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Content of sexual and reproductive health discussions between hearing-impaired adolescent children and their non-hearing-impaired parents in Kenya

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ABSTRACT

Parents play a critical role in educating their children on issues including sexual and reproductive health (SRH). However, content of discussions of SRH issues with their hearing-impaired adolescent children is unknown. We sought to identify the content of and factors that influence discussions of SRH issues between parents and their hearing-impaired adolescent children. Data were collected through a semi-structured questionnaire interview and focus group discussions from 384 parent-child pairs from 10 approved schools for the hearing-impaired children in the former Nyanza region of western Kenya. The SRH issues discussed included delaying sexual debut, abstinence, use of condoms, family planning, HIV and AIDS, and uptake of voluntary counselling and testing (VCT) services. Age, gender, education, marital status and area of residence of the parents, and gender of the child influenced discussions of SRH issues between parents and their children. Notably, parents who had secondary and tertiary levels of education (OR = 3.474, 95% CI = 1.191-10.131, P = 0.023 and OR = 5.483, 95% CI = 1.650-18.155, P = 0.005, respectively), parents who lived in urban areas (OR = 1.877, 95% CI = 1.198-2.947, P = 0.006), discussed more with their children on SRH issues. However, parents aged 31-40 years (OR = 0.030, 95% CI = 0.002-0.423, P = 0.009) and divorced parents (OR = 0.069, 95% CI = 0.007-0.663, P = 0.021) communicated less with their children. Similarly, there was less communication between the male children and their parents on such issues (OR = 0.346, 95% CI = 0.186-0.645, P = 0.001). These results underscore the role of parents as an important source of information for the children and the need to include them in programs aimed at conveying SRH issues to such vulnerable children. There is also a need to enhance capacity of the parents and improve their access to requisite information to effectively communicate SRH issues to the children.

Introduction

HIV and AIDS remains one of the most debilitating health risks in much of Africa, especially among people with disability who for a long time had been erroneously assumed not to be at risk of ills associated with active sexual behaviour. Indeed, this segment of the human population was often assumed to be sexually inactive and were less likely to experience sexual injustices such as rape (Groce, 2003). However, studies have shown that people with disability are equally, or sometimes have higher chances of exposure to HIV and AIDS infection (Groce, 2003). Even though such people constitute the largest majority group globally (Wylie et al., 2013), they have often been overlooked in programs that address the challenges of sexual and reproductive health (SRH), including HIV infection. Notably, they are amongst the most stigmatized and poorest in the world (Groce, 2005), with majority of them experiencing social inequality and exclusion, in addition to having limited access to human rights protection and healthcare (Hanass-Hancock, 2009; Rohleder et al., 2010).

There is inadequate SRH issue-based education for people with disability, particularly the youth. This is occasioned by many factors, including but not limited to communication barriers and discomfort about sexuality and disability (Rohleder et al., 2010), a situation experienced both in school and at home. Hearing-impaired adolescent children experience communication challenges, identity formation and low self-esteem that have serious implications for their health and development (Wallis et al., 2004). Moreover, studies have shown that they are more likely to have experienced child abuse compared to their hearing peers (Winningham et al., 2008). Further studies have reported unique health-related needs that exist within the hearing-impaired youth population, for example, relatively lower levels of, and insufficient knowledge about key health issues including sexuality (Job, 2004; Joseph et al., 1995). They also have lower levels of understanding of HIV transmission and access to HIV information and reproductive health services relative to those with no disability, and with relatively higher incidence of engaging in risky sexual behaviours (Alemu and Fantahun, 2011). The lower levels of understanding of SRH issues are partly due to peer misinformation and insufficient opportunities to acquire reliable information (Bisol et al., 2008; Xu et al., 2007).

Positive communication between parents and children helps to establish individual values and prepares the later to make healthy decisions (Manu et al., 2015). The challenge is that parents, especially those embracing African cultural values and other reserved cultures, often have difficulty communicating SRH issues (Tesso et al., 2012). Studies have shown that where practiced, parent-child communication on SRH has positive outcomes (Akers et al., 2011; Bastien et al., 2011). While content of communication between parents and hearing adolescent children is known, it is not certain the content of the discussions of SRH issues between parents and hearing-impaired adolescent children. The objectives of the current study were therefore to (i) identify the content of discussions on SRH issues between parents and their hearing-impaired adolescent children, and (ii) establish the factors that influence the perceptions of parents regarding such consequences.

Materials and methods

Study area, population and design

The study was conducted in ten schools randomly selected from a sample frame comprising a list of specially approved schools for hearing-impaired children within the former Nyanza region of western Kenya. The names of the schools, parents and children, however, are not provided for confidentiality purposes. The study population comprised paired parent-hearing-impaired adolescent child attending these schools, with the criteria that the child had to be aged between 10 and 24 years; between class VI (year six in school) and form IV (year twelve in school); must have lived with the parent(s) and in location of origin for at least the preceding 3 months; the parent had to be the biological parent or guardian, and had to be sign language illiterate. A sample of 384 children was randomly selected from class registers as a sampling frame, and consent of the parents' was sought prior to commencement of the study. The study adopted a descriptive survey design and the data was collected through semi-structured questionnaires and focus group discussions (FGDs).

Data collection

To facilitate data collection, ten people (henceforth referred to as enumerators) fluent in the two national languages, English and Kiswahili, were recruited and trained to administer the questionnaire. Prior to data collection, the enumerators were trained on key components of the study, including the general objective, detailed content of the questionnaire, and its administration in a way that protected the identity and privacy of the respondents. The questionnaire was pre-tested among a similar population in the region and adjusted accordingly. Structurally, the questionnaire had closed and open-ended questions organized within key sections capturing (i) socio-demographic information of the study participants, (ii) content of parent-child discussions on SRH issues, and (iii) factor(s) influencing such perceptions. In addition to the questionnaire, a semi-structured FGD guide was used to collect data from the respondents in a bid to verify and authenticate some of the responses received from the questionnaire surveys. Each FGD comprised 8-12 participants who were randomly selected by the facilitators. The discussions were held to saturation i.e. until no additional information was forth coming. Each session took a maximum of one and a half hours.

Statistical analysis

Quantitative data from the questionnaires were coded and entered in Statistical Package for Social Sciences (SPSS) software version 20 (SPSS Inc. Chicago, USA), cleaned and used to generate cross-tabulated frequencies and proportions of the responses on independent variables. Chi square analysis was used to verify association between variables as well as to test for independence. Multinomial logistic regression analysis was used to analyse the factors that influence communication between parents and their hearing-impaired adolescent children. The linear regression method of analysis was used when the dependent variable was nominal with three or more levels. An extension of logistic regression was also used to analyze binary dependent variables as well. Names of the schools and respondents who participated in the study were not included in the manuscript to protect their identity

Results

Socio-demographic characteristics of study participants

The total number of male children in the study was 218 while the total number of female children was 166 (n = 218 for male children and 166 for female children). Analysis of the ages of the children whose parents were interviewed showed that 26/218 (11.9%) of the male children were aged between 10 and14 years while their female counterparts were 26/166, accounting for 15.7% of all the female children. There were a total of 255 children for the age category 15-19 years out of whom there were 143/218 male children accounting for 65.6% of all male children, and 112/166 females accounting for 67.4% of all the female children. Children aged 20-24 years whose parents were interviewed were 77 in total, out of whom 49/218 (22.5%) were male. Female children in this age category were 28/166, accounting for (16.9%) of all the female children. These age distributions did not show any statistical differences. There were no male children who lived with parents of the age bracket of 31-40 years while there were 13/166 (7.8%) female children belonging to this age bracket who lived with their parents. Many of these children lived with parents of 41-50 years age range, with male children being 115/218 (52.8%) while female children were 74/166 (44.6%). Moreover, 92/218 (42.2%) of the male children and 79/166 (47.6%) of the female children lived with parents of 51-60 years age range. Notably, only 11/218 (5.0%) of male children lived with parents of

the age bracket 61-70 years while none of the hearing-impaired female children lived with parents of this age category. This analysis revealed significant differences in the distribution of the ages of the parents who lived with hearing-impaired children (*P*<0.001). Further analysis revealed that most of the children lived with parents who were married, with 130/218 (59.6%) being males and 126/166 (75.9%) being females. Additionally, 14/218 (6.4%) and 12/218 (5.5%) of the male children lived with single and divorced parents, respectively. However, none of the female children lived with either single or divorced parents. Moreover, 62/218 (28.5%) of the male children and 40/166 (24.1%) of the female children lived with widowed parents. This difference showed a statistical significance (*P*<0.001). Only 27/218 (12.4%) of the male children lived with parents who had no formal education, whereas none of the female children lived with parents in this category. Higher number of children lived with parents with primary school level of education; out of whom 86/218 (39.4%) were males and 126/166 (75.9%) were female children. Male children who lived with parents who had acquired secondary level of education were 51/218 (23.4%) while none of the female children lived with parents in this category. Further analysis revealed that 54/218 (24.8%) of the male children lived with parents with tertiary level of education and above, while 40/166 (24.1%) of the female children lived with parents of this level of education. These distributions were statistically different (*P*<0.001). Considering place of residence, the analysis revealed that 77/218 (35.3%) of the male children lived in urban areas compared to 39/166 (23.5%) of the female children. Conversely, male, 141/218 (64.7%), and female children, 127/166 (76.5%), lived in rural areas. Significantly more children lived in the rural areas (*P*=0.012). Sexual activity awareness discussions showed that 205/218 (94.0%) of the male children and 166/166 (100.0%) of the female children had received discussions from their parents on sexual activity awareness. Only 13/218 (6.0%) of the boys had not been talked to about sexual activity awareness. Analysis revealed that the number of children who had been communicated to about their sexual activity awareness were significantly higher (*P*=0.001) relative to those that had not been communicated to. These results are summarized in Table 1.

Table 1. General socio-demographic characteristics of study participants

Socio-demographic characteristics	Sex of children		*P*-value
	Male (n = 218)	Female (n = 166)	
Age of child (years)			
10-14	26 (11.9)	26 (15.7)	
15-19	143 (65.6)	112 (67.4)	0.286
20-24	49 (22.5)	28 (16.9)	
Age of parent (years)			
31-40	0 (0.0)	13 (7.8)	
41-50	115 (52.8)	74 (44.6)	
51-60	92 (42.2)	79 (47.6)	<0.001
61-70	11 (5.0)	0 (0.0)	
Marital status of parents			
Married	130 (59.6)	126 (75.9)	
Single	14 (6.4)	0 (0.0)	
Divorced	12 (5.5)	0 (0.0)	<0.001
Widowed	62 (28.5)	40 (24.1)	
Education level of parent			
No education	27 (12.4)	0 (0.0)	
Primary	86 (39.4)	126 (75.9)	
Secondary	51 (23.4)	0 (0.0)	<0.001
Tertiary and above	54 (24.8)	40 (24.1)	
Residence Urban	77 (35.3)	39 (23.5)	
Rural	141 (64.7)	127 (76.5)	0.012
Sexual activity awareness			
Yes	205 (94.0)	166 (100.0)	
No	13 (6.0)	0 (0.0)	0.001

All data are presented as number (n) and (percentage, %) of children's sexes unless stated otherwise. Statistical significance was determined by use of Chi-square test. P-values in bold were statistically significant at *P*≤0.05.

Content of discussions

To determine the information passed to the hearing-impaired children, the study analyzed the contents of the communication between parents and their hearing-impaired children, results of which are presented in Table 2. Considering delayed sexual debut, 142/168 (84.5%) versus 26/168 (15.5%) of the male parents communicated to their hearing-impaired children, while 154/216 (71.3%) against 62/216 (28.7%) of the female parents had communicated about delayed sexual debut (n = 168 for male parents and 216 for female parents). The proportions of parents who communicated about delayed sexual debut were significantly higher (*P*=0.002). Regarding abstinence, results showed that more parents had communicated to their children about this abstinence, with 146/168

(86.9%) having communicated compared to 19/168 (11.3%) that had not. The female parents who had communicated to their children were 165/216 (76.4%) against only 51/216 (23.6%) who had not (*P*=0.009). Even though discussion about the choice of responsible sexual partner was made, the proportions of parents who had communicated and those who had not were not statistically different (*P*=0.069). Only a few parents had discussed condom use with their children; 19/168 (11.3%) against 149/168 (88.7%) male parents, and 33/216 (15.3%) against 183/216 (84.7%) female parents. The number of parents who had not discussed use of condoms were significantly higher than those who had discussed condom use (*P*=0.023). Only 5 parents of all the 384 parents did not discuss HIV and AIDS with their children (*P*=0.011). There was, however, no significant differences between parents who had not discussed sexually transmitted infections (STIs) and those who had; 99/168 (58.9%) of male parents had discussed STIs against 69/168 (41.1%) who had not had such discussions. There were 132/216 (61.1%) female parents who had discussed STIs with their hearing-impaired children while only 84/216 (38.9%) had not discussed STI issues (*P*=0.665). Additionally, the number of male parents who reported having discussed voluntary counselling and testing (VCT) services was 164/168 (97.6%) versus 4/168 (2.4%) who had not discussed these services. All the female parents had discussed VCT services with their children and these were significantly different (*P*=0.027). Results on discussions on family planning use revealed that only 45/168 (26.8%) of male parents had discussed this with their children while 123/168 (73.2%) had not. There were also only 63/216 (29.2%) of the female parents versus 153/216 (70.8%) who had discussed this with their children. However, this distribution was not statistically significantly different (*P*=0.607).

Table 2. Contents of the discussions of sexual and reproductive health issues between parents and their adolescent hearing-impaired children

Content of discussions		Sex of Parent		P-value
		Male (n = 168)	Female (n = 216)	
Delayed sexual debut	Yes	142 (84.5)	154 (71.3)	0.002
	No	26 (15.5)	62 (28.7)	
Abstinence	Yes	146 (88.7)	165 (76.4)	0.009
	No	19 (11.3)	51 (23.6)	
Responsible sexual partner	Yes	60 (35.7)	97 (44.9)	0.069
	No	108 (64.3)	119 (56.1)	
Condom use	Yes	19 (11.3)	33 (15.3)	0.023
	No	149 (88.7)	183 (84.7)	
HIV and AIDS	Yes	163 (97.0)	216 (100.0)	0.011
	No	5 (3.0)	0 (0.0)	
STI	Yes	99 (58.9)	132 (61.1)	
	No	69 (41.1)	84 (38.9)	0.665
VCT	Yes	164 (97.6)	216 (100.0)	
	No	4 (2.4)	0 (0.0)	0.027
Family planning	Yes	45 (26.8)	63 (29.2)	
	No	123 (73.2)	153 (70.8)	0.607

All data are presented as number (n) and (percentage, %) unless stated otherwise. Statistical significance was determined by use of Chi-square test. P-values in bold were statistically significant at *P*≤0.05.

Factors that influence SRH communication between parents and their children

Regression analysis results are presented in Table 3. The results using the parents' age bracket of 61-70 years as reference revealed that parents in the 41-50 years and 51-60 years age ranges were not associated with communication to children (OR = 0.120, 95% CI = 0.013-1.058, *P* = 0.056 and OR = 0.203, 95% CI = 0.022-1.843, *P* = 0.157, respectively). However, parents in the 31-40 years age range were 97% less likely to communicate with their children on SRH issues (OR = 0.030, 95% CI = 0.002-0.423, *P* = 0.009). Considering children while using age between 20-24 years as reference, there were no associations between age bracket of 10-14 years and also 15-19 years and communication on SRH issues (OR = 2.592, 95% CI = 0.945-7.112, *P* = 0.064 and OR = 1.37, 95% CI = 0.683-2.749, *P* = 0.375, respectively). Using the male parents as reference to determine whether the sex of parent influences communication with their hearing-impaired children, analysis revealed that being a female parent was more associated with the likelihood (95%) of communication to children on SRH issues (OR = 1.95, 95% CI = 1.191-10.129, *P* = 0.030) as compared to male parents. Furthermore, compared to the female gender, being a male child was associated with 65% reduced communication with the parents about SRH issues (OR = 0.346, 95% CI = 0.186-0.645, *P* = 0.001) compared to male gender. In terms of marital status, divorce relatives were 97% less likely to communicate about SRH issues with the children compared to widows (OR = 0.069, 95% CI = 0.0.007-0.663, *P* = 0.021), while being married or single was not associated with communication to children (OR = 1.677, 95% CI = 0.828-3.397, *P* = 0.151 and OR = 0.594, 95% CI = 0.134-2.636, *P* = 0.494). Increase in communication seems to increase with education level attained; with those reporting secondary level of education having a nearly four-fold likelihood of communication compared to those having none (OR = 3.474, 95%

CI = 1.191-10.131, *P* = 0.023), while persons with tertiary level of education were 5.5 times more likely to communicate SRH issues to compared to persons with no education at all (OR = 5.483, 95% CI = 1.650-18.155, *P* = 0.005). In terms of residency, parents living in the urban areas were 20% more likely to talk to their children compared to their rural counterparts (OR = 1.877, 95% CI = 1.198-2.947, *P* = 0.006).

These responses were confirmed during FGDs where participants provided details of SRH information they shared with their hearing-impaired children. They decried the ravaging effects of HIV and AIDS in their areas of residence in addition to challenges they faced in communicating SRH issues with their children. Some of these included: inaccessibility of SRH information, lack of confidence, a belief that their children were not sexually active and that girls were generally more receptive than boys, although some of them still got pregnant in spite of being exposed to information on SRH. They expressed willingness to intensify discussions on SRH with their children but specifically asked that they be trained and equipped with relevant information to enhance their effectiveness in being change agents for their children.

Table 3. Factors that affects communicating sexual and reproductive health issues between parents and their adolescent hearing-impaired children

Factors		OR	95% CI	P-value
Age of parent	61-70	Ref.		
	51-60	0.203	0.022-1.843	0.157
	41-50	0.120	0.013-1.058	0.056
	31-40	0.030	0.002-0.423	0.009
Age of child	20-24	Ref.		
	15-19	1.370	0.683-2.749	0.375
	10-14	2.592	0.945-7.112	0.064
Sex of parent	Male	Ref		
	Female	1.959	1.191-10.129	0.030
Sex of Child	Female	Ref.		
	Male	0.346	0.186-0.645	0.001
Marital Status	Widowed	Ref.		
	Married	1.677	0.828-3.397	0.151
	Single	0.594	0.134-2.636	0.494
	Divorced	0.069	0.007-0.663	0.021
Education level of parent	No education	Ref.		
	Primary	1.314	0.620-2.783	0.476
	Secondary	3.474	1.191-10.131	0.023
	Tertiary and above	5.483	1.650-18.155	0.005
Area of residence	Rural	Ref.		
	Urban	1.877	1.198-2.947	0.006

Data are presented as odds ratios (OR) and 95% Confidence Intervals (CI) for factors affecting communication about sexual and reproductive health to hearing-impaired children. Analysis was performed using multinomial logistic regression analysis.

Discussion

Results of the current study indicated that majority of the respondents were female, a scenario which is common in much of Africa where women are more involved in family activities, some of which include taking care of children, particularly those with disabilities (Touko et al., 2010). The relatively high number of the respondents that were widowed was established during the FGDs to have been occasioned by death of spouses from HIV and AIDS and other preventable diseases, with higher-level causative factors being poverty and inaccessibility of medical care. The respondents generally had moderate literacy levels, although there were no females who had attained secondary level of education, where in this case attaining secondary level of education means completing the four years of classroom studying and attaining a final examination certificate. During the FGDs it was revealed that some of them had joined secondary schools but were forced to drop out either due to unavailability of school fees or because they got pregnant. Others had become pregnant soon after completion of primary school therefore were unable to proceed to higher levels of education, mostly because their parents/ guardians were unwilling to allow them to continue with secondary school, either because they deemed it a waste of resources or because they were needed at home to care for their babies. Nonetheless, after their children attained a certain age, a good number of them pursued tertiary education in terms of village

polytechnics that mostly offered dressmaking, cookery, weaving and hairdressing courses. With regards to the children, there were higher numbers and proportions of male than female children in the sample, a further demonstration of limited education opportunities available to the girl child since hearing-impairmentis a phenomenon that equally affects both boys and girls (Absalan et al., 2013). This indicates the intricate reinforcing effects between limited education opportunities and HIV and AIDS, especially on the girl child in the region. As is evidenced, for example in Uganda, 49% of disabled women and 88% of disabled men have been to school showing clearly that the males have more opportunities to access education than the females. Furthermore, only a limited population of people living with disability have access to education in general (Touko et al., 2010).

Discussions on SRH issues often focuses on delayed initiation of sexual intercourse, abstinence, having responsible sexual partners, condom use, knowledge of HIV and AIDS, improved knowledge of STIs, and utilization of VCT and family planning services (Akers et al., 2011; Bastien et al., 2011; Hacker et al., 2000). Results of the current study confirmed that the parents discussed some of these issues with their hearing-impaired adolescent children. They also indicate a potential of exploiting parents as educators and change agents for their children because as the primary caregivers of these children, they have a major influence on their development (Tesso et al., 2012). However, although a number of these issues were discussed, relatively lower proportions of the respondents held discussions on some of the topics, such as condom use. Indeed, most of the parents were against introduction of this topic to their children because they believed it would be akin to them giving their children permission to engage in irresponsible sexual behaviour. These results are consistent with those from other studies that have reported parents' general desire to be their children's primary educators on issues of sexuality but generally have difficulty discussing such topics (Teitelman et al., 2008). Indeed, matters such as family planning and choice of responsible sexual partners were topics that were not commonly discussed by majority of the parents. During FGDs, parents gave varied reasons why this was the case, including lack of relevant information on the topics, inadequate communication skills, 'shyness' and uncertainty whether the children would understand them. Some parents to female children quipped comments such as *'How do I start telling my daughter about sexual matters?'* and *'I informed my daughter through the sister that AIDS has no cure'*. Some parents also indicated that they did not think their children needed sexual education; that they did not have sexual desire; that they were asexual or less sexually active and therefore less exposed to risks such as HIV and AIDS as well as STIs; and that they were too young to be exposed to such discussions. Indeed, the latter has been reported as a major communication barrier between parents and their children on matters of sexuality (Pariera et al., 2016). Other studies have also reported a general lack of enthusiasm among parents with regards to talking to their children about sexuality and sexual behaviours (Clatos and Asare, 2016). These results thus reinforce a need to assist parents of children living with disability to acquire requisite information and communication skills to initiate, maintain, and impact their disabled children at home. Furthermore, studies have demonstrated that interventions by parents result in significant improvements in parents' beliefs, attitudes, knowledge and sexual communication behaviours, consequently leading to more effective interactions with their children (Clatos and Asare, 2016). Such interventions also enhance the parents' ability to influence their children in making the right decisions regarding sexual behaviour (Klein et al., 2005). Other studies have also reported positive outcomes of parent–child communication in influencing the reduction of sexual-risk behaviours among adolescent children, with topic-specific discussions such as abstinence and condom use being more effective than more general forms of communication (Teitelman et al., 2008).

The regression analysis revealed factors that influence content of discussions between parents and their hearing-impaired adolescent children. These were age, gender, marital status and area of residence of the parent, and gender of the child. The results showed that younger parents in the 31-40 years age range and divorced parents relative to widowed ones communicated less with their children on SRH issues. Being a male child was found to be associated with less communication, while female parents communicated significantly more with their children on such issues. Similarly, parents with secondary and tertiary levels of education, and those who lived in urban areas were found to significantly communicate more with their children on such issues. During the FGDs it was confirmed that the older parents communicated more with their female children relative to those who communicated with their male children on SRH issues. Indeed, some respondents observed that their hearing-impaired adolescent girls were more receptive to advice than boys. Other studies have also reported more positive uptake of SRH information among the girls relative to the boys, with mother-girl child discussions yielding positive sexual behavioural outcomes (Teitelman et al., 2008). However, some parents expressed frustration that their own children had conceived despite having had discussions with them on sexuality and the associated risks. It was, however, noted that most of the pregnancies resulted from abuse rather than consensual sexual interaction. They noted that cases of abuse were, however, relatively less among hearing-impaired male children. This lends credence to studies that have reported the disproportionate exposure to sexual abuse among females living with disability relative to their male counterparts (Aderemi and Pillay, 2013).

The younger and female parents expressed lack of confidence (a virtue the older parents had learnt with time), communication skills and access to relevant information on SRH issues as some of the

key reasons for their inadequacy in communicating such issues to their children. Those who had higher levels of education and lived in urban areas were more exposed, and with diverse sources of information thereby improving their effectiveness in communicating these issues to their children. During the FGDs parents generally agreed that parent-child discussions could help reduce some of the risks associated with improved sexual behaviors such as HIV and AIDS infections. It is observed that although globally there is increased persistence in the fight against HIV and AIDS, there is still a shortfall of specific interventions geared towards people living with disabilities including the hearing-impaired (Touko et al., 2010). These results indicated a need to build capacity of the parents, especially younger ones and women, to build their confidence and improve access to relevant information and strategies to communicate these to their children. This would enhance effective interactions with the children, and with a broader impact of enabling the children to develop skills to live independent lives to their highest capacity. Indeed, it has been observed that risk prevention is enhanced more among adolescent girls when parents are active in communicating with teens their preferences, beliefs and values (Aspy et al., 2007; Jaccard et al., 1996; Margellos-Anast et al., 2005).

Conclusions

The current study identified the content of discussions between parents and their hearing-impaired adolescent children. The results showed that parents generally discussed some of the key SRH topics, indicating an opportunity to exploit this as an avenue to communicate such issues to the children. The study identified some of the barriers responsible for the poor discussion of some of the SRH issues with the children, including lack of relevant information and communication skills and erroneous assumptions that the children did not need sexual education, that they did not have sexual desire, and that they were too young. Finally, the factors influencing such discussions such as age, gender, marital status and area of residence of the parent, and gender of the child were also identified. The results underscored the role of parents as an important source of information for the children and provide a justification for including parents in programs aimed at conveying SRH issues to the children. They also underscore the need for enhancing capacity of the parents and provision of a supportive infrastructure that improves their access to requisite information to effectively communicate SRH issues to their children.

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Competing interests

The authors declare that they have no financial or personal relationships that may have inappropriately influenced them in writing this article.

Authors' contributions

J.O, B.O.A. and C.O. conceptualized the study, J.O. and B.O.A. collected the data, J.O. wrote the first draft of the manuscript and B.O.A., H.A. and C.O. contributed to the finalisation of the manuscript.

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