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Exploring Adolescent Mothers' Experiences of Social and Behavioral Change Communication Interventions for Safe Motherhood in Ndola District, Zambia

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ABSTRACT

Introduction: Adolescent motherhood in Zambia is associated with increased maternal and neonatal risks. Social and Behavioral Change Communication (SBCC) interventions aim to promote safe motherhood practices, yet barriers such as social stigma, cultural myths, and limited access to information may hinder their effectiveness. Understanding the lived experiences of adolescent mothers and Maternal and Child Health (MCH) coordinators is critical to improving SBCC delivery and maternal health outcomes. Aim: To explore the lived experiences of adolescent mothers and MCH coordinators regarding SBCC interventions and their influence on safe motherhood in Ndola District, Zambia. Methods: A descriptive phenomenological study was conducted in 24 urban health centres. Two focus group discussions per centre with 6–10 adolescent mothers each (total n=306) and in-depth interviews with one MCH coordinator per facility (n=24) were conducted. Purposive sampling, audio-recorded sessions, transcription, NVivo coding, and thematic analysis were used to identify key themes. Results: Six major themes emerged from adolescent mothers: (1) perceptions and knowledge of safe motherhood; (2) social and cultural barriers (stigma, myths, fear of judgment); (3) communication and language challenges; (4) facilitators and support systems (trust in health workers, peer and family support, community outreach); (5) preferred interventions and decision-making autonomy; and (6) practical challenges (nutrition, traditional medicine, geographic barriers). MCH coordinators' perspectives generated five themes: (1) barriers to accessing reproductive health services; (2) facilitators to improve engagement and service access; (3) role of programmatic interventions (service integration, community influencers); (4) decision-making in care (client-centered approach); and (5) perspectives on safe motherhood (education, counseling, and clinical care). Conclusion: SBCC interventions can empower adolescent mothers, improve decision-making autonomy, and enhance maternal health behaviors when participatory, culturally

sensitive, and contextually relevant. Recommendations: Strengthen adolescent-friendly services, employ participatory and culturally appropriate SBCC methods, engage families and community leaders, address practical barriers, enhance provider capacity, and integrate SBCC strategies across health and community systems to optimize safe motherhood outcomes.

Keywords: Adolescent mothers, Social and Behavioral Change Communication, Safe motherhood, Zambia, Maternal health.

INTRODUCTION

Adolescent motherhood remains a critical public health concern due to its association with increased risks of maternal and neonatal morbidity and mortality. In Zambia, adolescent mothers often face barriers such as limited access to information, social stigma, and inadequate utilization of maternal health services, all of which undermine safe motherhood outcomes (1). Social and Behavioral Change Communication (SBCC) interventions have emerged as a vital strategy for promoting positive health behaviors, empowering adolescent mothers, and increasing uptake of maternal health services (2).

SBCC interventions typically employ community dialogues, peer education, mass media, and interpersonal communication to address misconceptions and strengthen health-seeking behaviors (3). However, the quality of these interventions measured by relevance, accessibility, and cultural sensitivity largely determines their effectiveness in improving maternal outcomes. For adolescent mothers, who often face unique vulnerabilities shaped by demographic factors such as age, education, and socioeconomic status, high-quality SBCC can influence the adoption of safe motherhood practices, including antenatal care attendance, skilled delivery, and postnatal care utilization (4).

Despite existing SBCC efforts in Zambia, there remain gaps in understanding the barriers and facilitators affecting their delivery and uptake among adolescents. In Ndola District, where adolescent pregnancy rates are relatively high, exploring the lived experiences of adolescent mothers and healthcare providers can provide critical insights. This study therefore focuses on examining the quality of SBCC interventions in improving safe motherhood among adolescent mothers, with particular attention to their perceptions, experiences, and engagement with maternal health services.

METHODS

Study Design, Setting and Participants

A descriptive phenomenological study design was used to explore how adolescent mothers acquire knowledge on Social and Behavior Change Communication (SBCC) interventions for safe motherhood in 24 urban health centres in Ndola District, Copperbelt Province, Zambia. Two focus group discussions (FGDs) were conducted at each health centre, with 6 to 10 adolescent mothers per group, resulting in an estimated total of 306 participants across all sites. Additionally, one in-depth interview was conducted with the Maternal and Child Health (MCH) coordinator at each facility, totaling 24 coordinators. Purposive sampling was used to select participants based on their direct experience with SBCC interventions. Eligible adolescent mothers were aged 10–19 years, had experienced pregnancy, childbirth, or the postnatal period, and had attended SBCC sessions, while those who had never been pregnant

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or had pre-existing medical complications were excluded. MCH coordinators were included based on their direct involvement in planning, supervising, and delivering SBCC interventions at the selected facilities. This approach ensured the collection of rich and diverse perspectives from both service users and providers, enabling a comprehensive understanding of how adolescent mothers acquire and interpret SBCC knowledge.

Data Collection Procedure

Ethical approval was obtained from the University of Zambia Biomedical Research Ethics Committee (UNZABREC) under reference number 5166-2025, and a certificate for researcher recognition was obtained from the National Health Research Authority (NHRA) under reference number NHRA-1302/16/2024. Following explanation of the participant information sheet and obtaining informed consent, data were collected from adolescent mothers through focus group discussions (FGDs) held in private rooms at the selected health centres, and from MCH coordinators through in-depth interviews. Two FGDs were conducted at each health centre, with 6 to 10 adolescent mothers per group, while one in-depth interview was conducted with the MCH coordinator at each facility. Confidentiality and anonymity were maintained throughout the study, and participants were free to withdraw at any time without negative consequences. A counsellor was available during FGDs to provide support due to the potential psychological or emotional impact of the discussions. Data were collected using audio recorders and detailed observation notes to ensure participant privacy, comfort, and safety.

Instruments

Data were collected using in-depth semi-structured interview guides for MCH coordinators and focus group discussion guides for adolescent mothers. The instruments included open-ended questions, with Section A capturing participant characteristics and Section B exploring experiences, perceptions, and interactions with SBCC interventions. The guides allowed flexibility for probing and eliciting detailed responses while maintaining consistency across participants.

Data Analysis

All audio-recorded FGDs and in-depth interviews were transcribed verbatim, and the transcripts together with field notes were reviewed multiple times to gain a comprehensive understanding of the data. Transcripts were organized and coded using NVivo (version 10) to support systematic analysis. A thematic approach was applied, beginning with the generation of initial codes to capture key ideas and meaningful units. Similar codes were clustered into categories, which were then examined for patterns and relationships. From these categories, overarching themes were developed to reflect participants' lived experiences and perceptions of SBCC interventions. The themes were carefully reviewed and refined to ensure they accurately represented the data. To enhance credibility and trustworthiness, the transcriptions were cross-checked and validated by the research supervisors.

RESULTS

Six major themes emerged from the focus group discussions with adolescent mothers. The first theme highlights their perceptions and knowledge of safe motherhood, with sub-themes including understanding of safe motherhood, sources of knowledge, and recognized practices. The second theme explores social and cultural barriers impacting engagement, with sub-themes including stigma, shyness, and cultural myths. The third theme focuses on

communication challenges and language barriers, including difficulties in understanding health messages and lack of clarity on available services. The fourth theme highlights facilitators and support systems, with sub-themes such as trust in health workers, community outreach, and family and peer support. The fifth theme reflects preferred intervention approaches, including one-on-one counselling, involvement of young nurses or peers, and participatory learning methods. The sixth theme addresses decision-making influences, autonomy, and practical challenges, including family influence on decisions, cultural pressures, nutritional constraints, use of traditional medicine, and geographical access barriers. Key statements from adolescent mothers were used to generate sub-themes, which were then merged to develop the main themes as shown in Table

Demographic Characteristics (FGDs)

Focus group discussions were held with adolescent mothers across the selected health centres; each FGD comprised 6–10 participants. Participants were adolescent mothers (aged approximately 15–19 years) who had experienced pregnancy and/or the postnatal period and had some exposure to SBCC activities at clinics and in the community. Educational attainment was generally low to moderate (majority had primary or lower secondary schooling), and social support varied (some lived with family, others with partners or alone). All participants contributed to discussions on knowledge, barriers, communication, support systems, preferences, and practical challenges related to safe motherhood.

Findings from Adolescent Mothers – Focus Group Discussions

Table 1 presents the major themes, sub-themes, and illustrative quotes from adolescent mothers regarding their perceptions and experiences with SBCC interventions and safe motherhood.

Table 1: Major themes, sub-themes and key statements from the participants

Main Theme	Sub-theme	Key Statement (Illustrative Quote)
Perceptions and knowledge of safe motherhood	Understanding of safe motherhood	"To us, safe motherhood means good health for both me and my baby."
	Sources of knowledge	"I learnt about safe motherhood from the clinic."; "reading brochures"; "I just hear from my friends in the community."
	Recognized practices	"I consider eating eggs is good as eggs are cheap to buy and they make a balanced diet."
Social and cultural barriers	Shyness / stigma	"I feel shy and scared to ask because I might be laughed at."
	Cultural myths	"In the community, people say that eating eggs will cause hairless babies."
	Fear of judgment	"We fear to come to the clinic because others might laugh at us."
Communication and language	Language and comprehension	"Most of us did not go far in school and nurses speak English."
	Lack of clarity on services	"Sometimes we do not know what services are available."
Facilitators and Support Systems	Trust in health workers	"The nurses are experienced, and we trust what they tell us."

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	Community outreach	"Nurses go to the community."
	Family and peer support	"Our family members support us."; "We share experiences with friends."
Preferred interventions and decision making	Privacy and youth-friendly staff	"I prefer talking privately with the nurse."; "young nurses or peers"
	Participatory methods	"I prefer role plays."
	Family influence and autonomy	"We usually follow what our mothers say."; "With what I learned from the clinic, I can make my own decisions."
Practical challenges	Nutrition and economic constraints	"We cannot afford enough food."
	Traditional medicine and taboos	"Our parents say herbal medicine is necessary because men who got us pregnant are unfaithful."
	Geographic / transport barriers	"Some of us stay far and find it tiring to travel."

Theme 1: Perceptions and Knowledge of Safe Motherhood:
Adolescent mothers generally understood safe motherhood as ensuring the health and safety of both mother and baby. A typical formulation was: *"To us, safe motherhood means good health for both me and my baby."* Clinics and printed materials were repeatedly cited as information sources ("I learnt about safe motherhood from the clinic", "reading brochures"), but peers and community channels also played a strong role ("I just hear from my friends in the community").

Formal SBCC (clinic talks, brochures) is reaching adolescents and establishing basic concepts (preparation, nutrition, postpartum care). However, the simultaneous reliance on peer networks increases the risk of mixed messaging accurate clinic guidance can be diluted by informal beliefs. Program implication: reinforce clinic messaging and proactively channel accurate information into peer networks and community spaces to reduce misinformation.

Theme 2: Social and Cultural Barriers Impacting Engagement:
Shame, fear of ridicule, and cultural myths were pervasive. Many adolescents reported reluctance to ask questions or attend group sessions because of embarrassment: *"I feel shy and scared to ask because I might be laughed at."* Cultural myths (for example, *"eating eggs will cause hairless babies"*) directly conflicted with health advice and discouraged healthy practices. Fear of public judgment also discouraged clinic attendance: *"We fear to come to the clinic because others might laugh at us."*

Stigma and culturally embedded myths operate together to suppress information-seeking and behaviour change. Even when information exists, these social forces discourage help-seeking and reduce uptake of recommended practices. Program implication: SBCC must create confidential, non-judgmental spaces and run community dialogues to address and dispel harmful myths.

Theme 3: Communication Challenges and Language Barriers:
Limited schooling and the language used by providers were important barriers: *"Most of us did not go far in school and nurses speak English."* Participants also reported not always knowing what services were available: *"Sometimes we do not know what services are available."*

Messaging is sometimes mismatched to adolescents' literacy and language needs, reducing comprehension and preventing utilization. Practical steps include simplifying messages, using vernacular languages and visual aids, and ensuring providers routinely explain available services during consultations and outreach.

Theme 4: Facilitators and Support Systems:
Trust in health workers, active community outreach, and family or peer support emerged as key enablers. Participants reported trusting nurses ("The nurses are experienced, and we trust what they tell us"), appreciating mobile outreach ("Nurses go to the community"), and relying on family/peers for encouragement and information ("Our family members support us"; "we share experiences with friends").

Interpersonal relationships and outreach are pivotal levers for SBCC. Where trust exists and outreach occurs, information uptake and positive behaviors improve. Program implication: strengthen provider client rapport, institutionalize outreach, and train peer educators to amplify accurate messaging.

Theme 5: Preferred interventions and decision-making autonomy:
Adolescents expressed preferences for private, youth-friendly services: *"I prefer talking privately with the nurse."* They favoured relatable educators (young nurses or peers) and participatory methods (role plays) to make sessions engaging: *"I prefer role plays."* However, decision making was often family-led: *"We usually follow what our mothers say,"* though clinic knowledge sometimes supported autonomy: *"With what I learned from the clinic, I can make my own decisions."*

Adolescents need confidential, youth-friendly, participatory interventions to feel safe and engaged. Yet family authority frequently constrains autonomy, so SBCC targeting adolescents alone will have limited impact unless family and community influencers are also engaged.

Theme 6: Practical Challenges in Practicing Safe Motherhood:
Participants faced concrete obstacles: food insecurity (*"We cannot afford enough food."*), reliance on traditional/herbal remedies and taboos (*"Our parents say herbal medicine is necessary…"*), and transport/distance barriers (*"Some of us stay far and find it tiring to travel."*).
Knowledge alone is insufficient where economic, cultural, and geographic barriers exist. SBCC must be accompanied by practical supports (nutrition linkages, transport solutions, engagement with traditional healers) to enable behaviour change.

Findings from MCH Coordinators – In-depth Interviews
The in-depth interviews with MCH coordinators generated five major themes. The first theme highlights barriers to accessing reproductive health services, with sub-themes including stigma

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and cultural norms, lack of privacy, and delayed registration. The second theme focuses on facilitators to improve engagement and service access, such as dedicated adolescent spaces, peer educators, community engagement, and staff training. The third theme emphasizes the role of programmatic interventions in linking services and involving community influencers. The fourth theme addresses decision-making in care, illustrating how care is guided by adolescents' needs. The fifth theme reflects coordinators' perspectives on safe motherhood, focusing on education, counseling, and clinical care. Key statements from participants were used to generate sub-themes, which were then merged to form these main themes, as presented in Table 2.

Table 2: Major themes, sub-themes, and key statements from MCH coordinators

Main Theme	Sub-Theme	Key Statements
Barriers to Accessing Reproductive Health Services	Stigma and Cultural Norms	"When an adolescent falls pregnant, they are more like they have been rejected by society because you can't fall pregnant while you are still at your parents' house."
	Lack of Privacy and Confidentiality	"When there's no privacy, adolescents usually get discouraged to access these services."
	Delayed Registration and Norms	"Most young or teenage pregnant girls usually delay to register because they feel like once they register, then they will lose that pregnancy."
Facilitators to Improve Engagement and Service Access	Dedicated Adolescent Spaces	"It will be good to give them days where they're supposed to come, like a separate clinic for them."
	Peer Educators	"If I'm able to link that person to a peer educator who is able to question that person and then they can freely give me the information, then it won't be difficult for me to probe further."
	Community Engagement	"We are trying to engage more parents, zone leaders, and even men to support the adolescents."
	Training and Capacity Building	"The health service providers and community workers should also be trained in these programs so they are able to link these adolescent clients to the facilities early."
Role of Programmatic Interventions	Integration of Services	"Young people are linked from OPD to MCH,"
	Use of Community Influencers	"We can include more of traditional leaders, like Banachimbusas and religious leaders, because these are influencers."
Decision-Making in Care	Client-Centred Decisions	"We decide on care depending on what the adolescent needs when they come to our facility."
Perspectives on Safe Motherhood	Education, Counseling, and Clinical Care	"My role as a nurse is to provide care under reproduction, ensuring clients understand family planning and antenatal services." "I equip my clients with information so they can make informed decisions."

Theme 1: Barriers to Accessing Reproductive Health Services:

MCH coordinators highlighted multiple barriers that impede adolescents from accessing reproductive health services. **Stigma and cultural norms** were frequently mentioned, with young mothers experiencing societal rejection that discourages clinic visits. One coordinator noted, *"When an adolescent falls pregnant, they are more like they have been rejected by society because you can't fall pregnant while you are still at your parents' house."* This demonstrates that social judgment can generate shame and limit engagement in healthcare. **Lack of privacy and confidentiality** was another barrier, as adolescents are reluctant to discuss sensitive issues when private consultation spaces are unavailable. A coordinator explained, *"When there's no privacy, adolescents usually get discouraged to access these services."* This highlights how structural challenges within healthcare facilities can exacerbate adolescents' vulnerability. **Delayed registration and norms** further impede timely care. Coordinators reported that adolescents often postpone antenatal registration due to fear or misinformation. One coordinator said, *"Most young or teenage pregnant girls usually delay to register because they feel like once they register, then they will lose that pregnancy."* This delay increases the risk of complications, emphasizing the need for early engagement strategies.

Theme 2: Facilitators to Improve Engagement and Service Access:

Coordinators identified several enabling factors. **Dedicated adolescent spaces** create safe and welcoming environments, fostering comfort and privacy: *"It will be good to give them days where they're supposed to come, like a separate clinic for them."* **Peer educators** act as bridges between adolescents and health facilities, helping young mothers feel understood: *"If I'm able to link that person to a peer educator… then it won't be difficult for me to probe further."* **Community engagement** emerged as a critical facilitator. Involving parents, zone leaders, and men can help shift harmful norms, making adolescents more likely to seek care: *"We are trying to engage more parents, zone leaders, and even men to support the adolescents."* **Training and capacity building** for health workers and community volunteers was also emphasized as essential to sustain these interventions: *"The health service providers and community workers should also be trained… so they are able to link these adolescent clients to the facilities early."*

Theme 3: Role of Programmatic Interventions:

Programmatic interventions were described as essential for linking adolescents to continuous care. Coordinators highlighted the integration of services across departments: *"Young people are linked from OPD to MCH,"* which ensures continuity and quality of care. They also emphasized the involvement of **community influencers**, including traditional and religious leaders, to disseminate accurate messages and reduce barriers: *"We can include more of traditional leaders… because these are influencers."*

Theme 4: Decision-Making in Care:

Decision-making was largely **client-centered**, with coordinators tailoring care to adolescents' needs. One participant stated, *"We decide on care depending on what the adolescent needs when they come to our facility."* This approach ensures that interventions are relevant, respectful, and more likely to be effective.

Theme 5: Perspectives on Safe Motherhood:

Coordinators emphasized their dual roles of **clinical care and education**. They equip adolescents with knowledge to make informed decisions, provide antenatal and family

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planning services, and ensure safe motherhood practices: *"My role as a nurse is to provide care under reproduction, ensuring clients understand family planning and antenatal services."* This demonstrates a holistic approach combining counseling, clinical care, and empowerment.

Overall, the findings show that MCH coordinators are aware of structural, social, and cultural barriers that limit adolescent access to care, but they also implement multiple facilitators to mitigate these challenges. Interventions that create private spaces, use peer support, engage the community, and train providers are key enablers of adolescent-friendly reproductive health services. Coordinators' client-centered decision-making and focus on education highlight the importance of integrated, culturally sensitive approaches to improving safe motherhood outcome.

DISCUSSION OF FINDINGS

The study explored the perceptions and experiences of adolescent mothers and MCH coordinators regarding Social and Behaviour Change Communication (SBCC) interventions aimed at promoting safe motherhood. The qualitative findings revealed six major themes among adolescents perceptions and knowledge of safe motherhood, social and cultural barriers, communication and language challenges, facilitators and support systems, preferred interventions and decision-making autonomy, and practical challenges. MCH coordinators' perspectives generated five major themes barriers to accessing reproductive health services, facilitators to improve engagement and service access, role of programmatic interventions, decision-making in care, and perspectives on safe motherhood. Integrating these perspectives provides a holistic understanding of the structural, social, and programmatic factors influencing adolescent maternal health outcomes.

Perceptions and Knowledge of Safe Motherhood

Adolescents in this study demonstrated a basic understanding of safe motherhood, emphasizing maternal and neonatal health. SBCC messages reached adolescents via clinics, printed materials, and peer networks. However, reliance on peers risked the spread of misinformation. Coordinators highlighted the importance of structured education and counseling. To strengthen outcomes, targeted adolescent-friendly SBCC programs that integrate peer education, structured clinic modules, and interactive learning methods are necessary. Globally, participatory approaches such as role plays, community dialogues, and mobile messaging have improved knowledge retention and behavioral adoption in adolescent maternal health (5). Locally, leveraging clinic visits and community spaces can reinforce accurate messaging and reduce misinformation.

Supporting literature emphasizes the effectiveness of structured SBCC interventions in enhancing adolescent knowledge and behavior regarding safe motherhood. For instance, a study found that structured peer education programs significantly improved adolescents' understanding of maternal health practices (6). Conversely, unregulated peer networks could perpetuate myths and misinformation, underscoring the need for supervision and guidance in peer-led initiatives (7).

Social and Cultural Barriers

Stigma, cultural myths, and fear of judgment emerged as critical barriers limiting adolescents' engagement. Coordinators corroborated these findings, highlighting societal rejection,

delayed registration, and restrictive cultural norms. These barriers are consistent with evidence showing that social norms and adolescent stigmatization inhibit maternal health service utilization (2,8). Addressing these barriers requires multi-level interventions, including confidential youth-friendly services, community dialogues to challenge harmful myths, and the engagement of parents, traditional, and religious leaders to normalize adolescent service use (9). Regional data from East Africa suggest that community mobilization and participatory engagement effectively reduce stigma and encourage timely ANC attendance (10).

Contrasting literature presents a more complex picture. Certain cultural beliefs may inadvertently support adolescent mothers by providing community-based support systems, highlighting the importance of integrating cultural contexts into SBCC interventions (11).

Communication and Language Challenges

Limited schooling and the use of non-local languages by providers hindered comprehension and service utilization. Coordinators confirmed adolescents' limited awareness of services available. Effective SBCC interventions should simplify messages, employ vernacular languages, use visual aids, and incorporate participatory methods such as role plays and interactive storytelling. Training healthcare workers in adolescent-sensitive communication is essential to improve understanding, encourage inquiry, and enhance adolescents' confidence in accessing services.

Language and communication are central to maternal health education. For example, language barriers in informed consent processes have been shown to cause misunderstandings and reduce participation in maternal health services (12). This emphasizes the need for culturally and linguistically appropriate strategies in SBCC programs.

Facilitators and Support Systems

Trust in health workers, peer networks, family encouragement, and community outreach emerged as critical enablers. Coordinators reinforced these facilitators, emphasizing the importance of peer educators, adolescent-specific clinic days, and staff capacity building. Evidence indicates that these enablers enhance engagement, retention, and adoption of health behaviors (10). Programs should formalize peer education, strengthen provider-client relationships, and institutionalize outreach strategies to maintain sustained impact. Linking adolescents to broader social support networks and community mentorship can mitigate the influence of social and cultural barriers.

However, over-reliance on peer networks without proper training and support can lead to the dissemination of inaccurate information. Standardizing peer education curricula and providing ongoing training are therefore critical (13).

Preferred Interventions and Decision-Making Autonomy

Adolescents expressed preference for private consultations, youth-friendly staff, participatory learning, and autonomy in decision-making. Coordinators emphasized client-centered care tailored to adolescents' needs. However, family influence remains significant, indicating that SBCC interventions targeting adolescents should simultaneously engage family and community influencers to support informed autonomy. These approaches align with Social

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Cognitive Theory, which emphasizes learning through observation, interaction, and active engagement (14).

Supporting literature shows that increased autonomy in reproductive health decisions is associated with better maternal health outcomes (15). Conversely, teenage mothers often have limited autonomy in infant feeding decisions, with choices heavily influenced by family members (16).

Practical Challenges in Practicing Safe Motherhood

Economic constraints, reliance on traditional medicine, and geographic barriers limited adolescents' capacity to act on SBCC guidance. Coordinators highlighted the importance of integrated service delivery to mitigate these obstacles. Evidence suggests that addressing structural and socio-economic challenges such as providing transport solutions, nutritional support, and culturally sensitive engagement with traditional healers enhances adolescents' ability to adopt recommended health behaviors. Multi-sectoral collaboration between health, social protection, and community systems is therefore critical for sustainable behavior change (17).

For example, economic support and comprehensive health services were effective in reducing adolescent pregnancies in Zambia (18). This underscores the need for integrated approaches addressing both health and socio-economic barriers.

Programmatic Interventions and Service Integration

Coordinators emphasized linking adolescents across service points and engaging community influencers. Integration ensures continuity of care, improves service quality, and strengthens SBCC impact. Globally, combining community mobilization, facility-based education, and adolescent-centered services has been shown to increase ANC attendance, skilled birth delivery, and postnatal care utilization (10). Locally, leveraging existing health infrastructure, building provider capacity, and fostering collaboration with community leaders can overcome cultural and logistical barriers, improving maternal health outcomes among adolescents.However, the success of integrated services depends on context. In Zambia, integration improved maternal health outcomes, but effectiveness varied based on local engagement and adaptability of health systems (19).

CONCLUSION

This study has demonstrated that adolescent mothers face multiple interconnected barriers and facilitators in accessing maternal health services and practicing safe motherhood, as experienced through SBCC interventions. The findings revealed that while adolescents possess basic knowledge of safe motherhood and show engagement in SBCC sessions, their participation is often constrained by social stigma, cultural myths, communication challenges, and practical limitations such as economic and geographic barriers. MCH coordinators acknowledged these barriers but also highlighted effective facilitators, including peer educators, dedicated adolescent spaces, community engagement, and tailored programmatic interventions.

The study underscores that SBCC interventions can empower adolescents, enhance decision-making autonomy, and improve maternal health behaviors when designed to be participatory,

culturally sensitive, and contextually relevant. However, persistent structural and social challenges require integrated, multi-level approaches that simultaneously engage adolescents, families, healthcare providers, and community influencers. The findings have practical implications for health policymakers, program implementers, and educators in designing and delivering adolescent-responsive SBCC strategies that foster safe motherhood outcomes. By addressing barriers while reinforcing facilitators, SBCC can serve as a transformative tool to promote adolescent maternal health at local, regional, and global levels.

STUDY LIMITATIONS

The sensitive nature of adolescent pregnancy and maternal health limited participant recruitment, as some adolescents were hesitant to discuss personal experiences due to fear of judgment or stigmatization. Similarly, MCH coordinators had limited availability due to workload and competing responsibilities. To reduce these challenges, a **conducive environment** was created for data collection by ensuring confidentiality, building rapport with participants, and conducting interviews and focus groups in private, safe spaces. Informed consent was obtained from all participants, and researchers emphasized voluntary participation and the option to withdraw at any point. The study was conducted in selected health centres in Zambia, using a purposive sample of adolescent mothers and MCH coordinators. While this approach facilitated **in-depth qualitative insights**, the findings may not be generalizable to all adolescent mothers or coordinators across the country. Furthermore, the study focused only on MCH coordinators, excluding other healthcare providers such as community health workers, and social support staff, whose perspectives could offer additional understanding of SBCC implementation challenges and successes. Future research should include a larger and more diverse sample across multiple districts, encompassing both urban and rural settings, and integrating a wider range of healthcare providers. Longitudinal studies could track adolescent engagement with SBCC interventions over time, providing stronger evidence for programmatic and policy interventions.

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Conflicts of Interest

The authors declare that there are no conflicts of interest associated with the preparation or publication of this study.

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