Investigating Factors Impeding Effective Reproductive Health Communication between Parents and Adolescents: A Case Study of Kamanga Township in Lusaka, Zambia

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ABSTRACT

Communication between parents and adolescents can help young people make safer decisions about their sexual and reproductive health (SRH). In many settings this communication is limited, and health services and counselling for adolescents do not meet the need. Little is known about the barriers in urban settlements in Zambia.

Objective: To investigate factors that impede effective reproductive health communication between parents and adolescents in Kamanga Township, Lusaka, Zambia. Methods: A descriptive cross-sectional study was conducted. Adolescents from Kamanga Compound were selected by purposive sampling (target 110, analysed 109). Data were collected with a structured questionnaire that included two open-ended items, and were analysed descriptively using the Statistical Package for Social Sciences (SPSS) and Microsoft Excel. Results: Of the 109 respondents, 55.0% were female and 45.0% were male. Fifty-one respondents (46.8%) discussed sexual issues with their parents or guardians and 58 (53.2%) did not. Only 29.6% lived with one or both parents. Among those who did not discuss, the reasons were not feeling free with parents (32.8%), cultural restrictions (27.6%), reliance on peer information (22.4%) and church-based SRH education (17.2%). Sixty-seven per cent rated their parents or guardians as not approachable or less approachable. Misperceptions about the consequences of discussing sex (24.8%), cultural taboos (22.0%) and fear that information would encourage sexual activity (21.1%) were the most frequent social factors. Conclusion: In this non-random sample, parent-adolescent communication on SRH was limited and was reported to be impeded by cultural role allocation, low approachability and parental concerns about the effect of discussing sex. Interventions at family level should include non-parental caregivers.

Keywords: Adolescents, Parent-Adolescent Communication, Reproductive Health, Sexual Health, Cultural Taboos, Kamanga Township

1. INTRODUCTION

Communication within the family matters during adolescence, particularly on reproductive health. Communication means passing information from one person to another by speech, writing or non-verbal means, and sharing ideas [1, 2]. How a family communicates shapes the way an adolescent forms an identity and takes on social roles. Parents are well placed to guide their children on sexual health and to help them build sound judgement about sexual behaviour. Evidence that such communication changes sexual behaviour in sub-Saharan Africa is, however, still inconclusive [3].

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Sexuality education has existed since precolonial times, when parents and elders provided it in reflection of the culture and values of their communities. Traditional societies provided education by responding to existing socio-economic, political and cultural contexts of responsible communities.

The Programme of Action of the 1994 International Conference on Population and Development committed member states to sexuality education that covers sexuality and Human Immunodeficiency Virus (HIV)/Acquired Immune Deficiency Syndrome (AIDS) [4]. Sexuality education was subsequently introduced in the schools of many African countries. Communication between parents and adolescents is expected to lower sexual risk taking [5], yet health services and counselling for this age group remain inadequate [5].

1.1 Statement of the Problem

The World Health Organization defines adolescents as persons aged 10 to 19 years. Adolescence is a stage of rapid biological and psychosocial change [5]. Adolescents worldwide face early pregnancy and parenthood, and barriers to contraception and safe abortion [5].

Adolescents are strongly affected by HIV and other sexually transmitted infections, particularly in developing countries [6]. Adequate counselling from parents is reported to be lacking [7]. Parents may be able to reduce sexual risk taking by discussing sexuality with their children [5], although the evidence for an effect on behaviour is mixed [3].

In Zambia, a cross-sectional study of adolescent girls and their parents found that girls who felt connected to their parents, and who saw their parents as comfortable discussing sex, were more likely to talk with them about sexual issues [8]. We found no published study of parent-adolescent SRH communication from Kamanga Township, a densely populated peri-urban settlement of Lusaka.

1.2 Significance of the Study

The findings of this study will help the Ministry of Health and various governmental and non-governmental organizations to use effective strategies in raising awareness about the importance of parent-adolescent communication on reproductive health at family levels, in order to enhance adolescent health outcomes.

1.3 Research Objectives

General objective: To investigate factors that impede effective reproductive health communication between parents and adolescents.

Specific objectives: (1) To establish the influence of tradition and culture on parent-adolescent relationships. (2) To determine the influence of social factors on parent-adolescent communication.

1.4 Definition of Terms

Adolescents: Defined by the World Health Organization (WHO) as persons between 10 and 19 years of age [9].

Reproductive health: The WHO defines reproductive health as a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity, in all matters relating to the reproductive system and to its functions and processes [4].

Communication: The act of transferring information through speech, the written word, or non-verbal means from one person to another, that is, the sharing of ideas and information.

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2. LITERATURE REVIEW

2.1 Global Perspective

Sexual health is a state of physical, mental and social well-being in relation to sexuality across the life span.

Nurachmah et al. interviewed adolescent girls in areas of Indonesia with a high HIV prevalence. The girls named mothers as their main source of information and described what helped and what hindered their conversations with mothers. Although mothers and daughters talked freely about many subjects, talk about SRH was uncommon [10].

In Vientiane, Lao PDR, 21.3% of 384 students aged 14 to 17 years had communicated with their parents on SRH [11]. The authors regarded this as low and called for school programmes that build communication skills and encourage open talk within families.

Parents are role models for adolescents. They pass on values, traditions and ways of living directly and indirectly, as social learning theory would predict [12]. Adolescence is also a time of life-defining events such as first sexual experience, marriage, pregnancy and parenthood [9].

2.2 African Perspective

Adolescents in Africa carry a heavy burden of early pregnancy, early parenthood and new HIV infections [13]. Parent-adolescent communication has not been widely adopted as an SRH strategy in African countries. In Addis Ababa, parents and adolescents both rated such communication as important, but parents rarely started the conversation. Where it happened it depended on gender, was unplanned and irregular, and was limited by taboos passed between generations [13]. A review of studies from sub-Saharan Africa describes a similar picture and notes that grandparents and aunts historically played a central role in sexuality education [3].

In Ethiopia, studies point to taboos, shame, embarrassment, fear of parents, limited communication skills, and parents who are unresponsive or unwelcoming as barriers [14]. Parents' education and living arrangements were also associated with communication. In Woreta town, 30.6% of 360 secondary school students had discussed at least 60% of SRH topics with their parents [5].

A community-based cross-sectional study of 388 parents and caretakers in Rwanda found that 81% did not discuss sexual matters with their adolescents [15]. A study in Accra, Ghana, reported that 73.6% of adolescents had talked about HIV/AIDS with parents or other family members [16]. Cultural and religious inhibitions have also been described among educated mothers in Kenya [17].

Many adolescents lack accurate SRH information and access to contraceptive services, which increases their exposure to unwanted pregnancy and its complications, HIV and other sexually transmitted infections [6].

Parents have a part to play in protecting children from sexual risk, by supervising them, giving information and shaping attitudes and values about sexuality [3].

2.3 Theoretical Framework

This study used the Social Cognitive Theory (SCT) developed by Bandura [12]. According to this theory, human behaviour is the result of the interaction of personal factors, the environment and the behaviour itself. The SCT explains how people acquire and maintain certain behavioural patterns and also provides a basis for intervention strategies. Among various behavioural factors, Bandura identified self-efficacy and outcome expectations as the most salient [12].

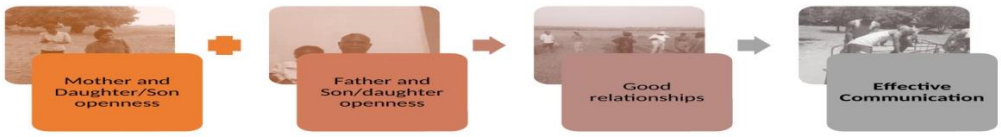
Social cognitive theory is relevant to sexual health communication because it deals with aspects of understanding behavioural change and describes the nature of communication and human development, where children learn to imitate their parents' behaviours [18]. Environmental factors that contribute to

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behavioural enactment include support from others in the form of encouragement and resources [18]. In this study the theory guided the questions on perceived approachability and on beliefs about the consequences of discussing sex. Self-efficacy and outcome expectations were not measured directly.

2.4 Conceptual Framework

Figure 1. Conceptual framework of parent-adolescent SRH communication



Source: Researcher, 2023.

The conceptual framework of this study posits that a good relationship between mother and daughter or son, and between father and daughter or son, results in parents and children being free and opening up to each other. This openness triggers parents or children to initiate effective communication on issues of SRH, leading to improved adolescent reproductive health outcomes.

3. RESEARCH METHODOLOGY

3.1 Study Design

A descriptive cross-sectional research design was used in this study. It provided information useful to the solutions of local issues and gave an accurate account of the characteristics of the phenomenon, situation, community and persons under study. Both quantitative and qualitative methods were applied. The qualitative component consisted of two open-ended questionnaire items.

3.2 Study Population

The study population comprised adolescents from Kamanga Compound. The decision to interview adolescents was based on the premise that adolescents tend to have challenges initiating discussions concerning sexuality and reproductive health with their parents. Adolescents were defined as persons aged 10 to 19 years and were recruited according to age band. The questionnaire recorded age in three bands: 13 to 15, 15 to 17 and 18 to 20 years. Respondents chose their own band, so a respondent aged exactly 15 years could have ticked either of the first two bands. Adolescents below the age of consent were approached by data collectors through their parents or guardians. Other adolescents were approached in the community and interviewed on a walk-in basis.

3.3 Study Setting

The study was conducted in Kamanga Compound in Lusaka District. According to Lusaka City Council, Kamanga Compound is located approximately 14 kilometres east of the City Centre. It lies opposite Chelstone Police Camp on the left-hand side of Galaunia Road off the Great East Road. The settlement has a total surface area of about 526,211.98 square metres with a total population of over 11,000 inhabitants [19]. Data were collected after ethics approval on 25 August 2022 and within the approval period, which ended on 24 August 2023.

3.4 Sampling Technique

A non-probabilistic purposive sampling technique was used, with a target sample size of 110 participants. Purposive sampling was used to reach adolescents in Kamanga who met the inclusion criteria.

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3.5 Sample Size Procedure

This study adopted the Yamane formula to calculate a target sample of 110 participants. According to Yamane (1967) as cited by Israel (2003) [20, 21], the formula is $n = N / (1 + N e^2)$, where n is the sample size, N is the population (11,000) and e is the level of precision (0.1).

Therefore, $n = 11,000 / (1 + 11,000 \times 0.1^2) = 11,000 / 111 = 99.1$, which was rounded to 100. Ten additional participants (10%) were added to allow for non-response, giving a target of 110. The formula assumes random selection. Because participants in this study were purposively selected, the formula was used only to set a target number, and the precision it implies does not apply to the results. N was the total population of the settlement, not the number of adolescents. Of the 110 questionnaires, 109 were analysed. One questionnaire was excluded because it was incomplete and had missing demographic data.

3.6 Inclusion Criteria

Adolescents from Kamanga Compound who were available and willing to participate during the study period were included.

3.7 Exclusion Criteria

Adolescents not residing in Kamanga Compound and those who were unwilling to participate were excluded.

3.8 Data Collection

The study used a structured questionnaire that relied mainly on closed-ended questions, which ensure uniformity and reduce complexity in statistical analysis. The questionnaire recorded sex, age band, highest level of education, religion, ethnic group, living arrangement and the education level of parents or guardians. It then asked whether the respondent discusses sexual and reproductive health with parents or guardians (yes or no), the reasons for not discussing (four listed options), the family member the respondent would be comfortable talking to according to culture and religion, and how approachable parents or guardians are (four categories). Two open-ended items asked respondents to write the reasons that stop parents from having effective SRH communication with their children and the social factors that reduce sexual communication with parents. The questionnaire is provided as a supplementary file. The questionnaire was administered by data collectors, who conducted interviews with the respondents.

3.9 Data Analysis

The Statistical Package for Social Sciences (SPSS) and Microsoft Office Excel were used for data analysis. Quantitative data were analysed descriptively in SPSS and are reported as frequencies and percentages, using the number of respondents who answered each item as the denominator. Responses to the two open-ended questions were read by the first author, grouped into categories of similar responses and counted. Each respondent was assigned to one category. The categories were then grouped into themes under each study objective, and the themes were placed beside the results of the closed items (Table 7). Results are summarised in tables. No inferential tests were performed.

3.10 Validity and Reliability

The researcher observed principles concerning data validity and reliability. The questionnaire was part of the protocol reviewed by the ethics committee, and it was tested on ten respondents before data collection began, to check clarity and consistency of the items. No item was changed after piloting, and the ten pilot respondents were included in the analysis. The main items are single categorical questions and not a scale, so an internal consistency coefficient was not calculated. The questionnaire was not validated against an existing instrument.

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3.11 Ethical Considerations

Ethical approval was obtained from the Lusaka Apex Medical University Biomedical Research Ethics Committee (LAMUBREC), reference number 00408-22, on 25 August 2022 (expedited review), valid until 24 August 2023. The committee reviewed the study proposal, the questionnaire and the participant consent form. Texila American University does not have its own research ethics committee, and LAMUBREC was the only approving committee. Written consent was obtained from the parents or guardians of adolescents under 18 years, and verbal assent was obtained from the adolescents themselves. Adolescents aged 18 years and above gave written consent themselves. The consent form was among the documents reviewed by LAMUBREC. Confidentiality, anonymity and voluntary participation were strictly maintained, and no names were recorded on the questionnaires. No incentives were offered to participants. Before each interview, the interviewer explained to the respondent that some responses may reveal things that put them at risk, such as sexual abuse or coercion, an underage pregnancy or serious distress. The protocol did not include a formal safeguarding procedure for acting on such responses, and this is listed as a limitation. No respondent revealed such a risk during data collection.

4. RESULTS AND DATA PRESENTATION

4.1 Characteristics of Respondents

Table 1 shows the characteristics of the respondents. Of the 109 respondents, 60 (55.0%) were female and 49

(45.0%) were male. Age was recorded for 104 respondents. Of these, 39 (37.5%) were aged 15 to 17 years, 34 (32.7%) were aged 13 to 15 years and 31 (29.8%) were aged 18 to 20 years. Forty-five respondents (41.3%) were in secondary school, 39 (35.8%) were in primary school, 16 (14.7%) were in tertiary education and 9 (8.3%) had never attended school.

Thirty-three respondents (30.3%) belonged to Pentecostal churches, 28 (25.7%) were Catholic, 24 (22.0%) belonged to Evangelical churches, 15 (13.8%) were Seventh-day Adventists and 9 (8.3%) were Muslim. By ethnic group, 23 (21.1%) were Bemba, 20 (18.3%) were Chewa, 17 (15.6%) were Tonga, 15 (13.8%) were Lozi, 13 (11.9%) were Kaonde, 11 (10.1%) were Luvale and 10 (9.2%) were Lunda.

Of 108 respondents who gave their living arrangement, 32 (29.6%) lived with one or both parents, 31 (28.7%) lived with grandparents, 26 (24.1%) lived with an elder brother or sister and 19 (17.6%) lived with an uncle or aunt. Among parents or guardians, 37 (33.9%) had secondary education, 30 (27.5%) had primary education, 21 (19.3%) had tertiary education and 21 (19.3%) had never attended school.

Table 1. Sociodemographic characteristics of respondents

Characteristic	n	%
Sex (n = 109)		
Female	60	55.0
Male	49	45.0
Age band, years (n = 104)		
13 to 15	34	32.7
15 to 17	39	37.5
18 to 20	31	29.8
Highest education of respondent (n = 109)		
Primary	39	35.8
Secondary	45	41.3
Tertiary	16	14.7
Never attended school	9	8.3

Characteristic	n	%
Faith denomination (n = 109)		
Pentecostal churches	33	30.3
Catholic	28	25.7
Evangelical churches	24	22.0
Seventh-day Adventist	15	13.8
Islam	9	8.3
Ethnic group (n = 109)		
Bemba	23	21.1
Chewa	20	18.3
Tonga	17	15.6
Lozi	15	13.8
Kaonde	13	11.9
Luvale	11	10.1
Lunda	10	9.2
Living arrangement (n = 108)		
Both or single parent	32	29.6
Grandparents	31	28.7
Elder brother or sister	26	24.1
Uncle or aunt	19	17.6
Education of parents or guardians (n = 109)		
Primary	30	27.5
Secondary	37	33.9
Tertiary	21	19.3
Never attended school	21	19.3

One respondent did not report a living arrangement (n = 108), and five did not report age (n = 104). Age band categories are as printed on the questionnaire. Percentages are of respondents who answered each item and may not sum to 100.0 because of rounding. Source: Researcher, 2023.

4.2 Discussion of Sexual Issues and Approachability of Parents or Guardians

Fifty-one respondents (46.8%) reported that they discussed sexual issues with their parents or guardians and 58 (53.2%) reported that they did not (Table 2). Of the 109 respondents, 44 (40.4%) reported that their parents or guardians were not approachable at all, 29 (26.6%) reported that they were less approachable, 24 (22.0%) reported that they were approachable and 12 (11.0%) indicated that they were more approachable.

Table 2. Discussion of sexual issues with parent or guardian and approachability on SRH (n = 109)

Variable	n	%
Discusses sexual issues with parent or guardian		
Yes	51	46.8
No	58	53.2
Approachability of parent or guardian on SRH		
Not approachable at all	44	40.4
Less approachable	29	26.6
Approachable	24	22.0
More approachable	12	11.0

SRH, sexual and reproductive health. Source: Researcher, 2023.

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4.3 Tradition and Culture

Table 3 shows the reasons given by the 58 respondents who did not discuss sexual issues with their parents or guardians. About 33% stated that they were not free to talk with their parents. Additionally, 28% indicated that cultural norms require such discussions to occur with grandparents, aunts or uncles. About 22% reported that information obtained from peers was sufficient, while 17% stated that their church provided sexual and reproductive health education.

Table 3. Reasons for not discussing sexual issues with parent or guardian (n = 58)

Reason	n	%
Not free with our parent	19	32.8
Our culture does not allow unless talking to grandparent, aunt or uncle	16	27.6
Information from our peers is enough	13	22.4
Our church handles SRH education	10	17.2

Source: Researcher, 2023.

Table 4 shows the family members that respondents were comfortable talking to. Fifty-one respondents answered this item. Mothers were the most preferred (31.4%), followed by grandparents (27.5%). Aunts or uncles were reported by 21.6% of respondents, while 19.6% indicated elder sisters or brothers. Fathers were not one of the response options.

Table 4. Preferred family member for discussing sexual and reproductive health issues (n = 51)

Family member	n	%
Mother	16	31.4
Grandparents	14	27.5
Aunt or uncle	11	21.6
Elder sister or brother	10	19.6

Fathers were not offered as a response option. Source: Researcher, 2023.

Table 5 shows the reasons given in response to the first open-ended item. About 22% of respondents indicated that cultural norms assign grandparents and aunts the responsibility of discussing sexual issues with girls. Additionally, 21% stated that although parents discuss sexual issues in modern times, cultural limitations still restrict such communication.

About 17% reported that discussions are limited to pregnancy issues, while 16% indicated that cultural beliefs prevent parents from discussing sexual issues with their children. Furthermore, 14% stated that sexual issues are discussed mainly during marriage preparation, while 10% indicated that discussions focus only on sexually transmitted infections. The three culture-related categories together accounted for 64 respondents (58.7%).

Table 5. Reasons for lack of effective SRH communication (open-ended item, n = 109)

Reason	n	%
Culture gives grandparents and aunties the role of discussing sex with girls	24	22.0
In this modern era, parents discuss sexual issues but culture limits them	23	21.1
Sexual issues discussed on pregnancies only	19	17.4
Culture states parents cannot discuss sex with their children	17	15.6
Parents discuss sexual issues only when children are getting married	15	13.8
Sexual issues discussed on STIs only; other issues too sensitive	11	10.1

STIs, sexually transmitted infections. Each respondent was assigned to one category. Source: Researcher, 2023.

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4.4 Social Factors

Table 6 shows the social factors reported in response to the second open-ended item. About 25% of respondents reported misperceptions about the consequences of discussing sexual issues with children. Cultural taboos surrounding sexual topics were reported by 22% of respondents, while 21% believed that discussing sexual issues might encourage children to engage in sexual activity. Social and cultural norms were identified by 17%, and secrecy and shame associated with premarital sex were reported by 15%.

Table 6. Social factors reducing SRH communication with parents (open-ended item, n = 109)

Social factor	n	%
Misperceptions about the consequences of discussing sex with children	27	24.8
Cultural taboos around sexual topics	24	22.0
Fear that sexual information may encourage children to practise sex	23	21.1
Social and cultural norms	19	17.4
Secrecy and shame associated with pre-marital sex	16	14.7

Each respondent was assigned to one category. Source: Researcher, 2023.

4.5 Integration of Closed-Item and Open-Ended Findings

Table 7 groups the open-ended categories into themes under each objective and sets them beside the closed-item results. Culture-related responses accounted for 64 of 109 open-ended responses (58.7%), and 16 of 58 respondents (27.6%) who did not discuss gave culture as the reason. Of the 51 respondents who named a person they were comfortable talking to, 35 (68.6%) named a relative other than a mother. Beliefs about the consequences of discussing sex accounted for 50 open-ended responses (45.9%). Seventy-three respondents (67.0%) rated their parents or guardians as not approachable or less approachable.

Table 7. Open-ended themes and related closed-item results by objective

Theme (open-ended categories)	n (%) of 109	Related closed-item result
Objective 1. Tradition and culture		
Culture assigns or limits who may discuss sex (grandparents and aunts have the role, 24; culture limits parents, 23; culture says parents cannot discuss, 17)	64 (58.7)	16 of 58 non-discussers cited culture (27.6%); 35 of 51 (68.6%) preferred a relative other than the mother
Discussion limited to an event or topic (pregnancy, 19; marriage, 15; STIs, 11)	45 (41.3)	No closed item
Objective 2. Social factors		
Beliefs about consequences (misperceptions, 27; fear of encouraging sex, 23)	50 (45.9)	No closed item
Taboos and social norms (cultural taboos, 24; social and cultural norms, 19)	43 (39.4)	73 of 109 rated parents not or less approachable (67.0%)
Secrecy and shame about premarital sex	16 (14.7)	19 of 58 non-discussers were not free with parents (32.8%)
Other sources of information (closed item only)	Not asked	13 of 58 said peer information is enough (22.4%); 10 of 58 said the church handles SRH education (17.2%)

STIs, sexually transmitted infections. Each respondent was assigned to one category for each open-ended item. Closed-item denominators differ and are shown in each row. Source: Researcher, 2023.

5. DISCUSSION

The demographic composition of this study warrants consideration before the main findings are discussed. Of the 109 respondents, 55.0% were female and 45.0% were male (Table 1). The near-equal distribution is an advantage, but sex differences in communication were not analysed. Gender-disaggregated analysis in future studies is needed to show how communication barriers operate differently for girls and boys.

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The age distribution shows a concentration of respondents within the 15 to 17 year band (37.5%), followed by the 13 to 15 year band (32.7%) and the 18 to 20 year band (29.8%) (Table 1). Adolescence is a period of rapid change in which first sexual experiences may occur [9]. Communication that reaches adolescents early may therefore matter, but this study did not measure sexual behaviour and cannot show when communication is most effective. The age bands also overlap at 15 years, and the highest band extends beyond the WHO definition of adolescence.

The educational profile of respondents (Table 1) shows that most were enrolled in secondary school (41.3%), with 35.8% at primary level, 14.7% in tertiary education and 8.3% having never attended school. The 9 respondents who had never attended school may be a group with less access to school-based SRH information. Their number is too small to draw conclusions, but they could be a priority for outreach that operates outside formal schooling.

The religious affiliations in Table 1 show a religiously plural sample: Pentecostal (30.3%), Catholic (25.7%), Evangelical (22.0%), Seventh Day Adventist (13.8%) and Islam (8.3%). Of the respondents who did not discuss SRH with parents, 17.2% cited church-based SRH education as sufficient (Table 3). Faith-based organisations may be a source of SRH information for these adolescents. The study did not assess the content of that education, and religious affiliation was not compared with communication, so the effect of doctrine on communication cannot be judged from these data. Engaging religious leaders in the design of SRH communication strategies is a reasonable step that this study supports only indirectly.

The ethnic diversity in Table 1, spanning Bemba (21.1%), Chewa (18.3%), Tonga (15.6%), Lozi (13.8%), Kaonde (11.9%), Luvale (10.1%) and Lunda (9.2%), reflects the cosmopolitan character of Kamanga Township as a peri-urban settlement. Different groups may hold different norms about who may speak about sex, to whom, and under what circumstances. A review from sub-Saharan Africa describes grandparents and aunts as historical providers of sexuality education [3]. This agrees with Table 5, where 22.0% of respondents indicated that culture assigns grandparents and aunts the role of discussing sex with girls. The numbers per ethnic group were too small to compare groups, so whether barriers differ by ethnic group remains a question for further study.

The living arrangements of respondents (Table 1) are one of the most structurally revealing findings of this study. Only 29.6% of respondents lived with both or a single parent, while 70.4% resided with other caregivers: grandparents (28.7%), elder siblings (24.1%) or aunts and uncles (17.6%). Much of the discourse on parent-adolescent SRH communication presupposes that adolescents live with their parents. That presupposition did not hold for most adolescents in this sample. The study did not examine why adolescents lived apart from their parents. Urban migration, orphanhood and economic pressure are possible explanations, but they were not measured. Programmes aimed only at parents may not reach most adolescents in this community unless they also involve non-parental caregivers.

The educational attainment of parents and guardians (Table 1) gives further context. Secondary education was the highest attainment for 33.9% of guardians, followed by primary (27.5%), tertiary (19.3%) and no formal education (19.3%). Parents' educational status has been associated with parent-adolescent communication in Ethiopia [14]. We did not test this association. Guardians with limited schooling may find it harder to discuss contraception or STIs accurately, but this is a hypothesis for further study.

The central finding of this study is that 53.2% of respondents did not discuss sexual issues with their parents or guardians, while 46.8% reported doing so (Table 2). Low communication has been reported elsewhere. In Rwanda, 81% of parents and caretakers did not discuss sexual matters with their adolescents [15], and in Lao PDR, 21.3% of high school students communicated with parents on SRH issues [11]. In Accra, 73.6% of students had talked about HIV/AIDS with family members [16]. The figure for Kamanga should be compared with care, because these studies differ in whom they asked, in the topics counted and in how communication was defined [3]. It should also not be taken as evidence of adequate communication. The yes or no question does not show frequency, depth, accuracy or emotional safety. A respondent who had one brief conversation about puberty would be recorded in the same way as one who has ongoing, comprehensive and supportive SRH dialogue with a parent. Future research in this setting should measure

communication quality with multi-dimensional scales that capture content breadth, emotional tone, parental responsiveness and the extent to which adolescents feel empowered by such exchanges.

The reasons for not communicating (Table 3) point to barriers that are interpersonal, structural and normative. The most frequent reason was not feeling free with parents (32.8%). This is consistent with the Zambian finding that adolescent girls who felt connected to their parents were more likely to communicate with them [8]. Cultural restrictions were the second most frequent reason (27.6%). These are adolescents' perceptions, and parents and elders were not interviewed, so we cannot say how widely such rules are held. The Social Cognitive Theory used in this study would suggest that taboos can be passed on through observation, but this study did not test that pathway. Peers were named as a sufficient source by 22.4% of those who did not discuss, and peers are a common source of SRH information for adolescents [22]. The study did not assess the accuracy of peer or church information, so whether this is a concern remains a hypothesis. The 17.2% who named church education as sufficient suggest that faith settings could be partners in SRH communication, and the content of what they teach should be explored.

Mothers were the preferred SRH communication partner for 31.4% of respondents (Table 4), followed by grandparents (27.5%), aunts and uncles (21.6%) and elder siblings (19.6%). The primacy of mothers is consistent with the Indonesian findings of Nurachmah et al. [10] and with the review of African studies [3]. Together, non-parental relatives were named by 68.6% of those who answered. That many adolescents named grandparents suggests that this traditional role remains active in a peri-urban setting, and programmes may build on it. Fathers were not offered as a response option, so this study cannot say anything about paternal communication. This is a gap in the instrument and should be corrected in future work. Table 4 was answered by 51 respondents, not the full sample, and its percentages should be read accordingly.

The approachability data (Table 2) are among the most programmatically relevant findings. A combined 67.0% of respondents rated their parents or guardians as not approachable at all (40.4%) or less approachable (26.6%). Only 22.0% rated them as approachable and 11.0% as more approachable. This is consistent with African evidence that even where parents acknowledge the importance of SRH communication, the initiation of such conversations is rare, not continuous and gender-selective [13]. Approachability was measured with a single item and cannot show cause. The deficit may not be addressed by information campaigns alone. Community-based parenting support, peer education and school and community linkages that address communication skills and emotional availability are options that deserve evaluation.

The reasons in Table 5 describe how culture is perceived to limit communication. The most frequent response was that culture gives grandparents and aunties the role of discussing sex with girls (22.0%). A further 21.1% said that parents discuss sexual issues but are restrained by culture. These responses suggest that some parents may want to communicate but feel limited by cultural norms. This is the respondents' interpretation and needs confirmation from parents. Responses that discussion happens only when children are getting married (13.8%), only on pregnancy (17.4%) or only on STIs (10.1%) suggest that communication, where it occurs, may be reactive and not preventive. This is also a hypothesis, and it needs a study designed to measure the timing and content of conversations.

The social factors in Table 6 can be read through the Social Cognitive Theory used in this study, in that they concern beliefs about the consequences of discussing sex. The most frequent factor was misperceptions about the consequences of discussing sex with children (24.8%), followed by cultural taboos (22.0%) and fear that sexual information would encourage children to practise sex (21.1%). The belief that talking about sex encourages sexual activity has been described among parents in other African settings [3]. Here, it reflects what adolescents wrote about their caregivers, and not what caregivers themselves believe. The evidence on whether parental communication changes sexual behaviour in sub-Saharan Africa is inconclusive [3], so this concern should be addressed through discussion with caregivers and not dismissed. The factors in Table 6 overlap, and they may reinforce each other. Addressing one in isolation may therefore be less effective than approaches that engage parents, religious leaders, community elders, health workers and adolescents together [18].

Taken together, the findings suggest that low SRH communication in Kamanga is shaped by who adolescents live with, by cultural role allocation, by low approachability and by caregivers' concerns. It is not explained by a single factor. Reported communication levels differ across settings, and communication models developed elsewhere should be adapted to local circumstances before they are applied [3]. Interventions in Kamanga are more likely to fit if they work with existing community resources, including grandparents, aunts and uncles, religious institutions and elder siblings. All of the above must be read with the limitations in Section 8.

6. CONCLUSION

The study provides information about factors impeding effective reproductive health communication between parents and adolescents in Kamanga Township. The respondents were 55.0% female, aged 13 to 20 years, mostly in secondary school, and from diverse religious and ethnic backgrounds.

Just under half of respondents (46.8%) reported discussing sexual issues with a parent or guardian, and 70.4% did not live with a parent. Adolescents reported that they were not free with their parents, that culture assigns the role of discussing sex to grandparents, aunts and uncles, and that parents were not approachable. Respondents also reported that misperceptions about the consequences of discussing sex, cultural taboos, and the fear that information would encourage sexual activity reduce communication. These findings are based on a non-random sample and should not be generalised. They call for culturally sensitive interventions that include non-parental caregivers.

7. RECOMMENDATIONS

Based on the findings of this study, the following recommendations are made.

1. Programmes to improve SRH communication in Kamanga should include grandparents, aunts, uncles and older siblings as well as parents, because most respondents did not live with their parents.

2. Programmes for caregivers should address approachability and the concern that discussing sex encourages sexual activity, and should involve religious and community leaders in discussing norms.

3. Male adolescents and fathers should be included in SRH communication programmes and in future studies. Fathers were not a response option in this study, and differences between girls and boys were not analysed.

4. Healthcare workers who engage with families should be aware of the cultural and religious practices that influence who talks to adolescents about sexual matters, so that advice is culturally appropriate.

5. Further research should measure the frequency, content and quality of communication with validated tools, interview parents and caregivers, and compare communication by sex, age, living arrangement and education level in a larger probability-based sample.

8. LIMITATIONS

The study has several limitations. The sample was purposive, drawn from one settlement and small (109 respondents), so the results cannot be generalised and may reflect who was approached. All data are self-reported by adolescents and were collected by interviewers, so they may be affected by social desirability and recall bias. Questionnaires with missing age or living arrangement were retained, while one questionnaire with missing demographic data was excluded. Parents and caregivers were not interviewed, so their views are known only through the adolescents.

The yes or no item on communication does not capture frequency or quality, and the questionnaire was not validated against an existing instrument. The closed item on reasons for not discussing offered four options, which may have shaped the answers. The open-ended responses were grouped by one coder, and each

respondent was assigned to one category, so the percentages show the main reason given and not all reasons held. Fathers were not offered as a response option. Living arrangement was recorded in one category per respondent, and parents were not separated from single parents.

Age was missing for five respondents, the age bands overlap at 15 years, and the top band (18 to 20 years) includes respondents older than the WHO definition of adolescence. The study did not collect socioeconomic status and did not test associations between communication and respondent characteristics, so no conclusion about differences by sex, age, living arrangement, religion, ethnic group or education can be drawn. The study also focused on communication and did not consider other factors that influence sexual behaviour. Respondents were told before the interview that some responses may reveal risks to them, but no formal safeguarding procedure was in place for acting on such responses. This is a limitation because the participants were adolescents and the questions concerned sexual matters.

Conflict of Interest

The authors declare no conflict of interest.

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Ethical Approval

Ethical approval was obtained from the Lusaka Apex Medical University Biomedical Research Ethics Committee (LAMUBREC), reference number 00408-22, on 25 August 2022 (expedited review). Written parental or guardian consent and verbal adolescent assent were obtained for adolescents under 18 years, and adolescents aged 18 years and above gave written consent themselves. Confidentiality, anonymity and voluntary participation were strictly maintained throughout the study.

Data Availability

The data supporting the findings of this study are available from the corresponding author (Dr. Namataa Eric; ericnamataa@gmail.com) upon reasonable request, subject to ethical considerations and participant confidentiality.

Author Contributions

Dr. Eric Namataa: Conceptualization, methodology, data collection, formal analysis, writing of the original draft, and project administration. Dr. Peggy Buumba Bubala: Supervision and writing, review and editing. Mr. Neo Emedy Sakala: Supervision and writing, review and editing. All authors have read and approved the final version of the manuscript.

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