health support, gender-based violence (GBV) prevention, and youth empowerment initiatives. Therefore, collaborative governance is crucial to ensure the holistic and effective delivery of CSE.

While teachers are key stakeholders in the delivery of CSE, they cannot implement it alone [14]. CSE requires involvement of many actors beyond teachers, including health providers, psychologists, peer educators, parents, community leaders, and government sectors such as police, social welfare and community development. The health sector, for example, has the expertise and authority to support CSE, but its effectiveness depends on cooperation from educators and other sectors. Collaborative governance has the potential to guide design, implementation, monitoring and evaluation. Hence, all government sectors, including health and education, together with parents, NGOs, religious groups, the community, and youth leaders, should actively promote CSE delivery. Their involvement creates opportunities for joint resource mobilisation, development of a shared vision and collective implementation.

Study context

This thesis focuses on Zambia. Zambia obtained its independence from the British in 1964 [34]. The country is located in south-central sub-Saharan Africa. Zambia is surrounded by eight neighbouring countries: Tanzania, Malawi,

Mozambique, Zimbabwe, Botswana, Namibia, Angola, and the Democratic Republic of Congo [35]. The country has approximately 752,618 square kilometers [36]. In terms of political administration, Zambia is subdivided into 10 provinces: Central, Copperbelt, Eastern, Luapula, Lusaka, Muchinga, Northern, North-Western, Southern, and Western. Zambia has a total of 116 districts across the country. Zambia's population has steadily grown over the years. In 2022, Zambia's population was approximately 19,610,769, with 9,603,056 males and 10,007,713 females [36]. Eastern province has the third largest population, while Lusaka province, which includes the capital city, has the largest population (3,079,964 people), as shown in Figure 1 [36].

The British colonised Northern Rhodesia, currently called Zambia. It was under colonial rule for 40 years, from 1924 to 1964, when it gained its independence [34]. The major economic backbone is the mining industry, with agriculture, tourism, and trade being other economic activities.

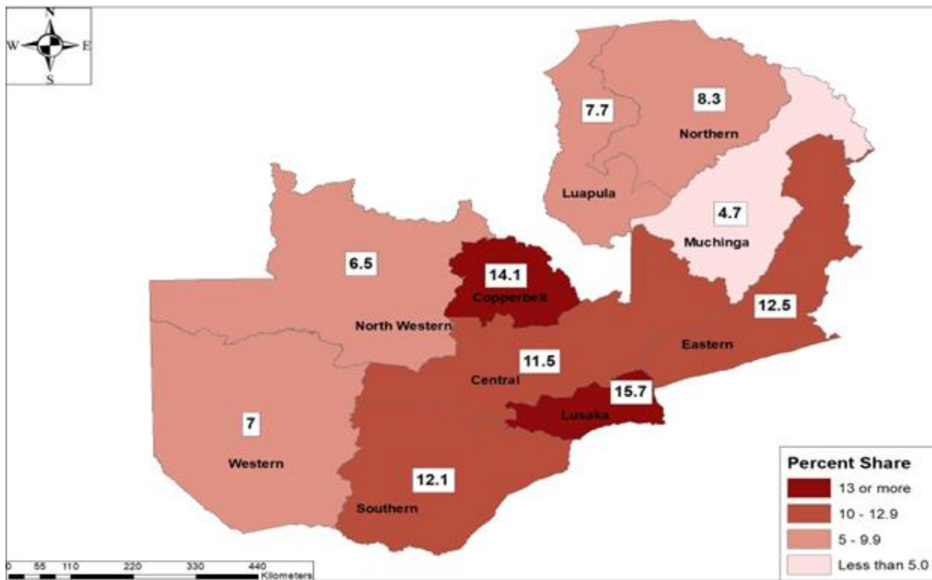

Figure 1: Map reproduced from the Zambia Statistics Agency [36]

Despite these development activities, the country is facing several socioeconomic challenges. The poverty and unemployment levels have remained significantly high. Agricultural activity has been weakened by the effects of climate change, such as floods and droughts. The lack of technical capacity, technology, and infrastructure has further exacerbated this situation. As a result, there are limited resources to improve the health sector, education, infrastructure, and social welfare systems. These challenges negatively affect the social, health, and well-being of the population.

Adolescent SRHR situation in Zambia

Zambia has made significant strides in addressing ASHR challenges. However, ASHR challenges remain high in Zambia. In 2024, the Zambia Demographic and Health Survey (ZDHS) [37] reported that about 28% of adolescents between 15 and 19 years old had already begun childbearing or become pregnant yearly [37]. Adolescent pregnancy is one of the major predictors of child marriage. Child marriage continues to be a complex problem in Zambia. This survey (ZDHS) showed that about 14 % of adolescents, compared to 48% young women aged 20-24 years, marry each year [37]. Eastern, southern, Northern, and central provinces have the highest prevalence of child marriages. HIV and STIs prevalence among adolescents and young people is currently higher among females than males [37]. Gender-based violence, including rape, is high among adolescents and young people. In 2022, the Zambia Victim Support Unit found that out of 33,536 GBV cases, over 8,037 were among child survivors [38]. This means that one out of every four GBV cases occurs in children [38]. The studies have shown that SRHR challenges are higher in rural areas compared to urban areas [37, 39].

Despite a high number of adolescents knowing the importance of contraceptives, the actual use is low, with only 32% females and 39% males reporting use [37]. Social, economic, and political factors continue to drive high SRHR challenges in Zambia. Similarly, social, cultural, and economic influences child marriage and the acceptability of SRHR services. Adolescent pregnancies, STIs including HIV, and child marriages are associated with social stigma and discrimination, which affects adolescents' mental and physical well-being [40]. This impacts school attendance and concentration on learning, affecting the quality of education and their progression. Furthermore, married girls take on added household responsibilities and are more likely to face pressure from their partners and family. This situation leads them to leave school.

In recognising these problems, Zambia has made efforts both in the past and present developed interventions and policies to enhance the integration of CSE to address ASHR gaps. These initiatives are essential for improving ASRHR health outcomes in Zambia.

Development of adolescent sexuality education in Zambia

It is important to acknowledge that sexual education in Zambia is older than the adoption of the CSE framework. I describe below how sexual education was practiced in Zambia in the pre-colonial era (before 1924), the colonial era (1924-1964), the immediate post-independence era (1964-1990s), and the current era (2000s onwards).

Pre-colonial era (1983-1924)

Before colonialism, elderly people such as grandparents, aunties, and uncles were charged with the sole responsibility of providing aspects of sexual health education. Chiefs and traditional leadership played multiple roles, including political, societal, economic, and cultural (religious), enforcement of customary laws, and dispute resolution [41].

During this era, the family structure was integrated within the extended family system and clans, where elders held authority and respect [42, 43]. Community members and village councils enforced collective discipline measures, including legal sanctions, economic penalties, physical punishment, or expulsion from the village of people who committed crimes in the communities [44].

In terms of gender relations and occupation. The boys and men's socioeconomic activities include herding cattle, hunting, farming, and village protection against external enemies. While women and girls gathered food, fetched water and firewood, and cooked [45]. Aunties and grandmothers provided sexual education, especially during puberty and conducted initiation ceremonies that taught girls about being homemakers, family care, and sexual performance. These practices contributed to pregnancies and child marriages, which were common and brought social pride and economic benefits through the exchange of wealth, especially cattle [46]. Polygamy was prevalent because of reproduction, economic production and protective functions [44]. However, during the African traditional governance system, sex education lacked crucial elements such as human rights, mental health, and life skills.

The arrival of missionaries and the British South Africa Company from 1891 to 1924 had both negative and positive effects on Northern Rhodesia (current Zambia). In 1883, missionaries established a few mission stations with schools and health facilities. They preached European cultural norms, including monogamy and viewed sex before marriage as a sin [42]. The British South Africa Company (BSAC) ruled from 1891 to 1924, transferring rule from chiefs to the company and focusing on mining profits. These profits were used to develop Southern Rhodesia (Zimbabwe) and the UK, with minimal infrastructure development in Zambia [45, 46].

Colonialism era (1924-1964)

In the colonial era, the health and education policy reforms did translate into increased indigenous communities' access to health and education services, and adolescent health. The British interests heavily shaped the health and education in Northern Rhodesia. There was low infrastructure development by the mission and colonial offices, primarily focused on serving their needs and those of European settlers. During this era, resources such as copper and other minerals were exported to Britain for its national development. The remaining little resources were reserved to build the capital of Southern Rhodesia (present-day Zimbabwe). The residual resources left were invested in the social and economic development of the country. For instance, between 1924 and 1963, there were few colleges, and a university was not established during this period. The lack of local universities meant that training teachers and health workers was done outside in selected universities in Africa, Europe, and the USA.

There was segregation in the delivery of services with separate education and health systems for whites and blacks. This segregated approach created inequalities in access to social services, including health and education. Western culture and philosophy predominantly shaped the nature of the education

system. Whites were taught and treated by qualified teachers and doctors. While black children were largely educated by untrained teachers, this resulted in the recycling of poor-quality education.

During this time, sexuality education focused on abstinence-only, discouraging premarital sex and polygamous opposite-sex relationships. The formal education failed to integrate sexuality education and demonised indigenous forms of learning, including initiation ceremonies and storytelling, leading to significant conflict between indigenous knowledge and the formal education system [34, 47, 48]. This one-sided approach of education and health hindered collaboration with the local people and limited the delivery of SRHR services to young people. These contextual issues, along with a lack of human resources, hindered integration and delivery of SRHR services [26, 37, 38]. This segregation and abstinence-only approach, with limited integration of indigenous knowledge, delayed the growth of inclusive sexuality education during the colonial era.

Post-independence (1965 to the 1990s)

In 1964, Zambia obtained its independence from colonial rule from Britain. In this first republic period, between 1964 and 1990, under the United National Independence Party (UNIP) and President Kenneth Kaunda, Zambia underwent crucial health and education reforms to shape national development. The leadership prioritised achieving national unity, self-economic reliance, and improving human development despite limited resources [43]. In the formative years, Zambia benefited from higher extraction of minerals, including copper. These revenues were crucial for the expansion of infrastructure, such as health facilities and schools, which are important settings for organising activities related to adolescent health. In 1964, Zambia had only 100 graduates across fields, reflecting the broader constraints the country faced in building the capacity needed to integrate SRHR issues into school and health systems.

The establishment of the University of Zambia in 1965 and other teacher, health-care worker and technical training colleges was critical in addressing the shortage of human resources [36]. This contributed to the increase enrolment in secondary school enrollment from approximately 2,500 in 1960 to 54,000 by 1971 [30]. Despite these gains, several contextual barriers hindered sexuality education progress. 1970s, a global economic crisis emerged due to a sharp drop in fuel prices. Regional political instability and geopolitical trade interruptions hindered or slowed the economic and social development of the country. This contributed to economic decline because of falling copper prices on the international market. This reduced public expenditure on health and education programmes.

The government nationalised most of the private companies. This policy created some inefficiencies; it contributed to economic stagnation, inflation, and increased debt levels. Moreover, the government adopted a human-centred philosophy to promote equity and national development. In this period, the health and social reforms contributed significantly to physical infrastructure expansion and development, including roads, industry, schools and social services. Access to health and education was free. The introduction of nine years

of compulsory education and vocational training improved youth opportunities [43]. While these increased the delivery of health and education services, the school system did not formally integrate sexuality education into the curriculum or address adolescent-specific needs and services. Sexuality education and services were largely absent, and young people had limited access to SRHR-related services. Therefore, due to inadequate knowledge, many young people became infected with STIs and dropped out of school because of pregnancy and/ or getting married [44].

Finally, the development of the Primary Health Care (PHC) strategy in 1981 improved vaccination programmes and health education, but lacked targeted adolescent-friendly interventions, including deliberate aspects of sexuality education [45]. In 1985, the government introduced the health sector decentralisation to improve service delivery. Nevertheless, the policy did not streamline sex education programmes, training of human resources, particularly in SRHR. As a result, the country continued to face challenges, including misinformation and cultural taboos, in the delivery of SRH education.

The Second Republic (1990s to 2000s)

In 1991, Zambia's governance changed from a one-party state to a multi-party democracy, which marked the beginning of the Second Republic era. This political transition brought both positive and negative consequences. The return to democracy promoted social accountability in health and education [46]. However, the government privatised and liberalised the economy, which affected the revenue from resources, contributing to reduced public expenditure on social services and increased inequality [47]. The introduction of Structural Adjustment programmes contributed to the development of cost-sharing policies, which meant that the community co-financed access to social services, including education and health [48]. This widened disparities in access to health and limited adolescents' opportunities to stay in school and receive SRH education. Additionally, reduced public expenditure also hindered the development of health facilities where young people could have received SRHR services. The increased corruption levels exacerbated the reduced public financing of social services [49]. This limitation contributed to fewer young people pursuing education and reduced opportunities to be exposed to SRHR initiatives within schools.

The government introduced decentralisation of health and social services to address inefficiencies and inequalities in its public social care financing. The district offices received grants to cover operational costs. This action empowered local leadership to oversee service delivery, including health planning, resource management, and monitoring system performance. These innovations attracted bilateral and multilateral donors who supported the comprehensive health reform process [50]. These also created a national model package for essential health services, including immunisation, family planning, perinatal care, HIV/AIDS prevention, and treatment of common diseases [36]. However, these reforms did not adequately address specific adolescent needs such as mental health issues, substance abuse, and reproductive health education. In 1996, the

"Educating Our Future" policy advocated for enhanced provision of sex education, HIV prevention in schools, and providing scholarship opportunities for vulnerable children. Nevertheless, sexuality education in school was not comprehensive because it excluded major topics, including contraception, gender, SRHR, and life skills. In 1977, the government introduced the Education "Re-Entry Policy", which provided opportunities for girls who dropped out due to pregnancy or marriage to return to school [51]. In the 1990s, economic liberalisation, reduced public spending, and policy gaps limited the coverage and growth of sexuality education in Zambia.

The current policy environment (2000s)

In the 2000s, new policy developments on SRHR and sexuality education emerged in Zambia. For instance, the Gender Based Violence (GBV) Act provides legal protection for victims of GBV, criminalising child marriages and abuse as mechanisms for addressing these challenges. Yet the recognition of customary law undermines the delivery of CSE due to conflicting messages and complicates the prevention of child marriages. On the other hand, the Education Act of 2011 also highlights the importance of education, prevention of adolescent pregnancies and marriages, and integration of reproductive health education in schools. Nonetheless, the lack of linkage of sexuality education delivery to access to adolescent SRHR services limits the prevention of unintended pregnancies. The enhancement of the free education policy has promoted increased access to education, giving more opportunities for young people [50]. However, the lack of comprehensive scholarships for vulnerable children limits them to purchase school materials, including uniforms, shoes, and books, limits access to education and exposure to CSE. In 2014, due to a supportive environment, the government introduced the CSE Framework.

The first Adolescent Health Strategy (2017-2021) further established adolescent structures from national, provincial, district, facility and school levels on the implementation of adolescent-friendly services, and integration of CSE in schools. Previous and current National Adolescent Health Strategic Plan 2016 and 2022-2026 focus on addressing the unique health challenges faced by adolescents, including sexual and reproductive health, HIV/AIDS, substance abuse, and mental health [51, 52]. This plan is more inclusive compared to previous policies, emphasising multi-sectoral collaboration and community engagement in addressing the social determinants of adolescent health. It includes strategic interventions for sexual and reproductive health, HIV/AIDS prevention, mental health services, and nutrition [51, 52]. Table 2 below shows a summary of the historical health reform in Zambia.

Table 2. Milestones on development of sexuality education in Zambia

Historical period	**Policy/Actor**	**Key policy affecting sexuality education**
Pre-colonial Before 1883	African Traditional Systems	• Community collectivism fostered strong support systems for adolescents.

		• Limited social accountability and advocacy hindered significant changes in adolescent health policies.
Missionary Era: 1883-1924	British South Africa Company	• Limited health and educational infrastructure for Africans. This resulted in access to primary education and health services without or with minimal sex education. • They focused on economic exploitation and mining without focusing on social development because all the profits were diverted away.
	Missionaries	• Missionaries built hospitals, clinics and schools providing health and education access. • They played a critical role in introducing formal education, which included reading, writing and arithmetic. This was the foundation for modern education in Zambia. • Religious values shaped the educational curriculum, which often limited the inclusion of sex education.
Colonialism era: 1924-1964	British Colonial Administration policies on Education and Health	• Health and education reforms improved access for indigenous communities, benefiting adolescent health. • Segregation created inequalities, limiting education and health care quality for black adolescents. • Abstinence-only sex education and ignoring indigenous methods caused conflicts, hindering comprehensive SRH services.
Post-Independence Health Reforms: 1965-1990	Health reforms Education reforms	• Health and education reforms improved access to services, benefiting adolescent health. • The school system did not integrate sex education, leading to limited access to SRHR services for adolescents.

<table>
<tr><td rowspan="3">Multi-Party State and Democracy: 1990s</td><td></td><td>• The return to democracy promoted social accountability in health and education, benefiting adolescent health.
• Cost-sharing policies led to disparities in access to health and education for vulnerable adolescents.
• Changing from CSE to Life Skills and Health Education compromised SRHR services.</td></tr>
<tr><td>Educating Our Future, 1996</td><td>• The policy promotes holistic education through physical, social and emotional well-being.</td></tr>
<tr><td>Re-entry policy, 1997</td><td>• It promotes continuity of education for girls who become pregnant during their education and allows them to return and continue with their education.</td></tr>
<tr><td rowspan="3">Current Health and Education Reforms, and Effects on Adolescent Health: 2000s</td><td>Education Act, 2011</td><td>• The Act provides universal access to education, including the integration of SRHR, HIV and integration of CSE into the school curriculum.
• Nevertheless, there was limited recognition of the need to link adolescents to SRHR services.</td></tr>
<tr><td>Anti Gender Based Violence Act, 2013</td><td>• Promotes public awareness on GBV, including the need to protect the rights of children, which align with CSE, where learners are exposed to their rights, healthy relationships, and gender equality</td></tr>
<tr><td>CSE framework, 2014</td><td>• It is a holistic framework where SRH issues, including HIV, child marriages and pregnancies are discussed.</td></tr>
</table>

Progress and challenges in implementing CSE in Zambia

In 2014, the Zambian government introduced and integrated CSE into the school systems to address SRHR issues. The new CSE Framework (2014) replaced the Reproductive Health Education Act of the 1990s, which was perceived as not comprehensive enough, as shown in Table 3. The Ministry of Education, in collaboration with stakeholders, has been scaling up implementation of the CSE framework across the country [53].

To effectively reach pupils, the CSE framework has been integrated into various career subjects such as biology, social studies, home economics, integrated

science, religious education, and civic education. The target population for this education is learners enrolled in grades 5–12 (ages of about 10-19 years). The Ministry of Education in Zambia collaborated with international organisations such as UNESCO, UNFPA, UNAIDS, and PPAZ, and local organisations to design and implement the framework [53]. These provide financial resources and technical support to curriculum development based on the international guidelines but also ensure that it aligns with the local context. They also provide capacity training for teachers and community engagement to promote local ownership of the programme.

Table 3: CSE Framework, Reproduced from the Curriculum Development Centre and Ministry of Education [19]

First thematic areas	Second thematic areas
1. Relationships 1.1 Families 1.2 Friendship, Love, and Relationships 1.3 Tolerance and Respect 1.4 Long-term Commitments, Marriage, and Parenting 2. Values, Attitudes, and Skills 2.1 Values, Attitudes, and Sources of Sexual Learning 2.2 Norms and Peer Influence on Sexual Behaviour 2.3 Decision-making 2.4 Communication, Refusal, and Negotiation Skills 2.5 Finding Help and Support 3. Culture, Society, and Human Rights 3.1 Sexuality, Culture, and Law 3.2 Sexuality and the Media 3.3 The Social Construction of Gender 3.4 Gender-Based Violence (GBV), Sexual Abuse and Harmful Practices	4. Human Development 4.1 Sexual and Reproductive Anatomy and Physiology 4.2 Reproduction 4.3 Puberty 4.4 Body Image 4.5 Privacy and Bodily Integrity 5. Sexual Behaviour 5.1 Sex, Sexuality, and the Sexual Life Cycle 5.2 Sexual Behaviours and Sexual Response 6. Sexual and Reproductive Health 6.1 Pregnancy Prevention 6.2 Understanding, Recognising, and Reducing the Risk of STIs, including HIV. 6.3 HIV and AIDS Stigma, Treatment, Care, and Support

CSE has been implemented countrywide over the past decade, but it has not been fully scaled to all schools due to resource constraints. Although progress has been made, its legitimacy has been challenged because adolescent SRHR remains a sensitive and contested issue requiring stakeholder support.

Governance of CSE implementation in Zambia

The government, through the Ministry of Health have established the Adolescent Health Technical Working Group (ADH-TWG) or committee responsible for CSE governance and coordination structure at national, provincial, district and community levels (clinic and school). This committee consists of different stakeholders, including government departments, NGOs, and religious and traditional leaders. The government department involved in the collaboration

includes education, youth, gender, sports, community development, police, social welfare, and the National AIDS Council [51].

The Ministries of Health and Education collaboratively conduct the overall coordination of the CSE programme across these different administrative levels [53]. They also play a central role in daily governance, coordination, supervision, monitoring and evaluation of the implementation of CSE country-wide across the levels. This national leadership provides technical and policy direction, ensuring adolescent health priorities and CSE are integrated into the school systems. They also mobilise resources, allocate budgets, and supply materials to strengthen the delivery of CSE programmes. The government and international organisations fund the implementation of CSE in Zambia. Government leadership also facilitates the development of the curriculum and the training of teachers to support the integration of CSE. Finally, they also organise and ensure that committee meetings at national and local levels are conducted accordingly, are functional, and are used to track the progress of CSE implementation.

Similarly, the provincial office of the Ministries of Health and Education coordinates CSE implementation in the province [53]. The provincial committee includes all aforementioned stakeholders representing government departments, NGOs, and community leaders. This committee plays a crucial role in facilitating planning, implementation, monitoring and evaluation of adolescent health services and CSE-related programmes. The provincial structure acts as an intermediary between national and district-based structures in ensuring there is policy enforcement and compliance among all key stakeholders.

Furthermore, the district health and education offices also play a crucial role in directing, coordinating, and supervising public and private actors involved in implementing adolescent health and CSE programmes. These district offices are supported by the committee (ADH-TWG), comprised of government sectors, community-based organisations, NGOs, and religious and traditional leaders. All these actors conduct community-based activities on promotion of CSE through health education, policy enforcement, and service delivery in different settings, including the clinics, schools, villages and communities.

Clinics and schools also have committees that ensure coordination of CSE within the community. For instance, schools are central to delivering CSE and linking adolescents to youth-friendly services and spaces [51]. Police and social welfare agencies play a complementary role in child protection, ensuring that cases of GBV, including rape and child marriage, are addressed and punished. The involvement of these diverse stakeholders is intended to promote social accountability in addressing SRHR challenges. However, social accountability within these committees at national, provincial, district, and community levels remains a challenge.

Rationale of the study

The CSE framework has been implemented for more than a decade now. The teachers have played a crucial role in the delivery of CSE, yet they cannot do it

alone. Effective implementation requires multisectoral collaboration with diverse stakeholders, such as those from the education system, government institutions, parents, healthcare workers, NGOs, and traditional and religious leaders. This is because collaborative governance among diverse actors in the implementation of CSE can enhance legitimacy, collective decision-making, and social accountability.

While there is general support for collaboration to ensure enhanced implementation and stronger linkage between education and SRHR youth-friendly services, there is limited evidence on the overall contextual environment and the specific factors influencing the implementation of CSE in schools [54]. There is also an inadequate understanding of how these contextual factors, including the policy environment, institutional capacity, and social norms, facilitate or hinder the successful implementation of the programme [55]. The collaborative process is often challenged by contestation and controversy that arise surrounding the implementation of the framework. Despite these challenges, there is limited knowledge regarding the role of collaborative mechanisms influencing implementation of the programme at different levels, from national, provincial, district and community levels [54]. This study seeks to fill this gap by exploring the delivery of a CSE framework in Zambia, with a particular focus on collaborative governance.

Conducting this study will generate critical information on barriers and facilitators influencing the integration of CSE in schools. It will also document the national context to understand the policy environment that supports or hinders the implementation of CSE in Zambia and provide an in-depth understanding of the collaborative governance mechanisms and spaces. It will offer practical recommendations for strengthening these collaborative efforts across different levels of governance, contributing to more effective, inclusive, and sustainable delivery of CSE in Zambia.

Chapter 3 | Purpose of the study

This chapter presents the overall aim and the specific objectives of the study.

Overall aim of the study

To explore the delivery of the CSE framework in Zambia, with a particular focus on collaborative governance.

Study objectives

1. To explore factors influencing integration of Comprehensive Sexuality Education in the national curriculum and educational systems in low- and middle-income countries (Systematic review, Sub-study I).

2. To analyse how national policy frameworks, provincial multisectoral collaboration, and community system dynamics interact to shape the delivery of the Comprehensive Sexuality Education framework in Zambia (Case study, Sub-studies II–IV).

Chapter 4 | Conceptual framework

Collaborative governance entails collective participation among public and private sectors in decision-making to address a complex problem that cannot be solved by other means. In this study, I mainly used the Integrative Framework for Collaborative Governance (IFCG) by Emerson et al. [21] to explore the delivery of a CSE in Zambia, with a particular focus on collaborative governance. To complement this framework, I also used Atun's Integration of Interventions into Health Systems framework, which provides additional understanding of how the CSE interventions are embedded within education systems. IFCG was particularly relevant for analysing the policy implementation process of the CSE framework across three administrative levels: national, provincial, district, and community levels in Zambia. In this section, I begin by providing background to the framework, describing its key components, and explaining how and why it has been used in this study.

According to Emerson et al. (2011), collaborative governance is the "processes and structures of public policy decision making and management that engage people across the boundaries of public agencies, levels of government, and/or the public, private and civic spheres to carry out a public purpose that could not otherwise be accomplished" [5]. In the context of Zambia, different stakeholders, also referred to as actors, players or partners representing various government departments, the private sector, NGOs, and traditional and religious leadership are involved in the implementation of CSE. This framework consists of key components (layers), including system context, collaborative governance and drivers, and collaborative dynamics (principled engagement, shared motivation and capacity for joint action) as shown in Figure 2.

General system context

The first component of the framework is the system context, which is also the outermost layer of the framework. The system context encompasses the political, legal, socioeconomic, and environmental factors that influence the delivery of CSE into the education system [1]. Implementation of CSE requires a supportive policy environment, which is crucial not only to provide the mandate but also policy direction and empowerment of different actors to hold the government accountable to its promises in promoting adolescent SRHR and addressing SRHR challenges. The political commitment driving child protection and economic development plays a critical role in addressing adolescent SRHR challenges. These contextual issues create bottlenecks and enabling conditions for effective collaboration of CSE.

Drivers and opportunities for collaboration

Consequently, Emerson (2012) argues that the general system context generates drivers such as uncertainty, interdependence, consequential incentives, and initiating leadership, which can either facilitate or hinder collaboration [4]. In Zambia, adolescents face SRHR issues such as unintended pregnancies, child marriages, GBV, and STIs, including HIV. These challenges are rooted in

interdependent systemic issues such as harmful gender norms, poverty, education, a weak system and limited government funding. Teachers are crucial in the delivery of CSE in schools, and communities are also essential to delay early marriages, and collective involvement of all actors within a supportive environment is necessary to comprehensively address these SRHR challenges. Furthermore, the inadequate availability of funding and resources creates the necessity for collaborative governance in delivery of CSE. As this creates opportunities for resources and knowledge sharing across stakeholders involved in the implementation of CSE.

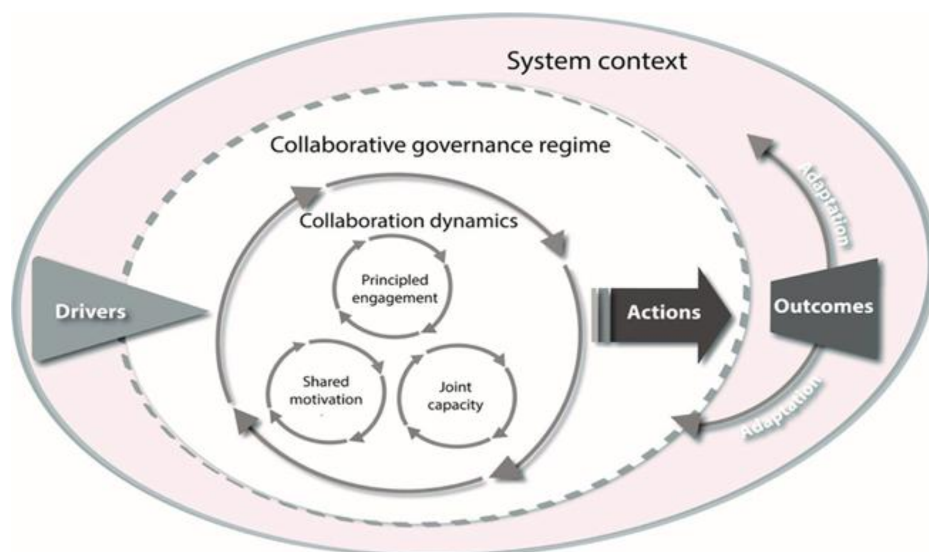

Figure 2: Integrative Collaborative Governance Framework, reproduced from Emerson et al. [4].

Collaborative regime

Subsequently, the collaborative regime is the second domain for the integrative collaborative framework. The collaborative regime entails the coming together of key stakeholders to set the agenda for collaboration to implement CSE at national, provincial, district, and community levels [4]. Each of these administrative functions for CSE implementation plays a critical role in providing overall policy direction, technical support, and coordination of the partners involved in CSE implementation.

Collaboration dynamics

Finally, collaboration dynamics include principled engagement, shared motivation, and capacity for joint action. The concept of principled engagement entails a process of collaborative dialogue that unfolds over time, involving various stakeholders who may participate at different stages and in different settings, such as face-to-face or virtual meetings, cross-organisational networks,

or public and private gatherings. The existing leadership structures at different levels and committees provide opportunities for principled engagement in charting the ways of addressing these challenges. Furthermore, shared motivation entails that actors are driven by a common goal in addressing these complex SRHR challenges. The stakeholders having a shared motivation among players is critical in driving principled engagement in the collaboration. This is relevant to enhancing negotiating complex issues, navigating challenges, and seeking consensus in addressing the problems [4]. Capacity for joint action entails the actor's ability to collectively integrate the intervention within their context. Partners collectively, through regular joint meetings, mobilise resources to facilitate implementation of CSE using existing networks, and community structures [4].

Previous research applications of the framework

The IFCG has been applied in research and practice in both high-income and low-income countries. Many countries, such as the United States, the United Kingdom, and Australia, have played a crucial role in applying this framework to explore complex public policy challenges, including urban planning, public health, and environmental management [4]. In public health, collaborative governance has been used to manage population health and respond to emergencies. For example, in the Netherlands, they drew on principles of collaborative governance to explore integrated community-based approaches aimed at reducing socioeconomic health inequalities [56]. The framework has been used in LMICs to understand public health issues [57], which shows its adaptability in various contexts. In Asia, the framework was used to analyse how local governments collaborated with civil society, law enforcement, and community leaders to prevent and control sexual abuse [58]. In South Africa, Zambia, India and Sweden, the framework was employed to explore how collaborative action supported local health systems in addressing complex needs under the Sustainable Development Goals [59]. In Uganda, it contributed to the national HIV/AIDS response. Despite its diverse applications, the framework has not been used to study the implementation of CSE.

Justification of the framework

This framework was adopted because it provides a comprehensive lens for implementing complex interventions like CSE. The implementation of CSE requires collaboration to address complex and interconnected adolescent SRHR challenges. The framework shows that system context embodies factors such as policy environment, socio-economic conditions, including poverty, gender norms, and resource limitations, which may hinder implementation of CSE in Zambia. The framework under a collaborative regime enables us to understand the different administrative levels, including national, provincial, district, and community levels, and why leadership is critical to facilitate CSE collaborative efforts. The framework guides the analysis of collaboration dynamics in CSE implementation.

Chapter 5 | Methodology

This chapter begins by outlining the overall study designs for Sub-studies I–IV. In Sub-study I, I used a literature review, while Sub-studies II–IV were conducted as a case study. The chapter then presents the context of the case study, followed by the research designs, data collection methods, and analytical approaches used. In the final section, I discuss ethical considerations and outline the plan for disseminating the findings. A summary of the methods used in each Sub-study is presented in Table 4.

Table 4. Summary of methods for Sub-studies I-IV

Design/ methods	**Sub-studies aim**	**Number participants/ interviews/articles**	**Data analysis**
Systematic literature review (Sub-study I)	To explore factors influencing integration of CSE in the national curriculum and educational systems in low- and middle-income countries	-34 peer-reviewed articles	Thematic synthesis approach
Case study (Sub-studies I-IV-4)	To analyse how national policy frameworks, provincial multisectoral collaboration, and community system dynamics interact to shape the delivery of CSE in Zambia	-Document review of 12 Zambian policies on SRHR -49 key informant interviews (national and provincial)	Qualitative content analysis
		-29 interviews with stakeholders from government departments, NGOs, and community leaders.	Reflexive thematic analysis
		-21 interviews with district, school, health, and community actors involved in CSE implementation.	Reflexive thematic analysis

Overview of designs

The Sub-study I used a systematic review design, which adopted Atun's Integration of Targeted Health Interventions into Health Systems [69] to explore the system context part of the collaborative governance framework. This framework enabled us to analyse how these systems and governance-related enablers and barriers influence the integration of CSE educational systems in LMICs (as more detailed applications as shown in Figure 9. The findings of the literature informed the design of the case study.

In the second part of this study, I used a case study approach (Sub-studies II-V). According to Yin (1994), a case study is an empirical inquiry that investigates a contemporary phenomenon within its real-life context. It is especially useful when the boundaries between the phenomenon and its context are not clearly evident [60]. In this study, the phenomenon being investigated was the delivery of the CSE framework in Zambia. Its context includes the administrative levels: national, provincial, district and community levels. The case study approach was appropriate for this research because it enabled us to conduct an in-depth exploration of the delivery of a CSE in Zambia, with a focus on system context, collaborative dynamics, and collaborative actions within its real-life context. Given the complexity of the framework, implementation processes occur across various contexts, national, provincial, district, and community levels, as shown in Figure 3. The adoption of the case study design enabled me to have an in-depth understanding of stakeholder perceptions and contextual influences on the collaboration process, which might be difficult to capture through other methods. The aim was to analyse how national policy frameworks, provincial multisectoral collaboration, and community system dynamics interact to shape the delivery of CSE in Zambia. I illustrate the Application of the Integrative Framework for Collaborative Governance within the context of this Stub-studies in Figure 3.

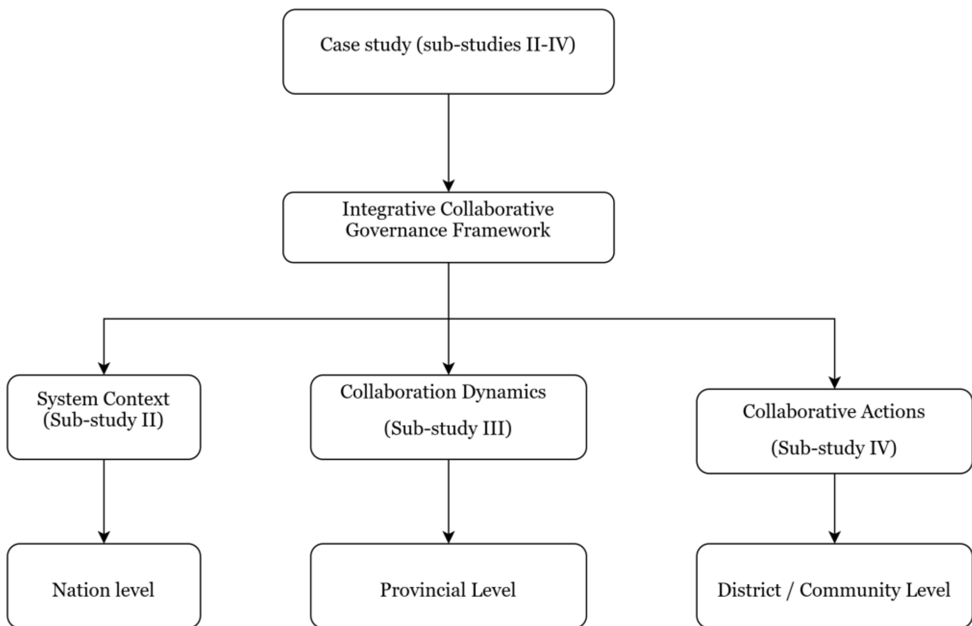

Figure 3: Application of the conceptual framework to this study

Data collection methods and analytical approaches

In this section, I present details of data collection methods and analytical approaches used for the literature review (Sub-study I) and the case study (Sub-studies II-IV).

Systematic review: Factors influencing the integration of CSE into the educational systems in LMICs (Sub-study I)

The first Sub-study employed a systematic review design to explore factors influencing the integration of CSE in the national curriculum and educational systems in LMICs. This approach and following Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (2020) enabled us to comprehensively and transparently identify, evaluate, and synthesise all the relevant studies on this subject.

Search strategy

We conducted an electronic search of peer-reviewed articles in four selected search engines, including PubMed, Cochrane, Google Scholar, and Web of Hinari [61]. Additionally, we also performed a purposive search reference of articles which met the inclusion criteria, and journals on reproductive health (BMC and BMJ). The review covered 34 articles meeting inclusion criteria. Key terms such as barriers OR challenges AND enablers OR facilitators AND implementation OR integration AND "Comprehensive Sexuality Education " OR "sexuality education" AND adolescents were used to search for articles [61].

Inclusion and exclusion

We included peered review published between January 2010 and August 2022. This period marked great global demand for integration of CSE in school. The review focused on qualitative and mixed-method studies. We excluded grey literature, reports, or dissertations in this review. All selected articles discussed lesson learnt, success and challenges that LMICs experienced in integrating CSE in schools. It considered perspectives from key stakeholders such as government agencies, pupils, community actors such as parents, and traditional and church leadership perspectives on the implementation of CSE in schools.

Study selection and data management

The initial search yielded 442 peer-reviewed articles. We further excluded 102 duplicate articles. We screened the titles and abstracts for the remaining 340, excluding 122 articles for lacking relevance to CSE or SRH in schools. Of the 158 full-text articles reviewed, 124 were excluded for being outside LMICs, beyond scope, or unrelated to the review question. Thirty-four articles met the inclusion criteria. We used Microsoft Excel (version 16) to extract key study details, including authors, location, title, design, methods, sample size, and findings [61].

Data analysis and synthesis for the systematic review
We imported 34 publications into NVivo software to identify factors influencing the integration of CSE into the education systems. We used Braun and Clarke's thematic analysis approach to guide the coding process, while Atun's conceptual framework of integration of the innovation into the health system provided the structure for interpreting the results [53]. The first author (MPC) reviewed all articles to identify key factors, with co-authors (AKH and JMZ) critically assessing the framework. I re-examined the studies to extract codes, concepts, and patterns that shape CSE integration, focusing on the nature of the problem, intervention, adoption system, and broader system characteristics.

Case study: How multisectoral collaboration dynamics at the national, provincial, district, and community levels shape the implementation of CSE in Zambia (Sub-studies II–IV)

In this section, I present the context, data collection methods, and analysis of this case study. Details are provided below.

Study context
We conducted this study at the national, provincial (Eastern Province), district and community (Chipangali) levels. The first part of the case study was conducted both at the national level in Lusaka and across all the 10 provincial headquarters (districts). The second phase of the study was conducted in the Eastern Province of Zambia. The provincial capital city is Chipata. The province shares borders with Mozambique to the south, Malawi to the east and Tanzania to the northeast. Eastern province was chosen because it has the second-highest prevalence of adolescent pregnancies in Zambia. Figure 4 depicts the different contextual levels, national (pink), provincial (yellow) and district (blue) contexts. Eastern Province comprises 15 districts, including Chipata, the provincial capital, and Chipangali District, which was a key site for this study. These challenges are linked to social and economic factors, including high poverty, unemployment, and vulnerability levels, with over 60% of the population living on less than $1.90 per day.

In response to these pressing SHR issues, the government, through the Ministry of Health in Chipata, has established the provincial Adolescent Health Technical Working Group (ADH-TWG). This committee is integrated by provincial government departments, NGOs, community-based actors such as religious and traditional leadership representatives in the province. The Ministry of Education is the key stakeholder in the provincial committee. This structure plays a critical role in facilitating engagement in planning, implementation, monitoring and evaluation of CSE. The provincial structure supervises district officers and actors, organises implementation of CSE in schools, communities, or villages, and health facilities.

Finally, the third phase of this study focused on exploring the role of the CHS in influencing the implementation of CSE at the district and community level in

Chipangali district. Chipangali is a rural district, 76 kilometers away from Chipata city, the provincial headquarters. In 2022, Chipangali District (the focus of Sub-study IV) had a population of approximately 169,357, which accounts for about 7% of the total population of Eastern Province (2,454,78). I purposively selected Chipangali because it is one of the 15 districts in Eastern province where pupils in schools demonstrated best knowledge in CSE. Yet, they exhibited poor attitude towards gender related concepts of the CSE framework. Chipangali district has 23 clinics, 13 NGOs, one (1) police station, various government sectors including health, and education, with 136 schools in eight (8) chiefdoms covering 8 wards in the district.

Like the provincial administration, Chipangali district has an ADH committee with low representation from NGOs due to their low presence. The collaboration between different stakeholders play a crucial role in addressing SRHR challenges in the district. Further, the community-based structures including health facilities, NGOs, schools, community, religious, and traditional leadership play a crucial role in facilitating the implementation of CSE in the district.

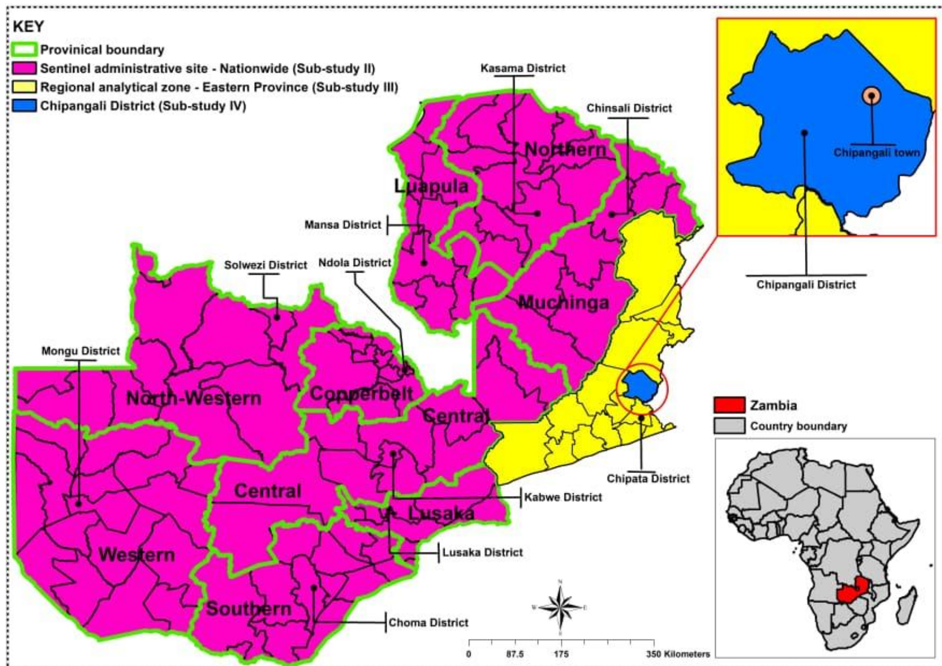

Figure 4: Sampled study sites of the case study; map created by Chavula MP (2026)

Case study data collection methods

We conducted the first phase of data collection of this case study (Sub-study II), which focused on the national level between January and April 2021. This phase aimed to explore the national context in relation to how the policy environment influences CSE implementation. Appendix 1a, 1b, and 1c present the interview

guides used in this study. This was a policy analysis, which used qualitative interviews and document review methods. I selected the 12 most relevant policy documents from various sectors, including education, health, gender, and justice. We used a data extraction in Microsoft Word format to report policy content domains that either support or hinder the implementation of CSE in Zambia. Figure 5 shows CSE-related materials.

In addition, I purposively conducted 49 key informant interviews with key stakeholders representing the NGOs, Ministries of Health, and Education, because all of them were involved in the implementation of CSE at national and provincial levels.

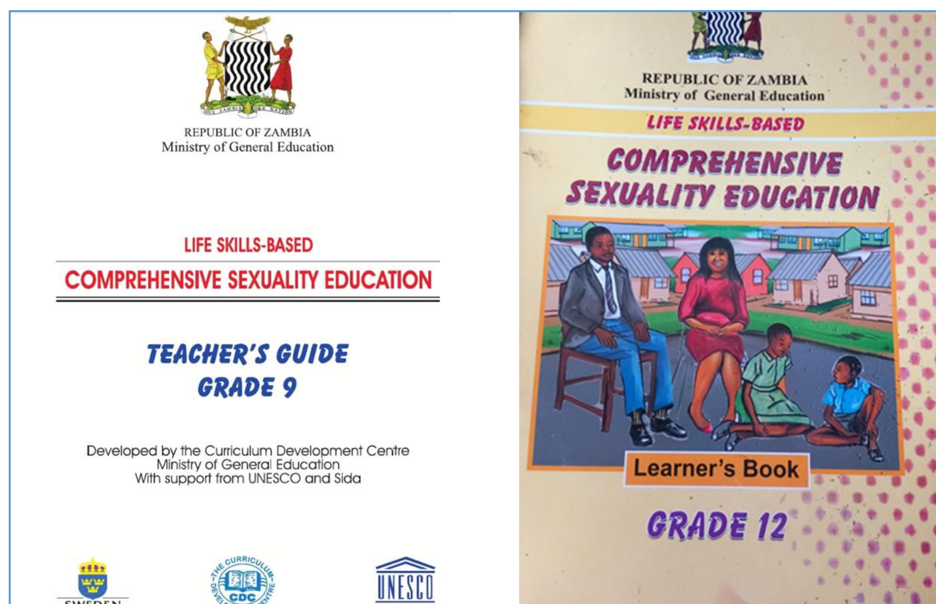

Figure 5: CSE framework-related materials relevant to Sub-study II

The second phase of data collection (Sub-study III) of this CSE case study was conducted between August and September 2023 in the eastern province of Zambia. This focused on multisectoral collaboration in implementing a CSE framework at the provincial level in the case Zambia. Appendix 2 presents the interview guide used in this study. I purposively conducted 29 interviews with stakeholders' government departments, NGOs, religious and traditional leadership at national and provincial levels, due to their involvement in the implementation of CSE, especially in provincial Zambia, as shown in Figure 6. These stakeholders represented government departments, including Education, Colleges, Community Development, Social Welfare, Health, Youth, National Guidance & Religious Affairs, Home Affairs (Victim Support), Traditional Affairs, Child Development, and National HIV/AIDS Council.

Figure 6: Selected fieldwork picture for Sub-study III

Finally, the third phase of data collection (Sub-study IV) was conducted between February and March of 2024 in the Chipangali District of Eastern Province. The aim was to explore collaborative community health system pathways and barriers in implementing CSE in rural Zambia. Appendix 3 presents the interview guide used in this study. We purposively conducted 21 qualitative interviews with district government departments, NGOs, schools, health facilities, peer educators, parents, community leaders, and religious leaders (some of whom are depicted in Figure 7).

Figure 7: Selected fieldwork pictures for Sub-study IV

Data analysis of the case study

For Sub-study II, I used Graneheim and Lundman's qualitative content analysis approach to analyse the data from the policy documents and interviews [62]. The first step in the data analysis approach was to read transcripts and policy documents and then import them into NVivo (QSR International UK, 2021) to support the process of identifying factors facilitating or hindering the implementation of CSE. In this stage, I developed codes from each meaning unit of the data. The next step consisted of grouping the codes into preliminary categories. Through continuous discussion within the research teams, these preliminary categories were further revised into two categories: i) synergies, and ii) challenges and contradictions.

For Sub-studies III-IV, I used a thematic analysis (reflexive) approach, following the six-phase process outlined by Braun and Clarke [63]. This approach enabled systematic development, analysis, and reporting of themes in this case study. The first step involved importing transcribed interviews into NVivo R1, a qualitative software to aid analysis processes. The process started by reading the transcripts to gain a deeper understanding of the subject matter. This enabled us to identify meaningful segments and generate codes. These developed codes were grouped to generate preliminary themes that were refined by going back to the transcripts and writing. With regards to Sub-study III, codes were developed deductively, guided by the integrative collaborative governance conceptual framework focusing on collaborative dynamics, including the principled engagement, shared motivation and capacity for joint action guided analysis process [4]. Whereas, in the third part of this study (Sub-study IV), I coded inductively.

Ethical considerations

We observed ethical issues in this study. Firstly, ERES Converge, Research Ethics Committee granted authority to conduct the study (Ref. No. 2020–017). In addition, the National Health Research Authority approved the study. We further got permission to conduct the study from the Ministry of Education and Health. Subsequently, we engaged key stakeholders at the provincial, district, NGO, health facility, school, and community levels to further contextualise and validate the study prior to its implementation. Furthermore, we obtained written informed consent from every participant. To every participant, and prior to obtaining consent, we explained the purpose, importance, benefits, and any potential risks. We also informed the participants about the methods of data collection and that the discussion would be recorded using a voice tape recorder. Participants were also informed that their participation was voluntary, and they were free to drop out of the study at any time. To achieve confidentiality, we informed the participants about the importance of privacy and safety during and after the study. I removed all possible identifiers, including the names of the respondents in the study. All the data collection forms; audio files and transcripts were securely stored on a password-protected computer. Participants appearing in pictures consented to be presented in the thesis.

Dissemination of findings
I held meetings with key stakeholders from government departments, including health, education, and NGOs to share the findings of the study. In addition to these local engagements, I also participated in an international conference organised by the Association of Public Health in Africa held in Zambia, meetings at the University of Miami with the community and universities in Florida in the United States, and a local conference for young researchers in Umeå, Sweden, to present the results of this study. Some of these dissemination activities are illustrated in Figure 8.

Figure 8: Photos captured during dissemination of findings activities

Chapter 6 | Findings

In this chapter, I present the findings of the study, organised into two main sections. The first section presents the results of the systematic review that explores the factors that influence the integration of CSE programmes into educational systems in LMICs (Sub-study I). These results are a systematic structure using Atun's framework for integration of targeted health interventions into health systems. The second section presents findings from the case study on the role of collaborative governance in the delivery of CSE in Zambia (Sub-studies II-V). The findings have been organised according to the Integrative Collaborative Governance framework, focusing on system context, collaboration dynamics, and collaborative actions.

Factors influencing the integration of CSE programmes into the educational systems in LMICs (Sub-study I)

The key findings highlight factors facilitating integration of CSE programmes into education systems including the high prevalence of SRHR problems (Nature of the problem), CSE programmes shaping the integration process (attributes of the intervention), actors' collaboration in the CSE integration process (broad system characteristics), international agenda, political, legal and economic factors facilitating integration of CSE (broad context), as illustrated in Figure 9.

Nature of the problem: high prevalence of SRHR problems

Several factors facilitating the integration of CSE programmes into education systems were identified. Many studies reported that high rates of adolescent pregnancies, child marriages, and STIs, including HIV, unsafe abortions, gender-based violence, and child abuse, are linked to a lack of knowledge of CSE [49, 52]. Moreover, the social and economic environment exacerbates these issues, undermining sexual decision-making in LMICs [55, 58, 60, 61]. CSE serves as a strategy to equip young people with knowledge and life skills crucial for them to make informed decisions. The integration of the CSE process leverages the availability of teachers, but many teachers are untrained in CSE. The integration of CSE into education was observed as a viable solution for young people to spend their formative years in school. Moreover, CSE helps to shift the cultural and social norms that restrict the uptake of SRHR services. The integration process provides a link for adolescents to other youth-friendly services such as counselling, contraceptives, and life skills empowerment [55]. This contributes to increasing universal access to youth-friendly and SRHR services. These factors motivated many countries to develop deliberate interventions to bridge the knowledge gap and promote youth-friendly services.

Attributes of the intervention: CSE programmes shaping the integration process

The CSE interventions generally include curriculum content, teacher training, and access to materials and methods of delivery. The content aims to increase knowledge, develop positive attitudes, enhance life skills, and empower young

people to make informed decisions, building healthy relationships and ASRHR [64-66]. It also covers topics on contraceptives, strategies to prevent pregnancies and STIs including HIV infection, human development, reproductive health, puberty, menstrual hygiene management, and SRHR [64, 65]. However, the inadequate topics on life skills, interpersonal development, social skills, health relationships, critical thinking, and tolerance, as well as GBV, legal education, gender, and prevention of adolescent pregnancies and marriages [13]. In most countries, CSE programmes are integrated into school subjects such as physical education, home economics, religious education, natural sciences, biology, and geography, rather than as standalone subjects [20, 67-71]. CSE has been integrated during pre- and post-tertiary education, with additional decentralised cascaded training to increase teachers' capacity at local levels [66, 68].

Trained teachers are motivated to teach CSE, while those with inadequate training resist teaching it [20, 54, 64, 65, 69, 70, 72-77]. The availability of training resources, teaching aids and materials, but the lack of funding limits it integration [18, 20, 54, 64, 71-73, 76-83]. Participatory methods, including group discussions, role-play, drawing, songs, illustrations, short films and brainstorming sessions, to enhance a safe environment for open discussions [54, 65, 66, 69, 73-75]. However, many teachers, due to a lack of training, use traditional methods such as lectures, which do not promote high levels of learning and limit comprehensive understanding among young people [73, 75].

Adopting systems: Actors' perspectives on CSE integration

The studies captured perspectives of various actors, including teachers, school administrators, learners, health workers, community members and pupils on integration of CSE programmes into the education system. The actors adopted the intervention because CSE openly discusses sensitive SRHR topics, empowering youth with knowledge that contributes to making informed decisions, delays sex initiation, reduces adolescent pregnancies, marriages, and prevention of STIs including HIV, and discourages harmful traditional practices such as genital mutilation [78]. Teachers had mixed experiences in the integration process. Some were passionate and motivated about teaching CSE, while others had negative attitudes because of cultural and religious norms [66]. Many teachers preferred teaching abstinence and life skills-related topics over sensitive topics such as contraceptive and homosexuality [20, 65, 72, 79]. In addition, learners had positive experiences with participatory approaches, including films and other visual aids; these approaches enhanced active participation and open discussion. However, some females felt shy to discuss uncomfortable topics, including menstruation, in the presence of male teachers and pupils [48, 67]. Communities because religiosity and cultural beliefs opposed the CSE content; they specifically resisted topics such as contraception, masturbation and homosexuality [20, 64, 69, 70, 75-78, 80].

Broad health system characteristics: actors' collaboration in the CSE integration process

Having discussed the adoption system, I am now going to give a glimpse of studies that reported broad health system characteristics and actors' collaboration in the

CSE integration process. These actors contribute in different ways, including creating links between schools and health facilities, community-based collaboration, coordination, monitoring, and evaluation of CSE. Studies reported that reported key stakeholders such as CHWs, healthcare providers, psychologists, and police who strengthened the linkage between schools and community health systems [46, 49, 52, 57, 65]. Teachers' collaboration with these actors helped in developing culturally appropriate CSE content [46, 65, 66]. CSE programmes created safe environments to discuss sensitive topics such as sexual violence [54, 63]. Schools collaborated with the health sector, NGOs, parents and community leaders to promote the delivery of CSE [65, 69, 75, 76]. This included working with other stakeholders to address cultural and social factors [74]. Stakeholder collaboration supported a coordinated response and contributed reduced parallel implementation of CSE activities. Additionally, actors' joint monitoring and evaluation of CSE was critical to track its performance. However, studies on these assessment mechanisms were often lacking or weak, which compromised data quality and consistency [63, 65, 66, 68, 73].

Broad context: international agenda, political, legal and economic factors facilitating integration of CSE

I am presenting the synthesis of broad contextual factors, including international health agendas, political, legal, and economic factors that influence the integration in LMICs. These factors shaped the national-level CSE integration of the CSE education systems process. Countries that demonstrated strong commitment towards the international agenda on CSE are key driving forces for the integration of CSE. In the 1990s, the majority of countries endorsed the international SRH protocols, such as the 1994 International Conference on Population and Development and the Maputo Declaration took steps towards their implementation[18, 64, 65, 70, 73, 79, 80]. These commitments inspired countries to develop interventions like CSE, institutionalise them and integrate them into existing programmes for sustainability. Meanwhile, in some regions where there is political resistance, progress has been slow due to inadequate policies to support the integration and leaving gaps for implementation. Furthermore, the availability of resources, including funding and resources, strongly motivates governments to scale up the interventions countrywide. However, inadequate availability of resources and funding remains a big challenge hindering practical implementation of the programmes, including conducting capacity building, development of training resources, coordination, monitoring and evaluation of the programme. Finally, the local and international organisation, because of the existing policy environment, check as balances to the respective government to ensure the programme is propelled forward [70].

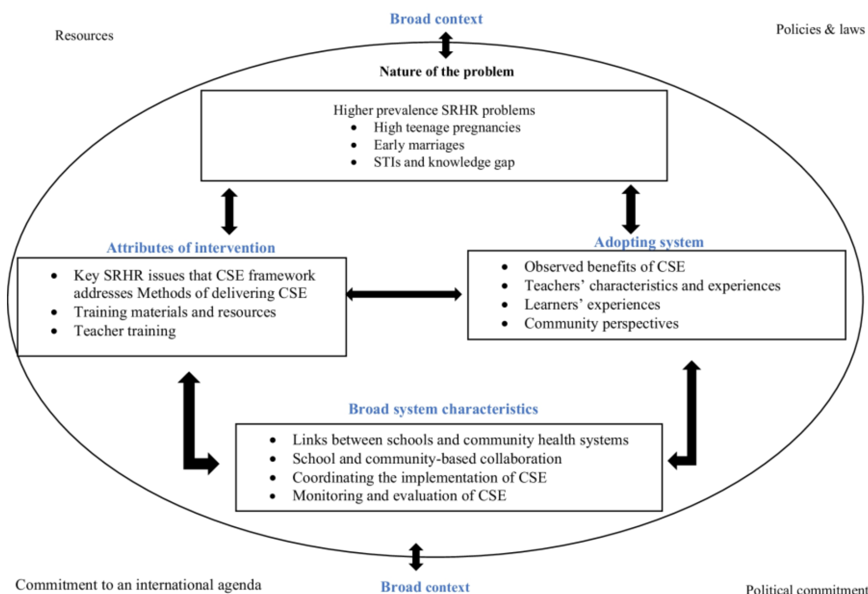

Figure 9: Factors influencing the integration of CSE programmes into educational systems, adapted from Atun et al., [61]

Case study: How multisectoral collaboration dynamics at the national, provincial, district and community levels shape the implementation of CSE in Zambia (Sub-studies II–IV)

This section presents the case study findings on the analysis of how national policy frameworks, provincial multisectoral collaboration, and community system dynamics interact to shape the delivery of CSE in Zambia. These key findings have been arranged according to three domains of the Integrative Collaborative Governance Framework, including the system context, collaboration dynamics, and collaborative action. Each domain helped analyse the three administrative levels, including national, provincial, and district and community of CSE implementation in Zambia. The system context helped unpack the national policy environment influencing CSE implementation; collaboration dynamics facilitated the analysis of multisectoral CSE collaboration at the provincial level; and collaborative actions helped to explore the community health system lessons affecting CSE delivery in rural Zambia.

Policy environment influencing implementation of CSE framework at national level in Zambia (Sub-study II)

This section presents the facilitators and barriers of the policy environment influencing the implementation of the CSE framework in Zambia. This includes policy synergies influencing the implementation of CSE in Zambia, and policy contradictions and challenges influencing the implementation of CSE in Zambia.

Policy synergies influencing the implementation of CSE in Zambia

The high rates of ASRHR challenges, such as STIs including HIV, unwanted pregnancies, and early marriages, had attracted political attention during the 1990s. This opened a policy window for adopting and integrating SRHR in education as a means of addressing these problems. Moreover, the global and local actors advocated for the government to develop and implement adolescent-friendly SRH and health services. Therefore, the country emphasised the importance of CSE and introduced polices such as "Educating Our Future" (1996) and the Re-Entry Policy (1997). These policies were initially focused on abstinence-only interventions and helping girls who dropped out to continue school. Later on, they were expanded to include more topics, including gender relations, sexual behaviour, and contraceptive methods, among others. Additionally, in 2014, the CSE framework broadened the content to include life skills such as values, assertiveness, attitudes, and self-realisation, value clarification and decision making. This can be seen in the following excerpt from the policy "Education Our Future":

> *"Areas of major national concern include HIV/AIDS…young people frequently experience problems arising from their developing sexuality, and the general health of the people and children of Zambia. It is imperative that the basic school curriculum deal with these issues [population education, sexuality, HIV/AIDS, interpersonal relationships], striving to create attitudes and establish practices that will be conducive to good health and personal wellbeing." (Educating Our Future, 1996) [83].*

Furthermore, participants expressed support for the integrated approach in addressing SRHR challenges, noting that CSE empowers learners with the knowledge and skills to make informed SRHR decisions, prevent child marriages and pregnancies, and combat GBV. This integrated approach to SRH is enhanced through the policy environment, which criminalises child marriages and abuse, given that these are major contributors to school dropout rates. As a result, the supportive policy environment becomes a crucial component included in the CSE framework. It helps the young people understand their sexual rights and what to do when they are violated.

> *"Any person who unlawfully and carnally knows (or sexual harassment, cleansing, exploitation, female genital mutilation) any girl under the age of sixteen years, is guilty of a felony and is liable to imprisonment for life or 14 years…" (Penal Code, 2012).*

Additionally, these policies, as well as stakeholders involved in the CSE implementation, highlighted that there is a great recognition of education as a crucial tool for reducing inequalities and promoting social development. Moreover, these policies have addressed social determinants affecting access to education, such as poverty and unemployment, through the introduction of scholarships and bursary schemes for vulnerable students [84]. These

programmes and policies support girls' return to school, because having the opportunity to access education also exposes them to CSE topics, which is crucial for them to help understand the importance of education. To illustrate this, one of the participants suggested:

> *"We have the Keep Girls in School (KGS), program for advancement of girl children that policy also is mobilizing girls who are fallen out of school so that they can come back, then those who are still in school we are trying to do the same for them so that they don't follow the routes of their colleagues who at one time left school… dropped out at grade seven, they dropped out at grade nine, in grade twelve" (KII 37, Government Representative).*

Policy contradiction and challenges influencing the implementation of CSE in Zambia

Some policies in the health sector have stressed the significance of delivery of adolescent-friendly services, including contraceptives in schools, health facilities, and communities [20]. The school has been seen as a crucial setting to deliver SRHR services, including contraceptives. However, our discussion with stakeholders revealed that the delivery of contraceptives or condoms in schools is prohibited.

> *Distribution of condoms in the schools they are not comfortable for them. They just refer them (pupils) to the health facilities to get condoms… in the schools we teach these pupils to refrain from activities here." (KII 65, Government Representative).*

Currently, the Marriage Act permits adolescent marriages at 16 years and above, while any marriages below 16 years are invalid. However, customary law allows child marriages below 16 years if the child has attained puberty and is "physically mature" with parental consent: "Under customary marriage, there is no specific age for marriage" [19]. These conflicting definitions of a child in different laws and customs contribute to legal misunderstandings that hinder child protection measures. Moreover, the contradiction in age limits can lead to confusion of laws, hindering efforts to prevent child marriages and abuse. Sex abusers can capitalise on these discrepancies to escape being prosecuted, inhibiting the complete delivery of CSE content on child protection and gender relations in schools and societies.

> *"The institution of chieftaincy and traditional institutions are guaranteed and shall exist in accordance with the culture, customs, and traditions of the people to whom they apply." (Constitution of Zambia, 2016).*

Furthermore, another significant barrier is the lack of a clear and comprehensive policy regarding the age at which adolescents can independently access SRHR services, including contraceptives. While the national HIV counselling and

testing policy gives young people above 16 years authority to access HIV related services, it excludes other essential SRHR services. This ambiguity may hinder access to SRHR, especially among healthcare providers with strong religious and cultural beliefs, which may influence whether or not they provide services to adolescents.

> *"You find girls who are below the age of 15, they are already sexually active, and the age for adolescents cannot consent, … walk in and get family planning methods, do you give it or do you have to involve the parents, so still something." (KII 16, Government Representative).*

> *"Locally, adolescents continue to face several health issues, with access to sexual and reproductive health services (SRH) still a challenge for many adolescents. The ages of consent to various SRH services have been identified as an ongoing issue… review/Strengthen the policy…for adolescent health, including clear policies and guidelines on age of consent and access to key SRH and HIV services." (Adolescent Health Strategy, 2017).*

Similarly, weak disability inclusiveness in SRHR policy frameworks was a barrier affecting the delivery of CSE to pupils with disabilities. The participants emphasised the importance of disability inclusion in the delivery of CSE in schools. The current policy environment provides little guidance on ensuring CSE is accessible to all learners.

> *"We translated some of the materials into sign language and very soon will also have the same materials on various health topics in sign language so that we don't leave people living with disabilities behind." (KII 26, Government Representative).*

We also identified policy controversies around LGBTQ+ rights and abortion. The Zambian Penal Code Act (2012) states, *"Any person who has carnal knowledge (sexual intercourse) of any person against the order of nature or permits a male person to have carnal knowledge of him or her is committing a criminal offence"*. This law criminalises sexual acts 'contrary to the order of nature,' which is interpreted as same-sex sexual relationships. Based on this statement in the Penal Code, same-sex sexual relations are interpreted to be unlawful in Zambia. LGBTQ+ rights are therefore not incorporated in the CSE. Despite all this, respondents consider that CSE promotes LGBTQ+ rights, which was listed as among the main reasons for opposing CSE implementation due to traditional and religious values.

Abortion is legal and is catered for in the Termination of Pregnancy Act (1972) in Zambia under certain conditions, including "risks to the life or health of the pregnant woman, existing children, or the child to be born". Due to religiosity and cultural values, the topic of abortion has been excluded from the CSE framework despite the government recognising its public health relevance.

"A pregnancy may be legally terminated by a registered medical practitioner if he and two other registered medical practitioners... think, formed in good faith—(a) that continuing the pregnancy would involve risk to the life of the pregnant woman; or... risk of injury to her physical or mental health; or... to any existing children, greater than if the pregnancy were terminated; or (b) that there is a substantial risk that if the child were born it would suffer from... serious physical or mental abnormalities" (Termination of Pregnancy Act, 1972).

Multisectoral collaboration in implementing the CSE framework at the provincial level in Zambia (Sub-study III)

In Sub-study III, I will highlight the key findings on provincial-level multisectoral collaboration influencing CSE implementation, with particular focus on collaboration dynamics as part of the analytical framework: principled engagement, shared motivation, and capacity for joint action. The provincial office plays a crucial role in organising coordination, implementation, monitoring and evaluation of the implementation of CSE in the province.

Factors influencing principled engagement in the collaboration process of CSE

Factors enabling principled engagement include the availability of the provincial structure and technical working group shaped in the delivery of CSE. The provincial structure, which is led by the ministries of education and health provides provincial policy direction and technical support, oversees operations, and engages both provincial and district-based actors for CSE. Additionally, the availability of a provincial platform, through provincial committees, facilitates the engagement of relevant partners. This is crucial in enabling the engagement of all actors in setting and implementing the CSE agenda. Physical meetings enabled planning and reviewing the province's overall performance and act as a platform for lobbying SRHR services provision. The committees also create channels and opportunities for collecting, analysing, and giving feedback on SRHR key indicators in the province.

"...the Provincial education office provides guidance on policy direction regarding delivery of education in the province. Then when we get to the districts, we have officers that coordinate again, the same delivery, we work with the standards section, where the standards officers will go around schools' district office, we also have district guidance coordinators, who are based in DEB's offices in some districts... (KII 24, Government Representative).

Nevertheless, the exclusion (sidelining) of actors such as NGOs, religious leaders, youth and disability organisations limited optimal principled engagement during provincial meetings. Some actors have been excluded on the basis that they cannot provide financial support and hold opposing views towards the CSE agenda. Finally, stakeholders reported that provincial committees offer opportunities for joint planning, resource mobilisation, and tracking

implementation in the province. However, some stakeholders participated in the provincial level without declaring their funding contributions towards implementation, while others bypassed the provincial office and implemented the activities directly at the district level. This practice undermined equitable resource distribution and hindered uniform coverage of CSE implementation.

> *Partners may be there, but one of the challenges is that NGOs do not declare budget lines. So, when we propose to do an activity, we are at their mercy; most of the time they will not even respond... (KII 27, Government Official) [85].*

> *"There could be some gaps at the provincial level, some organisations would have sidelined the provincial education office, and they want to work directly with the district... (KII 01, Government Official).*

Factors influencing shared motivation in the CSE collaboration process

The study also revealed the importance of stakeholders having shared motivation as a factor shaping CSE collaboration at the provincial level. The provincial actors had a common interest in addressing complex SRHR challenges. Stakeholders built trust and shared a common understanding of CSE, which helped them set priorities and align their interests in the implementation of the programme. However, controversial issues related to religiosity and cultural values inhibited optimal collaboration for CSE implementation. Some actors perpetually opposed the implementation of CSE as they perceived it as a programme promoting foreign interests and agenda.

> *People have different agendas, and people have what I can say as positions... that unless we give contraceptives to the children, that is when..., they do not want to look at other alternatives. For example, religious leaders are saying, we need to focus on abstinence, but then we have these other civil societies who say we just need to focus on providing contraceptives, without really looking at the submissions of other people. So, people come up with positions even in closed meetings; they just want their position to stand."(KII12, Education Representative).*

Forms and patterns of capacity for joint action shaping collaborative implementation of CSE

The factors shaping capacity for joint action include resource shortages, teachers' training, monitoring, and multisectoral efforts in addressing adolescent pregnancies and child marriages. Participants reported that limited resources facilitated actors pooling resources for joint implementation to compensate for their inability to carry out initiatives independently. We observed government departments, international and local organisations in conducting training of teachers, and joint monitoring of CSE activities.

“The college hub model is at the central point in the implementation. Teachers are trained for five full days through intensive training. We are working in partnership with…, a civil society organisation. Then we also have staff from the Ministry of Health, and education (provincial office) staff from the college and funding partners. They can monitor and support. ” (25, KII, Government Official).

Furthermore, multisectoral collaboration involving traditional leaders and school administration through community engagement and local enforcement measures addressed SRHR challenges such as adolescent pregnancies, marriages and gender-based violence. Moreover, government departments such as child development programmes implement child protection initiatives including retrieval of girls from early marriages. However, joint monitoring remains inadequate, affecting compliance and uniform implementation of these programmes.

“The best way you retrieve a child from an early marriage is to find a secure house for them or send a child to boarding school, and there is an appropriate support system to keep the child in school. Sometimes you can hear that an early marriage is about to take place in a certain area, but you are incapacitated with no transport available. By the time you have transport, you will find that it has already happened, and people have disappeared.” (27 KII, Government Official).

Factors influencing community-based collaborative actions in implementing CSE in rural Zambia (Sub-study IV)

In this section, I am going to present key findings on how the collaborative community health system (CHS) is influencing the implementation of CSE in rural Zambia. The findings are organised around four areas: school-based CSE collaboration, community-based CSE collaboration, health sector-based CSE collaboration, and collaboration in the legal and policy environment enforcement.

The first form of CHS collaboration involved how different actors supported the delivery of CSE within the school environment. The participants narrated how the school collaborates with various stakeholders, from health, NGOs, peer educators, teachers, and the district committee, in the implementation of CSE in schools. They highlighted that the district committee facilitates collaboration among various partners in aligning priorities and resources for allocation for CSE implementation. This collaboration was beneficial because various partners, including the teachers, played a crucial role in providing resources for capacity building teachers, distributing school training materials, and resources to enhance teacher support and integration of CSE. Moreover, this collaboration with the health sector and NGOs facilitated school mentorship of teachers and direct sensitisation of pupils in schools. This move was crucial as these external actors were able to comprehensively discuss sensitive SRHR topics, which teachers are uncomfortable talking about due to religiosity and cultural values. In

addition, sometimes the school provided adolescent-friendly services and access to resources that adolescents could use within the school setting.

We have the Adolescent Health working technical groups. The only platform where we engage the Ministry of Education, the Ministry of Health and us as an NGO. So, when they go back, maybe they don't relay the information to the superiors so that it trickles down [to schools]. DEBS (education department) to tell all headteachers to say, if we have NGO's that are working in your schools and are helping in delivering CSE, allow them to do their work. So, we do have engagements with them, but what is prevailing on the ground is a different thing". (KII 24, NGO Representative).

"We had received these books for Comprehensive Sexuality from; I think Global Fund (Ministry of Health) and CDC. So, we need materials ...to incorporate as we teach... There are some aspects, like when you are teaching reproduction, you must remain consulting these books. That is the incorporation of the Comprehensive Sexuality books into our main skill." (K11 11, School Representative 5).

Despite the health sector collaborating with the education sector, challenges regarding avenues and dosage of CSE remain unresolved. This further complicated the frequency of their collaboration for the avoidance of health care providers to deliver comprehensive information that is perceived as promoting sexual relations, and not abstinence.

"We also involve the traditional leadership, like recently I visited the Chief ... So, I was privileged to meet with the person who is in charge of a GBV Centre there and... I explained to him the challenges that we are facing... the Chief promised to say he would call for a stakeholder meeting, and he was very expressive, he said that he may not understand the rules and regulations that are contained about a child, so he needed some people to work with... We plan together, if possible, we go round sensitising the community and schools, so the stakeholders that I am very sure of that we are collaborating with its health sector, the police and traditional leadership." (KII 20, Government Representative).

The second form of CHS collaboration involved how different community-based actors supported the delivery of CSE within the school, community and health settings. Our informants also highlighted the importance of traditional leadership and community collaboration in addressing SRHR challenges like unintended pregnancy and early marriages. Since the local leadership is respected by community members, it was easy for the school to leverage their authority to sensitise the community on SRHR. Furthermore, the leadership played a significant role in enforcing local laws to punish the offenders of child abuse. They also collaborated with the community to link the adolescents to the healthcare and legal enforcement services. However, some community and traditional

authorities were opposed to the components of CSE because of cultural and religious reasons. This complicated the effective collaboration with the police, the school and the health sector in addressing SRHR challenges, including adolescent pregnancy, marriages and abuse.

> *"Especially in fight against early marriages, teenage pregnancies...the chief had very strong by-laws. and even at school once you told a parent to say a parent who is unwilling to bring a child back to school, because we have re-entry policy through people although are saying it is encouraging immorality. Parents used to fear the chief because of [the huge punishment of child abusers]" (KII 20, Government Representative).*

The third form of CHS collaboration involved how different health sector actors supported the delivery of CSE within the school, community, and health settings. Furthermore, the health sector played a crucial role in delivering services to adolescents in youth-friendly corners. Beyond receiving referrals from schools or the community, the health sector provided sensitisation in communities and youth-friendly services on SRHR. They also conduct counselling and provide various SRHR services such as contraceptives, HIV testing, management, and GBV screening. The community also plays a crucial role for adolescents; those who are victims of GBV, including rape, are linked to other relevant actors for legal enforcement, including the police and the social welfare department, for further support. Similarly, girls who have dropped out of school are linked back to school, and the school is informed about their health challenges, as this is crucial for the school to be aware of and support in addressing these issues.

> *Just recently, some schools invited health personnel who were conducting some health sensitisation, that is, diseases there even went on to test some pupils on pregnancy, STIs and so on. We work with the police, but usually not in sensitisation, but we make referrals when we have child marriages, when they don't come to the school... we refer the complaints to the police [Victim Support Unit]." (02, Education Sector Representative).*

Finally, the fourth form of CHS collaboration involved how different actors within the legal and policy enforcement environment supported the delivery of CSE across school, community, and health settings. The police, collaborating with other actors responsible for enforcing the legal and policy environment, played a significant role in addressing adolescent SRHR challenges. Participants reported that the police, schools, communities and health facilities collaborated in different ways to fight against child abuse. For instance, the community and schools identified the abuse cases and referred them to the health facility and police for further management. However, the police faced resistance from the community in the enforcement of the law due to social norms that perpetuate child marriages and other forms of abuse. This lack of community acceptability hindered the identification of cases and the inadequate cooperation of the

community when dealing with the cases. This tendency hindered investigations and prosecution cases, with some cases being handled outside the court system.

> *Under the victim support unit, we have been working hand in hand with other stakeholders and in collaboration with everyone like the traditional authority, the education sector and the Ministry of health. What normally happens is, when these issues are being committed in the communities, me standing in as victim unit personnel, we have got some informants in the communities and some groupings which have really been helpful to us whenever these issues have been committed like defilements of some juvenile. (KII 21, Government Representative).*

Chapter 7 | Discussion

This thesis explores the delivery of the CSE framework in Zambia, with a particular focus on collaborative governance. The literature reviewed highlighted factors influencing integration of CSE in the national curriculum and educational systems in low- and middle-income countries. The review also identified factors facilitating CSE integration into education systems, the nature of SRHR problems being addressed, the attributes of the intervention, and the extent of actors' collaboration in the CSE integration process. In addition, the broader contextual factors, including the international agenda, political, legal and economic factors shaped the integration of CSE. While Zambia's national policy environment supports CSE implementation, challenges and contradictions such as restrictions on contraceptive provision in schools and social norms promoting child marriage undermine its effective implementation. Furthermore, factors influencing multisectoral collaboration in implementing CSE at the provincial level included the presence of a supportive provincial structure that facilitated stakeholder engagement. However, the provincial structure was weakened by the exclusion of selected key actors, limited transparency, and the bypassing of institutional mandates. The study also illustrates how the collaboration within the community health system (CHS) influences implementation of CSE in rural Zambia. Stakeholders from the school system, community, health and police sectors took part in supporting the collective implementation of CSE across settings. Nevertheless, prevailing social norms sparked community resistance in addressing SRHR-related challenges, including child abuse, early marriages, and unintended pregnancies.

System context and policy environment shaping collaboration in implementing CSE

Zambia has made progress in developing policies and strategies that address adolescent SRHR challenges and create a supportive environment for integrating CSE in schools. These policies have been largely influenced by international conventions and guidelines such as the ICPD conference, Maputo Plan of Action, and UNESCO's sexuality education framework [26, 27]. In response, around the 1980s and 1990s, Zambia introduced SRHR-related policies such as "Educating the Future", "Adolescent Health Strategy", and the "Anti-GBV Act" to curb child marriages, pregnancies, GBV and STIs, including HIV among adolescents. This supportive policy environment provides direction for resource allocation, operationalisation of CSE, and advocacy for youth-friendly SRHR services [83]. This policy environment also strengthens multisectoral collaboration and political commitment, which are critical for translating policy into practical actions for CSE implementation.

Despite this progress, the implementation process of CSE faces major constraints due to policy contradictions and gaps. These include unclear age of consent, restrictions on contraceptives in schools, and recognition of customary law. Such inconsistencies create confusion among implementers and result in fragmented messaging to young people, weakening coherence or even hindering effective collaboration in CSE implementation. These challenges illustrate that top-down

policy adoption from international to national levels is bound to fail without meaningful involvement in the policy development and implementation process [87, 102]. These top-down policy adoption approaches are not new in Zambia. Similar patterns were observed during the missionary and colonial periods when formal education was introduced, and sex education only focused on abstinence [29, 40]. Currently, the majority of Zambians have been Christianised, and the dominant religious and traditional values continue to discourage sex before marriage. Furthermore, the policy and CSE framework environment do not include CSE LGBTQ+ related topics and abortion in the content. This, on the one hand, excludes important aspects of CSE, and can further stigmatise certain groups of learners. On the other hand, some stakeholders still believe that such topics are part of CSE, which often leads to perceptions that CSE promotes foreign and controversial ideas. Consequently, mistrust and misconceptions due to lack of awareness, religiosity, and social norms resulted in widespread resistance to its implementation [60].

The role of principled engagement in shaping collaboration for CSE implementation

The findings of this thesis also highlight that principled engagement plays a significant role in facilitating stakeholder collaboration in CSE implementation. The provincial structures facilitate collaboration by engaging implementing stakeholders through committee meetings. Through this process, the provincial government is not only able to set the agenda for CSE but also plan, monitor, and evaluate the implementation status. This process enables the alignment of actors' interests and goals regarding the delivery of CSE in Zambia. Moreover, this creates opportunities for sharing resources and knowledge. The provincial leadership, through the committee, act as a steering mechanism in directing the governance and guiding implementation in line with the national framework. Evidence from Asia shows that nurturing local leadership structures of multisectoral collaboration is essential in the delivery of health interventions [86]. In CSE implementation, principled engagement is crucial to uphold inclusive governance and collective accountability, which is essential for sustaining the intervention. Effective leadership provides a coordination mechanism that facilitate collective planning, ensures equitable funding allocation, promote collaborative implementation, and supervises monitoring activities [85]. Moreover, the provincial leadership serves as a broker of social dialogue, not merely the convener of coordination meetings, but ensuring that controversial values, moral and cultural, are amicably discussed and addressed during the engagement meetings [17].

However, several barriers, including limited legal authority, lack of financial transparency, exclusion of actors, and direct implementation without provincial involvement, have hindered progress. This limited inclusion of religious leaders, traditional, and community leaders in provincial coordination mechanisms restricts legitimacy and community buy-in. This limited participation and inclusion of actors in the provincial engagement process of CSE contributed to fragmented and duplication of activities in the implementation. This resonates with evidence from sub-Saharan Africa that indicates community exclusion

perpetuates mistrust and limits SRHR services uptake [21, 87]. This reflects historical context, where religious and traditional leaders perceived sexuality education as immoral and taboo, hence, they were relegated to traditional counsellors. However, this limitation may continue to uphold harmful SRH practices and contribute to continued resistance towards CSE.

Furthermore, principled engagement in CSE implementation should go beyond mere inclusion of actors through attendance but be about power-sharing and participatory decision-making in CSE implementation. Achieving this requires strengthening the provincial leadership through institutionalising inclusive CSE dialogues, integrating community, traditional, and religious actors as co-designers in the implementation process. This approach ensures that CSE programmes are not only broadly supported but also meaningfully shaped by actors most affected. Existing evidence also suggests the significance of leadership in navigating complex collaborative efforts through negotiation, joint problem-solving, and strategic thinking to effectively manage partnerships in these complex settings [33, 88]. Leadership is also key in the engagement of diverse actors through building trust and supportive relationships that promote inclusive planning and joint action in the delivery of CSE [33, 89].

In addition, this study also reveals limited financial transparency and the exclusion of some NGOs, which weakened collaboration in implementing CSE in the province. This behaviour includes selected actors with financial resources bypassing the provincial structures and proceeding with the direct implementation of activities at the district level. This practice limits collective pooling of resources to support implementation of CSE activities, including training of teachers, monitoring, and evaluation. This lack of financial disclosure generates mistrust, weakens collaboration among actors, leading to parallel implementation of the programme among the partners involved. Moreover, this also hinders optimal and meaningful collaboration and social accountability. Finally, the absence of formal relationships between the NGOs and provincial structures and limited legal leverage hinders the enforcement of compliance and equal distribution of resources.

Shared motivation is a driver for CSE collaboration

Shared motivation is a major driver of collaboration, critical in strengthening the effective delivery of CSE. Moreover, visible, consistent, and accountable provincial leadership is a key factor in facilitating stakeholder motivation and sustained collaboration. This thesis also highlights that the provincial leadership fostered shared motivation through several strategies. To align with national policy, stakeholders agreed not to include controversial topics such as abortion, contraceptives, and LGBTQ+ rights-related topics. Although these topics were already not part of the curriculum. Leadership's clear communication that these topics are excluded from the CSE may potentially motivate opposing stakeholders to participate in the implementation. The perceived topics often provoke resistance and opposition to programme implementation. However, their exclusion risks marginalising young people who are sexually active and may have experienced abortion. Similar studies have shown that collaborative governance

facilitates the engagement of actors with different interests, values, resources, and relationships to deliver the required services [90]. Moreover, other research supports that leadership is a pillar of building trust and collective commitment [90]. However, our findings suggest that weaknesses in leadership, particularly limited facilitation and negotiation skills to comprehensively and collectively discuss controversial may undermine shared motivation and limit effective collaboration. Similar studies in sub-Saharan Africa indicate that selective CSE implementation mirrors experiences through adaptation of the CSE framework, but this appears to dilute CSE's comprehensive and rights-based nature [91, 92]. While consensus may be achieved through omission of sensitive topics, this approach risks leading to mechanical collaboration and incomplete SRHR education.

Another factor shaping shared motivation is resource scarcity. This lack of resources stimulates short-term collaboration through internal and external resource pooling to compensate for financial constraints. At the same time, resource scarcity reinforces a culture of over-dependence on donor funding, which threatens long-term sustainable collaborative implementation. Recent evidence also suggests that limited resources can catalyse collaboration, but only temporarily, especially in the absence of domestic financing for programme implementation [93]. For instance, Zambia, like many African countries, relies heavily on external aid for CSE programme implementation [94]. While this may improve coordination in the short term yet will weaken provincial ownership and accountability. This highlights the need for increased domestic resource mobilisation, integrating SRHR financing within local government financing and within provincial health and education budgets, to reduce donor dependency and enhance sustainability [93-95].

Ideally, shared motivation among actors is a driver for coordinated collaboration for CSE programme implementation. Our findings showed multisectoral collaboration in CSE implementation efforts, such as SRHR education, prevention of adolescent pregnancies and marriages. For instance, different government actors, NGOs, and traditional leadership independently implemented SRHR activities. This results in fragmented and parallel actors undermining the collective response. Similar studies in LMICs found that weak governance mechanisms and fragmented implementation hinder effective multisectoral collaboration in the delivery of SRHR programmes due to a lack of synergy, which contributes to duplication of efforts among entities [85, 96]. Addressing these challenges requires strengthening coordination platforms, clarifying sectoral roles and responsibilities among sectors, and establishing shared accountability mechanisms to ensure coherence in programme delivery. Evidence from LMICs demonstrates that unclear mandates and power structures often weaken multisectoral collaboration, resulting in coordination gaps that impede effective implementation of the CSE programme [97]. Without this structural alignment, fragmentation will continue to undermine effective integration of SRHR interventions and limit their impact at community and system levels.

Capacity for joint action in shaping CHS collaboration for implementing CSE

The district and local leadership play a crucial role in organising a strong community health system (CHS) collaboration in the delivery of CSE in schools, communities and clinics. The findings highlight that CHS collaboration promotes active engagement of the school, clinics and community in implementing the CSE framework. This district-level structure serves as a platform providing planning, monitoring, identifying gaps, and empowering teachers and health providers with tools to deliver CSE and adolescent-friendly SRHR services. Similar studies show that the effectiveness of CHS depends not only on formal structures but also on the quality of relationships among CHS actors [98]. Additionally, a Zambian study shows that CHS stakeholders, including community health workers usually navigated tensions between professional expectations and community norms, which can influence the consistency and effectiveness of SRHR delivery [99]. Nevertheless, limited CHS actors' involvement, including schools, clinics, police, and community leaders, has contributed to weak community ownership and fragmentation of the CSE programme [85].

Furthermore, collaboration within CHS is shaped by complex networks, histories, and social hierarchies which impact the implementation of CSE. Studies show that CHS collaboration thrives when actors share vision, purpose and build mutually beneficial relationships, by leveraging informal ties to promote SRHR services [81, 98, 100]. Moreover, there is also growing evidence that poor communication and coordination undermine meaningful relationships, often resulting in tensions due to limited trust, lack of inclusive engagement and uneven power dynamics. Furthermore, another Zambian study showed that dominant social norms and discourses including the belief that sex is only for mature people shape young people's engagement with SRHR programmes and also influences how CHS actors deliver CSE [99]. Community resistance, driven by religious and cultural norms and weak linkages between CSE and SRHR services, limits uptake [53]. This implies that strengthening CHS collaboration requires more relational work that builds trust, promotes shared purpose, and engages diverse actors across social and institutional landscapes [81].

Teachers and peer educators play a primary role in delivering CSE in schools. However, teachers fail to comprehensively deliver CSE due to norms and inadequate training in SRHR. This collaboration plays a crucial role in delivering SRHR topics and supports teachers in conveying content that may cause shame or be perceived as taboo. While teachers apply pedagogical approaches, peer educators help to build trust, support, and use lived experience in discussions on SRHR with their peers in youth clubs, community, informal and youth-friendly spaces. Hence, strengthening collaboration between these actors is essential to bridge gaps in content delivery, promote trust, open dialogue, ensure inclusive, and adolescent-responsive SRHR education. Studies have also shown that teachers often skip sensitive topics due to limited training and fear of backlash, highlighting the need to integrate CSE into pre-service training and professional development [91, 101, 102]. This is because social norms, religious beliefs, and power dynamics shape how CSE is taught, accepted or rejected [53]. A Zambian

study also found that adolescents and young people struggle to apply SRHR knowledge, stressing the need external support from community health workers, teachers and peers [99]. This study underscores the importance of collaboration between teachers and other CHS actors to enhance comprehensive delivery of CSE in schools. Similar studies have shown that peer educators can be easily trusted by fellow peers and are crucial to delivering open dialogue [66, 103].

Additionally, teachers and peer educators turn to health providers for advanced SRHR education and service delivery in schools. However, teachers often remain restrictive in delivering SRHR content and services in schools. This creates opportunities for teachers and peer educators to collaborate by referring adolescents and young people to the youth-friendly services. These collaborations between schools and health providers help link adolescents to external services because not all SRHR support, including counselling, testing and contraceptives, is available in schools. A Zambian study revealed that young people's sexual decision-making is influenced by competing social messages, which often limit how confidently they act on SRHR information provided in school settings [99]. However, communities, due to culture and religiosity, still resist the delivery of CSE and SRHR, especially in rural Zambia. Addressing these barriers requires meaningful CHS engagement to enhance a mutually beneficial relationship, build trust and relevance [104].

When CHS actors are actively involved, they are more likely to spread CSE across community networks and spaces. This CHS engagement strengthens collective action that is critical in addressing SRHR, including child abuse, child marriages, and GBV cases. While community engagement promotes ownership and enhances referrals to youth-friendly services, uncoordinated responses among CHS actors may hinder effective child protection. Similar findings in sub-Saharan Africa show the importance of multisectoral collaboration among CSH actors from health, education, justice, and traditional leadership in child protection, including preventing GBV, child abuse, and supporting adolescent well-being [105]. Additionally, CHS actors' collaborations and bottom-up approaches improve GBV case identification, survivor support, and legal outcomes [3, 104]. The findings revealed that some community-based actors supported child protection through reporting child abuse cases and referred adolescents to the clinic, school or police to receive the services they needed. This resonates with the WHO Inspire framework, which outlines strategies for ending violence against children, such as the enforcement of laws and creating a safe environment for child protection [56]. Community-level action has therefore remained a fundamental for strengthening protective pathways for addressing child abuse and child marriage among adolescents and young people within local health and social systems.

Reflections on applying the framework

There is a growing popularity of the collaborative governance concept in research and practice. This framework was crucial in this qualitative study because it facilitated a deeper understanding of how multisectoral actors interact across government departments, community systems and NGOs in the delivery of CSE

in Zambia. Firstly, this framework provided an analytical structure such as the system context, collaboration dynamics (principled engagement, shared motivation, and capacity for joint action) and collaborative actions, which are critical for understanding the nature of collaboration dynamics across administrative levels, including national, provincial, district and community. Secondly, it helped align my research questions, assumptions and contextual collaborative issues. Thirdly, the framework was also vital in guiding the analysis of the issues that emerged from the data. Finally, applying this framework may increase the chances of knowledge translation to directly contribute to policy reforms, curriculum update and strengthen multisectoral programming of the CSE framework.

Despite the usefulness of this framework, collaborative governance faces several limitations when applied within the case study. Firstly, some issues highlighted in the framework did not clearly appear in the interviews. This suggests that it may be more effective to use a framework when the primary aim is to evaluate an intervention developed through a collaborative governance lens. Some studies suggest that the framework still lacks adequate conceptual clarity and consistency, which may complicate its uniform application of the concept across different settings [106]. Secondly, the framework assumes the existence of institutional capacity and stakeholders' willingness, which may not always be present at the onset. Additionally, the framework does not provide a comprehensive linkage to show how the intervention can be integrated into the health system. For this reason, I adopted Atun's framework for integrating targeted health interventions into health systems to support identifying contextual factors influencing the integration of CSE into educational systems [107]. Thirdly, the framework assumes collaboration is possible, desirable and acceptable, yet CSE is situated within the complex and contested socio-ecological and political environment, where actors hold conflicting values regarding SRHR-related issues. Fourthly, collaboration occurs in a complex dynamic relational and power dynamic setting. The powerful groups may influence decision making process and push a certain narrative, undermining the marginalised voices. Hence, the need for future studies to use ethnographic and participatory action research to unpack power relations influencing the implementation of CSE. Thus, while collaborative governance is an effective analytical framework for structuring research, it must be applied critically using participatory and ethnographic studies to avoid assuming ideal collaborative conditions that may not consistently exist across Zambia's education and health systems. Therefore, some collaborative issues may have been missed due to the absence of the researcher during the daily stakeholder engagement. Finally, future studies should consider adopting embedded research approaches to generate immersive insight into the collaborative processes affecting CSE delivery.

Measures to strengthen the quality of the studies

In this section, I am going to discuss the strategies used to strengthen the quality of the studies. The systematic review study design is discussed in the first section, and the second section addresses the case study design.

The systematic review

In conducting this study, I followed the Cochrane Qualitative Review Methods Group's recommendations. While I aimed to make my literature search comprehensive, some relevant studies might have been excluded from this study. To minimise this possibility, I conducted several rigorous searches between August 2020 and August 2022. I also searched the references of the included articles to enhance the coverage and inclusion of eligible publications. I only analysed studies in English, which may have excluded relevant publications. However, English is the main language used in most research publications. I ensured that published systematic reviews are included in the sample, some of which were not retrieved during the initial search. This approach helped me cover a wide, divergent perspective. Additionally, most of the studies were conducted in countries in the African region compared to other LMICs, so caution is needed in generalising the results to other contexts. This strengthens the relevance of the findings, particularly given that Zambia shares a similar contextual environment with many other African countries.

I used several strategies to enhance the quality of this study. Firstly, I employed an extensive search strategy in this review. This involved including numerous databases and reference lists, which enhanced the coverage of the sample. The inclusion of studies not initially retrieved added to the wide coverage of the search and sample. This review focused on research conducted in the LMICs; this provided a comprehensive analysis of opportunities influencing the integration of CSE in schools within this context. Moreover, the findings were consistent across LMICs.

The case study

In addition to a systematic review, this thesis used a case-study design to analyse how national policy frameworks, provincial multisectoral collaboration, and community system dynamics interact to shape the delivery of CSE in Zambia. This involved three Sub-studies: policy analysis (national level), collaboration dynamics (provincial level), and community-based collaboration influencing the implementation of CSE in Zambia. The first approach we used in this case study was a policy analysis aimed at understanding the policy synergies, challenges and contradictions influencing the implementation of CSE at the national level. This policy analysis used publicly available policy documents. It may be possible that some relevant policy documents were not included in this analysis. Document analysis does not fully capture how these policies are enacted in practice. That is why we also included interviews with various stakeholders from government departments (including health & education) and NGOs, which enhanced comprehensive understanding of the subject. Secondly, at the provincial level, we also reported the importance of provincial structures in facilitating stakeholder engagement through planning, implementation, and coordination of the programme.

Finally, the last part of the case study analysed collaborative CHS pathways and the factors influencing CSE implementation in rural districts of Zambia. This study drew interviews from various government departments, peer educators,

NGOs, and community representatives, both at the district and community levels, contributing to providing a comprehensive understanding due to the limited knowledge of CSE implementation at the community level. The findings are crucial in guiding the development of community-based policies and strategies to improve CSE implementation in rural CHS settings in Zambia and comparable contexts. Future studies should broaden the sample frame to include additional stakeholders such as traditional healers and counsellors.

I followed the trustworthiness criteria of Lincoln and Guba, focusing on confirmability, credibility, dependability, and transferability [108, 109]. These provide a comprehensive evaluation of methodological research's rigour.

Confirmability. Confirmability refers to the degree to which findings, interpretations, and recommendations are grounded in the data rather than in the researcher's bias [108]. I strengthened the confirmability aspects by transparently describing the study design, context, data collection methods, and analysis approaches. I also applied an auditability approach, which is a more systematic and thorough method to document the research process. This approach enhances the recording of all the procedures performed from study development to data collection and data analysis. I further used NVivo qualitative software to ensure auditability through storage protocol materials, including transcripts, developing the code book, and coding of all the interviews. This approach ensured that triangulation of data was conducted across multiple sources (interviews & policy documents) and levels of the case study. This enhanced collection of divergent perspectives contributed to having an in-depth understanding of crucial influencing collaborative delivery of CSE.

Dependability. Dependability refers to hear adapting to new emerging discoveries following an emergent design [110]. I enhanced dependability through clearly describing all the data collection procedures, processes and the characteristics of the participants. I conducted interviews with national, provincial, district and community-based stakeholders, government sectors, NGOs, religious and community leadership. Finally, dependability was achieved by clearly documenting the research process and being flexible and adaptable throughout this study.

Credibility. Credibility refers to the extent which findings and interpretations are believable and accurately reflect participants' realities [111]. I am a social scientist with a Bachelor of Adult Education and a Master of Public Health, both awarded by a nationally reputable university in Zambia. I am a lecturer and researcher at the same university in the Department of Community and Family Medicine at University Zambia. I have over seven years of experience conducting public health, community health, health policy, and sexual and reproductive health (SRH) studies, and qualitative research. These theoretical, practical skills, and experience enhanced my capacity to conduct interviews and do the analysis. Having been involved in the Adolescent Health national coordination committee, I had built trust and relationships with implementing partners. I achieved credibility by establishing prolonged engagement with the key stakeholders

interviewed. This played a crucial role in getting help from these actors in identifying participants and obtaining credible information from the field. Further, I spent significant time in the field conducting data collection three times, once per year on each objective. It enabled me to gain a deep understanding of the issues and was crucial for effective probing during interviews to gain rich data rooted in participants' experiences, including the quotes. This enabled me to gather information grounded in participants' experiences and perspectives on the phenomena of interest. However, the lack of involvement of the research team in provincial meetings might exclude some insights that cannot be captured at one data collection point. Though the inclusion of various stakeholders and long engagement in the data collection process might improve the credibility of the findings. Ultimately, I also shared the findings with the participants for member checking and validation, which further contributed to the confirmability of findings.

Transferability. Finally, transferability is defined as the applicability of findings to other contexts [111]. I addressed transferability by providing rich, thick descriptions of the study and participants. Furthermore, the application of the collaborative governance conceptual framework in design, data collection and analysis is among the elements that enhance the possible transferability of the findings beyond the specific context in Zambia. Nevertheless, the use of a framework may have narrowed my interpretation of the data. To minimise this, I remained reflexive by revisiting the data inductively and discussing emerging themes with the research team. These generated insights may serve as a guide for effective reforms and strategies that can advance CSE implementation in Zambia and comparable contexts. Furthermore, this analysis focused mainly on the school context implementation of CSE. It did not explicitly consider how the policy affects CSE implementation for out-of-school adolescents. Therefore, future studies target how the policy influences CSE in community and health facility settings for out-of-school adolescent and young people.

Chapter 8 | Conclusion and recommendations

Conclusion

The overall aim of this study was to explore the delivery of a CSE framework in Zambia, with a particular focus on collaborative governance. Firstly, this study highlights contextual factors influencing CSE integration in the education system, policy dynamics, multisectoral collaboration at the provincial level, and community health system pathways in rural districts. The literature review showed that various factors, including social, economic, cultural, political, legal, and financial, influenced how CSE has been integrated into educational systems across LMICs. The review also showed that stakeholders' collaboration was critical in shaping the integration process including in the design, implementation, coordination, and monitoring of the intervention to ensure it remained socially appropriate. Secondly, Zambia has made notable progress in developing policies that support adolescent SRHR, including efforts to address child marriage, teenage pregnancy, GBV, and STIs, including HIV. These policy synergies promote SRHR education and encourage youth-friendly services uptake. However, despite policy synergies, contradictions and silences persist. These include restrictions on contraceptive delivery in schools, local by-laws that enable child marriage, a lack of inclusive policies for adolescents with disabilities, and inconsistent definitions of childhood. Moreover, stakeholder resistance—driven by perceptions that CSE promotes controversial topics such as abortion and LGBTQ+ rights-related topics continues to hinder implementation, particularly among stakeholders wanting to stay within the legal environment that restricts such issues. To address this gap, there must be an inclusive and consultative approach in policy revision to ensure all policy inconsistencies are addressed and align these issues to enhance a coordinated SRHR policy implementation.

Thirdly, effective delivery of CSE requires coordinated collaboration across national, provincial, district, and community levels. This study found that provincial-level stakeholder engagement facilitated collaboration, but limited stakeholder participation contributed to fragmented planning, unequal resource allocation, and duplication of activities. Therefore, strengthening institutional mandates and coordination structures at the provincial level is essential for inclusive planning, implementation, and monitoring, which is critical to enhance coordinated approaches in the delivery of CSE at the provincial level. Finally, community health systems collaborative efforts between the school, peer educators' community, clinics and police enhance optimal delivery of CSE, improve referral systems of adolescents to youth-friendly services and legal enforcement of child abuse. However, cultural and religious resistance, and informal dispute resolution systems, undermine effective delivery of CSE and addressing child abuse. Hence, strengthening community education, abolishing harmful by-laws, and expanding survivor support beyond legal responses are essential pathways toward enhancing accountability, service access, and collective ownership of CSE delivery.

Policy and programme recommendations

This section outlines key policy and programmatic implications of a study on the role of multisectoral collaborative governance in influencing the delivery of CSE framework in Zambia. The major study recommendations include the following: enhancing the integration of CSE within the education sector, strengthening the facilitative policy context, strengthening collaboration at the provincial level, and establishing multisectoral engagement at the district and local community level. The government, the Ministries of Education and Health, should collaborate closely with other sectors, NGOs, community, and religious leadership to implement these strategies.

Recommendations

i. Zambian government should increase domestic financing for CSE, ensuring that external support complements national priorities and aligns SRHR-based international practices with the local context.

ii. Strengthening the integration of CSE in the education system including teacher-training approaches, improved school–community linkages, and monitoring systems aligned with national policies, adequately resourced, and responsive to the social, cultural, and political context shaping SRHR challenges in Zambia.

iii. Government strengthens policy coherence by addressing contradictions in SRHR and CSE legislation. This requires aligning conflicting laws and policies, especially around contraception in schools, definitions of childhood, enhancing disability inclusion, and contentious SRHR topics to ensure a coherent national framework for CSE implementation.

iv. Strengthening the Provincial authorities' mandates to coordinate multisectoral CSE implementation: this entails outlining clear mandates, inclusive engagement platforms, transparent budgeting, and adequately resourced provincial structures which will reduce duplication and improve planning, monitoring, and support for implementers.

v. The Ministries of Education and Health must strengthen school and health facility coordination nationwide: this entails creating clear national guidelines and referral pathways between schools, clinics, peer educators, and legal enforcement services to ensure adolescents access timely SRHR information, counselling, and care.

vi. Integrated CSE coordination in district councils beyond the technical meetings to strengthen routine, structured multisectoral collaboration: There is need for regular joint planning and review meetings among education, health, police, religious leaders, traditional authorities, and youth groups to strengthen coordination and collective responses to SRHR challenges.

vii. Improve CHS structure, including community and religious leadership, in developing culturally grounded CSE and addressing child abuse: Active

involvement of parents, traditional leaders, and faith groups is essential to dispel misconceptions, reduce resistance, and build strong community ownership of CSE programmes.

viii. Local government and justice actors must abolish harmful by-laws and enforce child-protection laws: Dismantling practices that enable early marriage or informal dispute resolution of child abuse—and ensuring consistent legal enforcement—will protect adolescents and reduce SRHR risks.

Recommendations for future studies

This study explored the delivery of a CSE framework in Zambia, with a particular focus on collaborative governance. We acknowledge its major limitation; it did not focus on assessing the effectiveness of and measuring the effect of CSE programmes. Consequently, it was not possible to determine how the collaboration process contributes to improved CSE outcomes. Therefore, future studies should consider the following:

i. There is a pressing need to evaluate the long-term effects of CSE on adolescent health and education outcomes through longitudinal studies.

ii. Some of the issues found in this study require more exploration. Hence, researchers may require spending longer periods with participants, participating in collaboration meetings, and observing their interactions over time.

iii. Future studies should also include other relevant stakeholders linked to schools but not engaged in this study, such as local councils, community health workers, traditional healers, and private companies.

iv. Research should consider applying health-economic analysis to understand how financing, resource allocation, and economic incentives influence SRHR outcomes and the implementation of CSE programmes.

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Appendices

Appendix 1a -Interview guide (Sub-study II):

Exploring Policy Synergies, Challenges, and Contradictions Influencing Implementation of the Comprehensive Sexuality Education Framework in Zambia: A Policy Analysis

Target Participants: Educational Staff (Provincial Education Officer, Principal Education Standards Officer, District Education Board Secretary [DEBS], and District Standards Officer [DESO]) or other recommended staff.

Thematic Area and Guiding Questions

Organisation/Department

1. Can you briefly describe how CSE was introduced and implemented in this district/province, and the role your office played
a) What role have you or your office played in implementing CSE?
b) From your perspective, what is CSE?
2. Introduction of CSE in the District/Province
a) When did the Ministry of General Education start implementing CSE in this province/district?
b) What factors motivated the development and implementation of CSE?
3. Key Activities Related to the Introduction of CSE in the District/Province
a) How did the implementation process of CSE start in this province/district?
b) What are the main activities that have been carried out as part of the implementation process of CSE?
Probe for:
• Training of teachers:
  - Who conducted the training?
  - When was the training conducted?
  - How many teachers have been trained?
  - What worked well with the training?
  - What challenges were experienced during the training?

• Provision of teaching materials on CSE:
  - What CSE training and teaching materials were provided to teachers?
  - Who provided the CSE teaching materials?
  - What has worked well with the provision of teaching materials?
  - What are the challenges or gaps in the provision of teaching materials?

• Reflection:
  - What should have been done differently to better support the implementation of CSE?

Implementation of CSE in the Province/District/School

4.How is Comprehensive Sexuality Education (CSE) being implemented in your province, district, or school
a) How is CSE implemented in schools?
b) What role has the province or district played in the implementation of CSE? (Probe for monitoring and support activities.)
c) What has worked well with:

- The teaching of CSE?
- Provincial/district support for CSE implementation?
  d) What challenges or gaps exist regarding the teaching of CSE?
  e) What challenges are experienced by the district or province in supporting the teaching of CSE?
  f) Which topics are considered more sensitive or conflictive to teach?
  g) Which topics are left out (i.e., facilitators do not teach them at all)? Why are these topics omitted?
  h) How can the implementation of CSE be improved?

Collaboration

5. Can you describe how different actors or stakeholders work together in the implementation of Comprehensive Sexuality Education (CSE) in this province/district?
a) Which actors or stakeholders are involved in implementing CSE in this province/district? (Probe for Ministry of Health, NGOs, churches, etc.)
b) What roles do these actors or stakeholders play?
c) What are the benefits or value of having these stakeholders involved?
d) How is the coordination process of CSE across partners or stakeholders managed?
e) What has worked well in stakeholder coordination or partnerships?
f) What are the gaps in partnership or coordination?

- Are there any stakeholders who have been left out? If yes, why?
- What can be done to bring them on board?
  g) What can be done to improve stakeholder collaboration in implementing CSE?

6. Policies That Support or Hinder the Implementation of CSE in Zambia
a) What are some of the policies that are relevant to and guide or support the implementation of CSE? (Please list them.)
b) How do these policies affect the implementation of CSE in schools?

- In what ways do the policies support CSE implementation?
- In what ways do the policies hinder CSE implementation?
  c) How can the policy environment be improved to better support the implementation of CSE?

Performance Indicators

7. What is the pregnancy rate at the provincial level?

- Which district has the lowest pregnancy rate at the school level?
- Which district has the highest pregnancy rate at the school level?
  b) Which district is the best-performing in terms of implementing CSE?
- What is the basis for this rating?
  c) Which district is the least-performing in implementing CSE?
- What is the basis for this rating?

Current Debate on CSE / Conclusion

8) What is your comment regarding the current debate on whether CSE should be taught or modified?
b) What else should be done to better support the implementation of CSE?
c) From your perspective, what should CSE entail?
- Which topics should be removed or changed?
- Which topics should be added?
  d) Is there anything else you would like to add?

Thank you very much for your participation.

END OF INTERVIEW

Appendix 1b -Interview guide (Sub-study II):

Exploring Policy Synergies, Challenges, and Contradictions Influencing Implementation of the Comprehensive Sexuality Education Framework in Zambia: A Policy Analysis

Key Informant / In-Depth Interview Guide – Ministry of Health Staff
(Provincial Health Director, District Health Director, or other recommended staff)

Thematic Area and Guiding Questions

Organisation / Department

1) What role have you or your office played in implementing CSE?
a) From your perspective, what is CSE?

Introduction of CSE in the District / Province

2. Can you describe how and why the Ministry of Health became involved in CSE implementation in this district/province
a) When did the Ministry of Health begin engaging in activities related to CSE implementation in this province or district?
b) What factors motivated the Ministry of Health to implement or support CSE (particularly in relation to adolescent sexual and reproductive health and rights – SRHR)?
3. Key Activities Related to the Introduction of CSE in the District / Province
a) In what ways is the Ministry of Health collaborating with the Ministry of Education in implementing or delivering CSE (or adolescent SRHR initiatives)?

Implementation of CSE in the Province / District / School

4. What are the main activities that have been carried out as part of the CSE implementation process?
a) How is CSE implemented in schools, and what is the Ministry of Health's role in this process?
b) What role has the provincial or district health office played in the implementation of CSE? (Probe for monitoring and coordination activities.)
c) What has worked well in the CSE implementation process?
d) What challenges are experienced by the province or district in supporting the teaching and delivery of CSE?
e) Which topics are considered more sensitive or conflictive to teach, and why?
f) How can the implementation of CSE be improved?

Collaboration

a) Which actors or stakeholders are involved in implementing CSE in this province or district? (Probe for NGOs, faith-based organisations, community leaders, etc.)
b) What roles do these actors or stakeholders play?
c) What is the benefit or value of involving these stakeholders?
d) How is the coordination process for CSE managed across partners and stakeholders?
e) What has worked well in stakeholder coordination or partnerships?
f) What gaps exist in partnership or coordination?

- Are there any stakeholders who have been left out? If yes, why?
- What can be done to bring them on board?

  g) What can be done to improve stakeholder collaboration in implementing CSE?

6. Policies That Support or Hinder the Implementation of CSE in Zambia
a) What are some of the policies that are relevant to, guide, or support the implementation of CSE? (Please list them.)
b) How do these policies affect the implementation of CSE?

- In what ways do the policies support CSE implementation?
- In what ways do the policies hinder CSE implementation?

  c) How can the policy environment be improved to better support the implementation of CSE?

7. Conclusion
a) What are your thoughts on the current debate regarding whether CSE should continue to be taught or be modified?
b) What else should be done to better support the implementation of CSE?
c) From your perspective, what should CSE entail?

- Which topics should be removed or changed?
- Which topics should be added?

  d) Is there anything else you would like to add?

Thank you very much for your time and valuable insights.

END OF INTERVIEW

Appendix 1c -Interview guide (Sub-study II):

Exploring Policy Synergies, Challenges, and Contradictions Influencing Implementation of the Comprehensive Sexuality Education Framework in Zambia: A Policy Analysis

Key Informants: NGOs, CSOs, Church Organizations, and Other Community Stakeholders

Thematic Area and Guiding Questions

Organisation / Department

1. Can you describe your organisation's role and motivation in becoming involved in CSE implementation in this district/province?
   a) What role have you or your office/church/organisation played in implementing CSE?
   b) From your perspective, what is CSE?
2. Introduction of CSE in the District / Province
   a) When did your organisation become involved in CSE-related activities in this district/province?
   b) What factors motivated your organization to be part of the implementation process of CSE (particularly in relation to adolescent SRHR)?

3. Key Activities Related to the Introduction of CSE in the District / Province
   a) In what ways is your organisation collaborating with the Ministry of Education in implementing or delivering CSE or adolescent SRHR initiatives?

Implementation of CSE in the Province / District / School

4. How is CSE being implemented here, and what is working well or challenging?
   a) What are the main activities that have been carried out as part of the CSE implementation process?
   b) How is CSE implemented in schools, and what role does your organisation play in this process?
   c) What has worked well with the CSE implementation process?
   d) What challenges are experienced by the district or province in supporting the teaching and implementation of CSE?
   e) Which topics are considered more sensitive or conflictive to teach, and why?
   f) How can the implementation of CSE be improved?

Collaboration

5. How do different stakeholders collaborate in implementing CSE in this district/province?
   a) Which actors or stakeholders are involved in implementing CSE in this province or district? (Probe for NGOs, faith-based organisations, church

groups, etc.)
b) What roles do these actors or stakeholders play?
c) What is the benefit or value of involving these stakeholders?
d) How is the coordination process for CSE managed across partners and stakeholders?
e) What has worked well in stakeholder coordination or partnerships?
f) What gaps exist in partnership or coordination?

- Are there any stakeholders who have been left out? If yes, why?
- What can be done to bring them on board?
  g) What can be done to improve stakeholder collaboration in implementing CSE?

6. Policies That Support or Hinder the Implementation of CSE in Zambia
a) What are some of the policies that are relevant to, guide, or support the implementation of CSE? (Please list them.)
b) How do these policies affect the implementation of CSE?

- In what ways do the policies support the implementation of CSE?
- In what ways do the policies hinder the implementation of CSE?
  c) How can the policy environment be improved to better support the implementation of CSE?

Conclusion

7. What are your overall views on the future of CSE and how it can be improved
a) What are your thoughts regarding the current debate on whether CSE should continue to be taught or be modified?
b) What else should be done to better support the implementation of CSE?
c) From your perspective, what should CSE entail?

- Which topics should be removed or changed?
- Which topics should be added?

d) Is there anything else you would like to add?

Thank you very much for your time and contribution.

END OF INTERVIEW

Appendix 2- Interview guide (Subs-study III):

Exploring Multisectoral Collaboration in Implementing the Comprehensive Sexuality Education Framework at the Provincial Level in Zambia: A Qualitative Study

Thematic Area and Guiding Questions

Introduction

1. Can you describe how your department is involved in implementing Comprehensive Sexuality Education (CSE) within Eastern Province?
   a) When did your department begin implementing CSE in the province?
   b) Which other stakeholders or sectors do you collaborate with in implementing CSE (e.g., sensitisation, teacher training, service delivery)?

Principled Engagement

2. How are different sectors and actors involved in delivering CSE across the province?
3. How is CSE implementation managed across sectors at the provincial level?
   - Probe: Are there coordination structures such as provincial committees, intersectoral meetings, school assemblies, church sessions, or other platforms?
4. Who are the key actors involved in provincial-level coordination of CSE, and what roles do they play?
5. What are the functions of the provincial coordination committee or structure overseeing CSE?
   - Probe: Planning, policy direction, joint decision-making, governance.
6. What are the benefits of having a multisectoral coordination committee at the provincial level?
7. What aspects of CSE coordination have worked well at the provincial level?
8. What challenges have been experienced in coordinating CSE across sectors in the province? How have these been addressed?
9. How can engagement and collaboration in implementing CSE be improved at the provincial level?

Shared Motivation

10. What are the key issues motivating different sectors to collaborate on CSE implementation in Eastern Province?

11. Probe: Shared concerns such as SRHR challenges, school dropouts, early marriages, and limited resources.
12. How motivated are provincial and district-level actors to address SRHR challenges through CSE? What drives their motivation?
10. What factors affect actors' motivation to collaborate on CSE implementation at the provincial level?
11. What can be done to strengthen motivation and commitment among stakeholders for multisectoral collaboration in CSE?

Capacity for Joint Action

15. What are the key CSE activities jointly implemented by stakeholders at provincial and district levels?
- Examples: Teacher training, community sensitisation, campaigns against child marriage, re-entry policy implementation, service linkages, referrals, counselling, SRHR service provision.
16. What has worked well in collective action for CSE at the provincial level?
- Probe: Availability of resources, power dynamics, and enabling social norms.
17. What has not worked well in collective action for CSE at the provincial level?
- Probe: Resource limitations, power imbalances, restrictive social norms.

- What factors limiting stakeholders' ability and capacity to collaborate effectively on CSE at the provincial level?
- What are potential ways to strengthen joint action and multisectoral collaboration in CSE implementation?

18. Are there any risks or downsides to having too much collaboration among stakeholders?

Conclusion

21. Is there anything else you would like to share that you feel is important for improving the CSE programme through multisectoral collaboration in Eastern Province?

Thank you so much for your participation.

END OF INTERVIEW

Appendix 3 – Interview guide (Sub-study IV):

Collaborative community health system pathways and barriers in implementing Comprehensive Sexuality Education in rural Zambia: A qualitative case study

Thematic Area and Guiding Questions

Introduction

• How is your department involved in implementing Comprehensive Sexuality Education (CSE) in the district/community/school/clinic?

- When did you start implementing CSE?
- Which other stakeholders or actors do you collaborate with or involve in implementing CSE (e.g., sensitisation, teaching, outreach activities, etc.)?

Principled Engagement

1. How are different actors involved in delivering CSE?
2. How is the coordination of CSE implementation carried out? (Probe for availability of structures such as meetings, school assemblies, church sessions, committees, or clinic forums.)
3. Who are the actors involved in the coordination process, and what roles do they play?
4. What are the functions of the committee coordinating CSE at the district/community/school/clinic level? (Probe for planning, policy direction, and governance.)
5. What is the value or benefit of this committee?
6. What aspects of CSE coordination have worked well?
7. What challenges have been experienced in coordinating CSE, and how are these challenges resolved?
8. How can the engagement process in implementing CSE be improved?

Shared Motivation

9. What key issues motivate actors to work together or collaborate in implementing CSE? (Probe for SRHR challenges, school dropouts, lack of resources, etc.)
10. How motivated are the actors in addressing SRHR challenges? (Probe for reasons behind their motivation.)
11. What issues affect actors' motivation in implementing CSE?
12. What can be done to improve actors' motivation towards collaboration for effective CSE implementation?

Capacity for Joint Action

13. What are the key CSE activities that stakeholders collaborate on (i.e., implement together)? (Probe for training of teachers, sensitisation, campaigns against child marriage, re-entry policies, linkages, referrals of adolescents, counselling, and provision of SRHR services in schools and clinics.)
14. What has worked well in collective action on CSE at the district/community/school/clinic level? (Probe for availability of resources, power dynamics, and social norms.)
15. What has not worked well in collective action on CSE at the district/community/school/clinic level? (Probe for issues related to resources, power, and social norms.)
16. What factors limit actors' abilities and capacities to collaborate in delivering CSE at the district/community/school/clinic level?
17. What potential ways can joint action be improved?
18. Is there any downside to having too much collaboration?

Conclusion

19. Is there anything we might have left out that you feel is crucial for improving collaboration in CSE implementation?

Thank you so much for your participation.

END OF INTERVIEW