Factors Associated with Early Involvement in Sexual Behavior Among Adolescents in Oruchinga Refugee Settlement in Isingiro District Southwestern Uganda

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Abstract

Background: The increasing rates of early sexual involvement among adolescents are a significant global public health concern. Despite widespread awareness of the risks associated with early sexual activity, adolescents are becoming sexually active at younger ages. The extent of this issue within the Oruchinga Refugee Settlement is unclear, making it essential to understand the factors contributing to early sexual involvement in this community. Identifying these factors will aid in developing targeted prevention strategies and policies to encourage adolescents to delay sexual activity until marriage, thereby improving their reproductive health. This study aims to explore the factors associated with early sexual behavior among adolescents in the Oruchinga Refugee Settlement in Isingiro district.

Methodology: A mixed-methods study was carried out with a sample of 241 adolescents aged 11-17, chosen randomly from the Oruchinga Refugee Settlement. Data collection involved structured questionnaires and in-depth interviews, and the analysis was performed using Stata 17. Chi-square tests were used to explore the relationships between demographic, socio-economic, environmental, and psychological factors and early sexual involvement, with a p-value of less than 0.05 indicating statistical significance.

Results: Nearly half (47.3%) of the respondents had engaged in sexual intercourse before turning 17, with 32% initiating sexual activity by age 14. Of the participants, 41.9% engaged in sexual activity willingly, and 22% had multiple partners. Significant associations were identified between early sexual involvement and factors such as gender ($\chi2=27.45$, $p < 0.001$), religion ($\chi2=37.31$, $p = 0.001$), educational level ($\chi2=15.22$, $p = 0.001$), parental education ($\chi2=8.377$, $p = 0.015$), fasting ($\chi2=99.37$, $p = 0.001$), and cultural beliefs ($\chi2=14.33$, $p = 0.001$). Socio-economic variables like the father's sexual education ($\chi2=8.704$, $p = 0.03$), media access ($\chi2=12.42$, $p = 0.002$), sources of sexual information ($\chi2=28.62$, $p = 0.001$), parental employment ($\chi2=21.94$, $p = 0.001$), number of romantic partners ($\chi2=15.98$, $p = 0.001$), peer pressure ($\chi2=87.99$, $p = 0.001$), negotiation skills ($\chi2=203.2$, $p = 0.001$), substance use ($\chi2=19.79$, $p = 0.001$), attending nightclubs ($\chi2=38.73$, $p = 0.001$), transactional sex ($\chi2=116.4$, $p = 0.001$), suicidal thoughts ($\chi2=6.194$, $p = 0.045$), stress ($\chi2=20.885$, $p = 0.000$), and family emotional support ($\chi2=10.529$, $p = 0.032$) were also found to be significantly associated with early sexual behavior.

Conclusion and Recommendation: The study highlights a high prevalence of early sexual activity among adolescents, with initiation as early as 14 years. There is an urgent need to strengthen policies regarding adolescent sexual health, raise public awareness about the risks of early sexual activity, and educate youth on sexual and reproductive health. Churches and other organizations should promote the message of "No Sex Before Marriage." Parents and guardians should be educated on how to communicate effectively about sexual matters with their children. Additionally, peer support groups should be developed to help adolescents deal with peer pressure and manage the changes of puberty throughout adolescence.

Background

Sexual health encompasses the capacity to enjoy and express one's sexuality without the dangers of sexually transmitted infections, unwanted pregnancies, coercion, violence, and discrimination (Ahikire, 2009). It is a lifelong aspect, starting before birth and continuing throughout one's life, involving the experience of sexual pleasure and the potential for reproduction (Dixon-Mueller, 2010).

Adolescence marks the transition from childhood to adulthood, characterized by increased responsibility, autonomy, and heightened health risks (UDHS Report, 2011). Evidence shows that girls are more likely to drop out of school than boys, primarily due to factors such as pregnancy and early sexual activities, with approximately 34% leaving school because of pregnancy, 28% due to poverty, and 11% owing to early sexual engagement (Ahikire, 2009).

Adolescents who begin sexual activities between ages 11 and 14 face numerous risks, including adjustment difficulties and unsafe sexual behaviors (Schofield et al., 2008). Early initiation of sexual intercourse is linked to a higher likelihood of having multiple sexual partners and engaging in unprotected sex, which heightens the risk of sexually transmitted diseases like AIDS and complications such as premature rupture of membranes, preterm labor, and postpartum infection (WHO, 2009). Additionally, an early sexual debut increases the risk of HPV infection due to the immaturity of the cervix, raising the chances of cervical cancer (WHO, 2009). According to the WHO (2010), the neonatal mortality rate for infants born to teenage mothers is

41 per 1,000 live births, compared to 22 per 1,000 for those born to mothers aged 20 to 29 years. Furthermore, a study by Onsumu et al. (2010) found that among sexually active individuals aged 15-19, 7% of women and 2% of men reported having had an STI or STI symptoms in the previous year. Those who start sexual activity early are also more likely to experience academic difficulties, which can restrict their future social and vocational prospects (Kauffman et al., 2013).

In 2019, around 11.0 million people were newly displaced (UNHCR, 2019). Adolescents represent a significant portion of the most vulnerable populations in refugee situations globally (Edge et al., 2014). In 2017, individuals under 18 years old comprised over half (52%) of the refugee population (UNHCR, 2019). Adolescence, defined as the period from 10 to 19 years of age, marks the transition from childhood to adulthood (UNHCR, 2019). Adolescents are particularly susceptible to sexual violence, which can result in unintended pregnancies, school dropouts, unsafe abortions, and STIs, including HIV (Urdinola and Ospino, 2015). According to the Inter-Agency Working Group for Reproductive Health in Crises (IAWG), 1.2 million adolescents die each year from pregnancy and birth-related complications worldwide, with two-thirds of these deaths occurring in the least developed countries in Africa and Southeast Asia. This high mortality rate is attributed to the lack of adequate sexual and reproductive health information and services.

In Africa, teenagers' in particular young girls have continued to be at high risk of early sex behaviours of becoming pregnant and contracting sexual transmitted diseases (Onsumu et al., 2010). In sub-Saharan Africa, about 24% of teenage girls get pregnant before the age of 19. According to a study by Doyle et al., (2012), up to 25% of adolescents 15- to 19-year-olds reported to have had sex before age 15 years. In most countries, ≥ 5% of females reported marriage before age 15, and >20% had commenced childbearing. Furthermore, sexual practice data are not collected for adolescents aged <15 years, although 30% of 15- to 19 year-olds in some countries report sex before the age of 15 (Dixon-Mueller 2009).

In East Africa, early onset of sexual activity is as equally as high, as each year over 100 secondary school teenagers become pregnant and others diagnosed with a sexually transmitted disease (STD) (Kauffman et al., 2013). In Tanzania, in 2010, more than 8,000 girls dropped out of school due to pregnancy, including about 1,760 girls in primary school and over 6,300 in secondary school (Songa, 2012). Another study showed that 57.8% had sex before their 15th birthday with incidence of early sexual debut of 17.4/1000 person-years at risk **(**Mmbaga et al., 2012). In Kenya among high school adolescents' boys and girls, 44% reported having had their first Sexual encounter before the age of 18 years (Wanjiku, 2015).

In humanitarian settings, adolescent sexual and reproductive health (ASRH) needs are either ignored or neglected. Uganda hosts the third-largest refugee population in the world, and the largest in Africa (Betts et al, 2019). By May 2020 Uganda was to host an estimated 1.4 million refugees and asylum seekers (United Nations Office for the Coordination of Humanitarian Affairs Uganda, 2019). These are largely hosted in the West Nile (in Moyo, Adjumani, Yumbe, and Arua districts), Northern (Lamwo district), and Western (Isingiro, Kikube, Kiryandongo districts) regions of the country (UNHCR, 2020). The majority of refugees in Uganda are from South Sudan and the Democratic Republic of Congo (Government of Uganda and UN, 2020) and 82 percent are women and children (World Bank, 2019).

Humanitarian settings in Uganda are associated with a high prevalence of gender-based violence (GBV) which is a risk factor for poor ASRH outcomes (Jennings et al, 2019). In Uganda, ASRH services such as HIV and AIDS, and contraceptive use are often neglected. Moreover, access and availability to ASRH are limited due to social and structural factors and over-burdened health systems within humanitarian settlements (Spiegel, 2017). Adolescents in humanitarian settings are at a higher risk of experiencing gender-based violence (GBV), STIs, mental stress, sexual coercion, rape, forced prostitution, human trafficking than adolescents in development settings (Spiegel, 2017).

Uganda is in the top four countries that host the largest refugee populations, of which half are under 18 years (UNHCR, 2020). This also applies to Nakivale, one of Uganda's earliest refugee settlements (UNHCR, 2020). Research into adolescent refugees' SRHR needs is scarce, but available data point to exacerbations of SRHR vulnerabilities already common amongst this age group (Botfield et al., 2016; Nordström & Agardh, 2020). Vulnerabilities pertain to sexual violence and abuse, including the risk of adolescent boys and girls engaging in sex work and transactional sex, lack of knowledge on and access to contraceptives, and forced child marriages (Ivanova et al., 2018; Ivanova et al., 2019; Wachira et al., 2016). In Uganda and Oruchinga refugee settlement, such conditions make refugee adolescents more vulnerable to engage in sexual behavior in an environment where they may not have access to ASRH services.

Problem Statement

In Oruchinga and Nakivale refugee settlements, refugee adolescents are reportedly engaged in early sexual intercourse in exchange for money (Ivanova et al., 2019; Spiegel, 2017). Adolescent refugees face added challenges due to displacement, stigma, and discrimination (Mwenyango and Palattiyil, 2019). The Sexual Reproductive Health (SRH) needs of adolescent refugees are exacerbated by disruption of family and social structures, gender imbalances between men and women, violence and poverty, and its effects such as psychological disorders and mental health needs (UNHCR, 2019). Such conditions make refugee adolescents more vulnerable to engage in sexual behavior at an early age in an environment where they may not have adequate and convenient access to ASRH services. In Oruchinga Refugee Settlement, adolescents need comprehensive SRH services to productively transit from childhood to adulthood (UNHCR, 2019).

While these conditions are common in humanitarian settings, the risk factor profile of refugee adolescents and how these are likely to affect their sexual behavior is not adequately researched and hence less known. Most studies have been done on factors affecting sexual behavior among adolescents but few have focused on adolescents. Moreover, limited studies have been done in a refugee setting given that these adolescents may have unique challenges. This is likely to affect the reproductive health of refugee adolescents in terms of higher risks of sexual abuse, exploitation, and violence, and transmission of sexually transmitted infections and/or

unwanted pregnancies, unsafe abortion and early marriage if not addressed.

This study examined factors associated with early involvement in sexual behavior among adolescents in Oruchinga refugee settlement in Isingiro district. It is important to understand psychosocial factors associated with early sexual involvement in refugee adolescents to develop a plan that responds to their specific needs, especially in settings with limited resources to tackle all needs. This once established will enable planners to develop refugee tailored adolescent programs that help in drastically reducing early sexual behaviour in Oruchinga refugee settlement.

General Objective

To investigate factors associated with early involvement in sexual behavior among adolescents in Oruchinga refugee settlement in Isingiro district.

Specific Objectives

To assess the prevalence of early sexual involvement among adolescents in Oruchinga refugee settlement in Isingiro district.
To examine the influence of Demographic and Socio-economic factors on early involvement in sexual behavior among adolescents in Oruchinga Refugee settlement.
To examine the influence of Environmental factors on early involvement in sexual behavior among adolescents in Oruchinga Refugee settlement.

To examine the influence Psychological factors on early involvement in sexual behavior among adolescents in Oruchinga Refugee settlement

Significance of the Study

The study may be useful to the field of reproductive health for identifying the unique reproductive health needs of these refugee adolescents such that strategies of better outreaches and appropriate information can be given to them. The policymakers of sex education in the government and humanitarian agencies in the refugee settlement will find the study useful because it may be the basis of revising policy plans and programs on sexual reproductive health in a refugee setting. The study will also be used to address adolescent girls and boys in their seminars and conferences and will share with the spiritual leaders to awaken them to take part in guiding these adolescents.

Methodology

The study employed a mixed-methods approach, integrating both quantitative and qualitative methods for comprehensive data collection. Quantitative data was collected through structured questionnaires administered to adolescents, while qualitative data came from key informant interviews with representatives of refugee agencies. This combination allowed for a deeper understanding of the factors influencing early sexual behavior in Oruchinga Refugee Settlement, ensuring that data gathered from different sources validated each other and increased the reliability of the study's conclusions.

A sample of 293 participants was selected, consisting of 288 adolescents and five representatives from gender-related refugee agencies. Adolescents were chosen using simple random sampling, while key informants were purposively selected. The study's sample size was determined using Cochran's formula, and participants were interviewed with questionnaires translated into both Runyankole and English. Data collection occurred over a month, with research assistants trained to maintain ethical standards and accuracy during the process.

Quantitative data analysis was conducted using SPSS, employing descriptive statistics and logistic regression to assess relationships between early sexual involvement and factors like demographic, socioeconomic, and psychological influences. Qualitative data from interviews was analyzed thematically, with recurring patterns identified and coded. The integration of both methods enhanced the depth of understanding, providing a well-rounded perspective on the study's objectives. Ethical considerations, including participant consent and confidentiality, were prioritized throughout the research.

Results

Prevalence of sexual practice among adolescents in Oruchinga Refugee settlement

Data was collected from adolescents residing in the Oruchinga Refugee Settlement, with a total of 241 respondents participating in the study. Their ages ranged from 11 to 17 years, with the majority (58.5%) falling within the 11-14 years age group, while the remaining 41.5% were aged 15-17 years (Table 1). Among the 241 adolescents, findings revealed that 47.3% (n=114) had engaged in sexual activity at an early age, while 52.7% (n=127) had never engaged in sexual intercourse (Table 4).

The influence of demographical factors on early involvement in sexual behavior among adolescents in Oruchinga Refugee settlement

This section sought to assess the influence of demographical factors on early involvement in sexual behavior among adolescents. Results were presented in Table 1.

Demographic factors of the adolescents in Oruchinga Refugee settlement.

The majority of the respondents (58.5%) fell within the age range of 11-14 years, while 54.4% were female. The majority of respondents identified as Protestants (36.1%), with a significant portion (65.6%) hailing from Rwanda as their country of origin. In terms of education level, nearly half (49.4%) were in O & A level classes. Regarding paternal education, 59.8% reported their fathers had attained primary or secondary level education. A majority (52.3%) attended religious services once a week, and 90% considered religion to be very important. In terms of religious practices, 36.5% reported never or rarely fasting. Lastly, 78.0% stated they did not adhere to cultural beliefs permitting sex before marriage. Details of the Univariate analysis are given in the Table 1 below.

Table 1: Univariate analysis of demographic factors influencing early sexual practices among adolescents in Oruchinga Refugee settlement (N=241).

Variable	Category	Frequency (n)	Percentage (%)
Country of Origin	Rwanda	158	65.6
	Burundi	19	7.9
	DRC	15	6.2
	Somalia	48	19.9
Age	11-14	141	58.5
	15-17	100	41.5
Sex	Female	131	54.4
	Male	110	45.6
Religion	Catholic	59	24.5
	Protestant	87	36.1
	Born- again	65	27.0
	Others	10	4.1
	Moslems	21	8.7
Class	Lower and upper primary	81	33.6
	Lower and upper secondary	119	49.4
	Certificates and above	41	17.0
Formal education of father/guardian	Never attended school	13	5.4
	Primary/secondary school	144	59.8
	College / University	84	34.9
Attendance of services	Every day	100	41.5
	At least a week	126	52.3
	At least once a month	15	6.2
Importance of religion	Very important	217	90.0
	Important	20	8.3
	Not important	4	1.7
Fasting	At least once a week	75	31.1
	At least once a month	79	32.8
	Not at all /rarely	88	36.5
Cultural beliefs	Permit	49	20.3
	Do not	188	78.0
	Missed	4	1.7

4.2.2 Relationship between demographic factors and early sexual involvement among adolescents in Oruchinga Refugee settlement (N=241).

Table 2: Bivariate analysis of demographic factors and sexual factors influencing early involvement in sexual behavior among adolescents in Oruchinga Refugee settlement (N=241).

Variable	Category	Ever played sex		X^2, df	OR	95%CI	P value
		Yes (114)	No (127)				
Country of origin	Rwanda	73(64.0%)	85(66.9%)				
	Burundi	9(7.9%)	10(7.9%)				
	DRC	6(5.3%)	9(7.1%)				
	Somalia	26(22.8%)	22(17.3%)				
Age	11-14	77(67.5%)	64(50.4%)	6.893,1	0.58	0.39-0.87	0.090
	15-17	37(32.5%)	63(49.6%)		1		
Sex	Female	46(40.4%)	85(66.9%)	27.45,1	0.34	0.22-0.57	0.001
	Male	68(59.6%)	42(33.1%)		1		
Religion	Catholic	30(26.3%)	29(22.8%)	37.31,1	0.35	0.15-0.83	0.001
	Protestant	47(41.2%)	40(31.5%)		0.40	0.18-0.93	
	Born- again	16(14.0%)	49(38.6%)		0.11	0.05-0.26	
	Others	6(5.3%)	4(3.1%)		0.52	0.14-1.87	
	Moslems	16(14.0%)	5(3.9%)		1		
Class	Lower and upper primary	30(26.3%)	51(40.2%)	15.225	0.74	0.24-1.15	0.001
	Lower and upper secondary	66(57.9%)	53(41.7%)	15.225	1.57	0.25-1.29	
	Certificates and above	18(15.8%)	23(18.1%)		1		
Formal education of father/guardian	Never attended school	5(4.4%)	8(6.3%)	8.377,2	2.02	0.18-1.19	0.015
	Primary/secondary school	61(53.5%)	83(65.4%)		0.55	0.36-0.84	
	College / University	48(42.1%)	36(28.3%)		1		
Attendance of services	Every day	43(37.7%)	57(44.9%)	2.250,2	0.68	0.28-1.34	0.325
	At least a week	63(55.3%)	63(49.6%)		0.92	0.27-1.20	
	At least once a month	8(7.0%)	7(5.5%)		1		
Importance of religion	Very important	99(86.8%)	118(92.9%)	3.860,2	0.33	0.01-1.51	0.145
	Important	12(10.5%)	8(6.3%)		0.58	0.41-1.45	
	Not important	3(2.6%)	1(0.8%)		1		
Fasting	At least once a week	58(50.9%)	17(13.4%)	99.37,2	3.48	2.03-5.97	0.001
	At least once a month	12(10.5%)	67(52.8%)		0.17	0.19-0.85	
	Not at all /rarely	44(38.6%)	44(34.6%)		1		
Cultural beliefs	Permit	32(28.1%)	17(13.4%)	14.33,2	4.72	0.36-6.54	0.001
	Do not	81(71.1%)	107(84.3%)		1.87	1.12-2.06	
	Missed	1(0.9%)	3(2.4%)				

Sex ($\chi2$=27.45, $p < 0.001$), religion ($\chi2$ =37.31, $p = 0.001$), class ($\chi2$=15.22, $p = 0.001$), parental formal education ($\chi2$=8.377, $p = 0.015$), fasting ($\chi2$ =99.37, $p = 0.001$), cultural beliefs ($\chi2$ =14.33, $p = 0.001$), and father's sexual education ($\chi2$=8.704, df=3, $p = 0.03$) were found to be significantly linked to sexual practices, as detailed in Table 2. Conversely, age, tribe, attendance at religious services, and understanding

the importance of religion did not exhibit significant associations with sexual practices among secondary school teenagers.

Females showed a lower likelihood of engaging in sexual activity compared to males (OR=0.34, 95% CI=0.22 - 0.57). Similarly, individuals identifying as Catholics (OR=0.35, 95% CI=0.15-0.83), Protestants (OR=0.4, 95% CI=0.18-0.93), Born Again Christians (OR=0.11, 95% CI=0.05-0.26), and those of other religions (OR=0.52, 95% CI=0.14-1.87) exhibited reduced likelihoods of engaging in sexual activity compared to Muslims. Regarding education levels, individuals in lower and upper primary (OR=0.74, 95% CI=0.24-1.15) showed lower likelihoods of early sexual activity, while those in lower and upper secondary (OR=1.57, 95% CI=0.25-1.29) demonstrated higher likelihoods of engaging in early sexual activity compared to those with certificates and higher qualifications.

Moreover, students with fathers lacking formal education were twice as likely to participate in early sexual activity, whereas those with fathers educated up to primary or secondary levels were less inclined to do so compared to those with fathers holding college or university degrees. Similarly, students who perceived their cultures as allowing premarital sex were more prone to engaging in early sexual activity compared to those who believed their cultures prohibited it.

Social- economic factors influencing early sexual involvement among adolescents in Oruchinga Refugee settlement

The majority of respondents (31.5%) reported finding it easy to communicate with their fathers. A significant portion (61.4%) stated they had never received sexual education from their fathers. A majority (56.0%) mentioned finding it very easy to communicate with their mothers/guardians. A large proportion (88.8%) reported receiving sexual education lessons at school, with 71.4% of students expressing a desire for more of such lessons. Half of the respondents (52.7%) acquired sexual education information from the media, while a majority (53.5%) obtained it from schools. Only a small percentage (17.8%) had received sexual education from church. Most respondents' parents (62.2%) were self-employed. A considerable number (50.6%) had experienced periods of lacking necessities, while 22.4% had two or more boy/girlfriends, and 41.9% reported having engaged in sex willingly.

The majority of respondents (68.0%) reported never experiencing pressure for sex. Among adolescents who did experience pressure, 27.4% said it came from friends. Approximately 28.6% of respondents never negotiated about sex. Most respondents (75.9%) reported never using alcohol or substances, while 55.2% of those who did cited influence from friends. The vast majority (93.9%) tended to engage in sexual activity without alcohol. Approximately 71% indicated that youth-friendly services were accessible, and 64.3% had undergone HIV testing. A majority (67.6%) had not attended nightclubs, and among those who had (32.4%), 42.3% cited peer influence as a reason. Most respondents (75.4%) expressed satisfaction with abstaining from sexual activity, while among those who had engaged in sex (47.8%), 52.2% reported satisfaction with their first sexual experience. The majority (92.4%) stated they had never exchanged sex for material goods. Detailed univariate data are provided in Table 3.

Table 3: Univariate analysis on social-economic factors of adolescents in Oruchinga Refugee settlement (N=241).

Variable	Category	Frequency (N=241)	Percentage
Talking to father	Very easy	58	24.1
	Easy	76	31.5
	Difficult	31	12.9
	Very difficult	22	9.1
	I do not see him	53	22.0
Sexual education by the father	Often	9	3.7
	Occasionally	31	12.9
	Never	148	61.4
	Not applicable	53	22.0
Talking to mother/guardian	Very easy	135	56.0
	Easy	77	32.0
	Difficult	17	7.1
	very difficult	12	5.0
Having school lessons on sexual education	Yes	214	88.8
	No	27	11.2
Lessons should be	More	172	71.4
	Less	17	7.1
	Right number	34	14.1
	Not applicable	19	7.9
Access to media:	Not at all	114	47.3
(News, T.V/ Films and Radios)	≤ and at least a week	107	44.4
	Almost daily	20	8.3
Obtain sex information from different sources.	Radio	76	31.5
(More than one option)	T.V/Films	81	33.6
	Internet	84	34.9
	School	129	53.5
	Parents	53	22.0
	Church	43	17.8
Parental employment	Self-employed	150	62.2
	Employee	78	32.4
	No job	13	5.4
Needs provision	All time got all needs	97	40.2
	At times lacked needs	122	50.6
	All time lacked needs	22	9.1
Playing sex	Ever	114	47.3
	Never	127	52.7
Age at first sex (n=114)	< 13	43	37.7
	13 – 15	60	52.6
	16-17	10	8.8
Number of boy /girl friends	Had one	80	33.2
	Had ≥ two	54	22.4
Peer pressure	Played sex forcefully	12	5.0
	Played sex willingly	101	41.9
Pressure for sex	Ever been	77	32.0
	Never been	164	68.0
Pressure for sex	Friends	66	27.4
	Relatives	11	4.6
Negotiation skills	N/A	101	41.9
	Ever	71	29.5
	Never	69	28.6
Alcohol / substance use	Ever	58	24.1

	Never	183	75.9
Influenced by (58)	Friends	32	55.2
	Family members	26	44.8
Tendency of playing sex (N=114)	With alcohol	7	6.1
	Without alcohol	107	93.9
Youth friendly services	Available	171	71.0
	Not available	70	29.0
	Tested HIV	155	64.3
	Not tested	86	35.7
Attending night club	Ever	78	32.4
	Never	163	67.6
Courage by (N=78)	Self	28	35.9
	Family member	17	21.8
	Friend	33	42.3
Sex for goods	Ever	9	3.7
	Never	105	43.6

Relationship between social-economic factors and early sexual involvement among adolescents in Oruchinga Refugee settlement

Table 4: Bivariate Social- economic factors of early sexual involvement (N=241)

Variable	Category	Ever played sex		X^2, df	OR	95%CI	P value
		Yes (114)	**No (127)**				
Parent/ guardian-interaction /guidance	**Talking to father:**			7.503,4			0.111
	Very easy	32(28.1%)	26(20.5%)				
	Easy	37(32.5%)	39(30.7%)				
	Difficult	14(12.3%)	17(13.4%)				
	Very difficult	6(5.3%)	16(12.6%)				
	I do not see him	25(21.9%)	28(22.0%)				
	Sexual education by father:			8.704,3	4.71	1.28-1.73	0.034
	Often	7(6.1%)	2(1.6%)				
	Occasionally	18(15.8%)	13(10.2%)				
	Not applicable	24(21.1%)	29(22.8%)				
	Never	65(57.0%)	83(65.4%)				
School lessons on sexual education	Yes	100(87.7%)	115(90.6%)	0.5350,1	0.78	0.41-1.5	0.46
	No	14(12.3%)	12(9.4%)				
Access to media	Never	43(37.7%)	71(55.9%)	12.42,2	0.39	0.19-0.85	0.002
News, T.V/ Films and Radios	At least once a week	8(50.9%)	49(38.6%)	0.4409,1	0.7734	0.361- 1.65	0.5067
	Almost daily	13(11.4%)	8(6.3%)				
Obtain sex information from different sources. (More than one option)				28.62,5	2.16	1.15-4.05	< 0.0001
	Radio	18(15.8%)	20(15.7%)	5.875,1	2.159	1.152-4.047	0.0154
	TV/ Films	23(20.2%)	18(14.2%)	13.53,1	3.147	1.688-5.866	0.002
	Internet	26(22.8%)	17(13.4%)	17.31,1	3.616	1.944-6.726	0.001
	School	26(22.8%)	39(30.7%)	12.78,1	0.4518	0.291-0.700	0.004
	Parents	10(8.8%)	18(14.2%)	9.106,1	0.4305	0.247-0.747	0.025
	Church	7(6.1%)	15(11.8%)	17.31,1	0.2765	0.148-0.514	0.001
Support from parent/ guardian				21.94,2	0.04	0.005-0.27	0.001
	Self employed	67(58.8%)	83(65.4%)				
	Employee	34(29.8%)	44(34.6%)				
	No job	13(11.4%)	1(0.8%)				
Supply of needs				0.9558,2			0.620
	All time got all needs	43(37.7%)	53(41.7%)				
	At times lacked needs	61(53.5%)	61(48.0%)				
	All time lacked needs	10(8.8%)	12(9.4%)				

Table 5: Bivariate Social- economic factors of early sexual involvement

Variable	Category	Ever played sex		X^2 df	OR	95%CI	P value
		Yes (114)	**No (127)**				
Sexual engagement	All time lacked needs	10(8.8%)	12(9.4%)				
	Number of girl/boyfriend			15.98,1	0.12	0.03-0.41	0.001
	Had none	0	107(84.3%)				
	Had one	61(53.5%)	18(14.2%)				
	Had two	53(46.5%)	2(1.6%)				
Peers	**Pressure for sex**			87.99,1	9.95	5.90-16.77	0.001
	Ever been	63(55.3%)	14(11.0%)				
	Never been	51(44.7%)	113(89.0%)				
	Pressure by relatives	16(14.0%)	3(2.4%)				
	By friends	98(86.0%)	12(9.4%)				
Negotiation skills	Not applicable	0 (0.0%)	101(79.5%)	20.32,2			0.001
	Did	56(49.1%)	11(8.7%)				
	Did not	58(50.9%)	11(8.7%)				
Alcohol /substance abuse				19.79,1	2.96	1.81-4.81	0.001
	Ever	39(34.2%)	19(15.0%)				
	Never	75(65.8%)	108(85.0%)				
Youth friendly services				0.3482,1	1.14		0.555
	Available	82(71.9%)	88(69.3%)				
	Not available	32(28.1%)	39(30.7%)				
	HIV Testing			2.116,1	1.36	0.89- 207	0.001
	Tested	77(67.5%)	77(60.6%)				
	Not tested	37(32.5%)	50(39.4%)				

Attending night club				38.73,1	0.001
	Ever	54(47.4%)	23(18.1%)		
	Never	60(52.6%)	104(81.9%)		

Tables 4 and 5 demonstrate significant correlations between various factors and sexual practices among the respondents. Factors such as father-provided sex education ($\chi2 = 8.704$, df=3, $p = 0.03$), accessibility of sexual information ($\chi2 = 12.42$, $p = 0.002$), multiple sources of sexual information ($\chi2 = 28.62$, $p = 0.001$), parental employment ($\chi2 = 21.94$, $p = 0.001$), pressure for sex ($\chi2 = 15.98$, $p = 0.001$), peer influence ($\chi2 = 87.99$, $p = 0.001$), negotiation skills ($\chi2 = 203.2$, $p = 0.001$), substance use ($\chi2 = 19.79$, $p = 0.001$), influence of friends ($\chi2 = 37.22$, $p = 0.001$), attendance at nightclubs ($\chi2 = 38.73$, $p = 0.001$), and engagement in sex for material goods ($\chi2 = 116.4$, $p = 0.001$) were significantly linked to sexual practices among the respondents.

Students who did not receive sexual education from their fathers were more inclined to engage in early sexual activity than those who did receive such education. However, variables like tribe, attendance at religious services, understanding the significance of religion, communication with fathers, school-based sexual education, access to necessities, and the presence of youth-friendly services were not found to have significant associations with sexual practices.

Environmental factors influencing sexual involvement among adolescents in Oruchinga Refugee settlement

The purpose of this section was to present results in relation to the fourth objective of the study which was meant to examine the influence of environmental factors on early involvement in sexual behavior among adolescents in Oruchinga Refugee settlement. Results are presented in Table 6.

Table 6: Univariant analysis for Environmental factors influencing sexual involvement among adolescents in Oruchinga Refugee settlement (N=241).

Variable	Category	Frequency (N=241)	Percentage (%)
Whom have you been living with for the past 12 months?	Both biological parents	190	78.8
	Single parents (with either mother or father)	34	14.1
	No parents (With siblings only)	11	4.6
	Others (with relatives, friends, guardians)	3	1.2
Do your parents/guardians/relatives/siblings monitor your lifestyle – who your friends are and what you do with them?	Yes	186	77.2
	No	51	21.2
Did you ever drink any form of alcohol/or use any drug during the last 12 months?	Yes	69	28.6
	No	172	71.4
If yes, how often?	No response	170	70.5
	Every day	21	8.7
	Once in a week	29	12.0
	Rarely	19	7.9
Do you possess a mobile phone?	Yes	58	24.1
	No	174	72.2
If yes, what is the purpose of possessing a mobile phone?	No response	174	72.2
	Send or receive email	10	4.1
	Take pictures, Play music/games	35	14.5
	Send or receive messages	14	5.8
	Access Internet/social media	2	0.8
If used for sending SMS, email and social media, which people do you communicate with via these platforms?	No response	186	77.2
	Parents	18	7.5
	Relatives	2	0.8
	Boyfriend	13	5.4
	Other friends	22	9.1
If it is used for communicating with your boyfriend, how often do you communicate	No response	193	80.1
	At least once a day	18	7.5
	Less often	5	2.1
	Several times a day	26	10.8
Do you have and use any of these social media accounts to exchange information about sex (Facebook, Instagram, WhatsApp, TikTok?	Yes	40	16.6
	No	201	83.4
How often do you visit the social media account(s)?	No response	153	63.5
	Every day	39	16.2
	Once in a week	8	3.3
	Rarely	42	17.4
While on social media, do you get sex-related ads/information?	No response	132	54.8
	Yes	42	17.4
	No	67	27.8
If yes, have you ever considered this information relevant?	No response	145	60.2
	Yes	32	13.3
	No	64	26.6
Apart from social media and friends, do you get information on sexual and reproductive health from different agencies in the camp?	Yes	210	87.1
	No	18	7.5
If yes, from which agencies do you get this information?	OPM	14	5.8
	WTI	42	17.4
	ALIGHT	103	42.7
	TPO	58	24.1
	Others	13	5.4
Has this information been helpful in you sex and reproductive life?	No response	66	27.4
	Yes	156	64.7
	No	19	7.9

Out of 241 respondents, most 190(78.8%) have been living with both biological parents for the past 12 months. Majority 186(77.2%) of respondents that parents/ guardians/ relatives/ siblings monitor their lifestyle – who their friends are and what they do with them. 172(71.4%) of the respondents had never drunk any form of alcohol/ or used any drug during last 12 months. Of 69 respondents, majority (12.0%) used any form of alcohol /or used drug once in a week.

Most of the respondents 172(72.2%) did not possess a mobile phone and 36(24.0%) possessed a mobile phone. Majority 35(14.5%) of respondents who had mobile phones purposed possessed phones to take pictures, play music/games, 11(7.3%) used mobile phones for sending SMS, email and social media to parents, 14(9.3%) used mobile phones for sending SMS, email and social media to other friends, 8(5.3%) used mobile phones for sending SMS, email and social media to boyfriends while only 1(0.7%) used mobile phone for sending SMS, email and social media to relatives. 16(10.7%) used a mobile phone for communicating with boyfriend several times a day, 11(7.3%) alteast once a day, 3(2.0%) less often. Most of the respondents 125(83.3%) did not use social media while 25(16.7%) has and used any of these social media accounts to exchange information about sex (Facebook, Instagram, WhatsApp, TikTok. 26(17.3%) rarely visited social media account(s), 24(16.0%) visited social media account(s) every day while 5(3.3%) visited social media account(s) once a week.

The majority 42(28.0%) of the respondents did not get sex related ads/information while on social media while 26(17.3%) got sex related ads/information. Most of the respondents 40(26.7%) never considered information irrelevant while 20(13.3%) considered information relevant. The majority 131(87.3%) got information on sexual and reproductive health from different agencies in the camp, apart from social media while 11(7.3%) did not get information. Results of the study also indicated that majority 64(42.7%) of respondents got information about sexual and reproductive health from ALIGHT agency, 36(24.0%) got information from TPO, 26(17.3%) got information from WTI, 9(6.0%) got information from OPM while the rest 8(5.3%) got information from other agencies. The majority 97(64.7%) of the respondents agreed that the information for agencies been helpful in their sex and reproductive life while 12(8.0%) were in disagreement that the information was not helpful.

Table 7: Bivariate analysis of environmental factors and early sexual involvement among adolescents in Oruchinga Refugee settlement (N=241).

Variable	Category	Frequency (N=241)		X^2	P value
		Yes (114)	No (127)		
Whom have you been living with for the past 12 months?	Both biological parents	89	101	0.735	0.151
	Single parents (with either mother or father)	14	20		
	No parents (With siblings only)	9	5		
	Others (with relatives, friends, guardians)	2	1		
Do your parents/guardians/relatives/siblings monitor your lifestyle – who your friends are and what you do with them?	Yes	82	104	0.488	0.063
	No	23	28		
Did you ever drink any form of alcohol/or use any drug during the last 12 months?	Yes	25	44	2.032	0.000
	No	89	83		
If yes, how often?					
	Every day	21		8.394	0.002
	Once in a week	29			
	Rarely	19			
Do you possess a mobile phone?	Yes	34	24	1.717	0.002
	No	80	94		
If yes, what is the purpose of possessing a mobile phone?	NAN	174			
	Send or receive email	3	7		0.028
	Take pictures, Play music/games	21	14		
	Send or receive messages	11	3		
	Access Internet/social media	2	0		
If used for sending SMS, email and social media, which people do you communicate with via these platforms?	Parents	8	10	23.470	0.000
	Relatives	2			
	Boyfriend	4	9		
	Other friends	20	2		
If it is used for communicating with your boyfriend, how often do you communicate	At least once a day	14	4	35.656	0.000
	Less often	4	1		
	Several times a day	20	6		
Do you have and use any of these social media accounts to exchange information about sex (Facebook, Instagram, WhatsApp, TikTok?	Yes	33	7	0.688	0.437
	No	81	120		
How often do you visit the social media account(s)?	Every day	30	9	13.521	002
	Once in a week	3	5		
	Rarely	12	30		
While on social media, do you get sex-related ads/information?	Yes	22	20	2.522	0.035
	No	23	44		
If yes, have you ever considered this information relevant?	Yes	14	18	7.709	0.000
	No	24	40		
Apart from social media and friends, do you get information on sexual and reproductive health from different agencies in the camp?	Yes	89	121	1.696	0.000
	No	9	9		
If yes, from which agencies do you get this information?	OPM	3	11	13.155	0.000
	WTI	19	23		
	ALIGHT	55	48		
	TPO	22	36		
	Others	4	9		
Has this information been helpful in you sex and reproductive life?	No response	66			
	Yes	66	90	1.262	0.025
	No	10	9		

Relationship between environmental factors and early sexual involvement among adolescents in Oruchinga Refugee settlement (N=241).

Adolescents whose parents/guardians/relatives/siblings monitored their lifestyle – who their friends are and what you do with them were 0.488 times not likely to involve in early sexual practice. Drinking any form of alcohol /any drug (x^2=2.032, p-value 0.000), possession of mobile phone (x^2=1.717, p-value 0.002), sending messages, email, and social media (x^2=23.470, p-value = 0.000), communicating with boyfriend using a phone several times a day (x^2=35.656, p value of 0.000), getting sexual related and reproductive health information from different agencies (x^2=1.696, p value of 0.000) and information got being helpful in sex and reproductive life of adolescent (x^2=1.292, p value of 0.025)

were significantly associated with early sexual involvement among adolescents in Oruchinga Refugee Settlement.

The influence psychological factors on early involvement in sexual behavior among adolescents in Oruchinga Refugee settlement

The purpose of this section was to present results in relation to the fifth objective of the study which was meant to examine the influence psychological factors on early involvement in sexual behavior among adolescents in Oruchinga Refugee settlement. Results are presented in Table 8.

Table 8:Univariant analysis psychological factors and early sexual involvement among adolescents in Oruchinga Refugee settlement

Variable	Category	Frequency (N=241)	Percentage (%)
Have you ever felt stressed?	Yes	140	58.1
	No	50	20.7
If yes, how often do you feel stressed?	Sometimes	137	56.8
	Often	7	2.9
	Almost always	1	0.4
If yes, how often do you feel stressed?	Yes	45	18.7
	No	139	57.7
If yes, how often do you feel like committing suicide?	Sometimes	40	16.6
	Often	8	3.3
	Almost always	4	1.7
Do you usually feel stressed	SD	10	4.1
	D	60	24.9
	A	63	26.1
	SA	76	31.5
Have you attempted suicide in the last 12 months?	SD	23	9.5
	D	118	49.0
	A	61	25.3
	SA	9	3.7
There is a special person in my life who cares about my feelings	SD	25	10.4
	D	83	34.4
	A	91	37.8
	SA	10	4.1
I get the emotional help & support I need from my family.	SD	11	4.6
	D	47	19.5
	A	105	43.6
	SA	46	19.1
There is a special person with whom I can share joys and sorrows.	SD	32	13.3
	D	71	29.5
	A	81	33.6
	SA	26	10.8

Results in Table 8 showed that the majority 140(58.1%) of respondents had ever felt stressed while 50(20.7%) had never felt stressed. Majority 137(56.8%) of respondents who had ever been stressed were sometimes stressed, 7(2.9%) were often stressed, 1(0.4%) was always stressed, however 70(29.0%) of respondents had never been stressed. The findings of the study also indicated that minority 45(18.3%) of respondents had ever felt like committing suicide while 139(57.7%) never felt committing suicide. Majority 40(16.6%) of respondents felt committing suicide sometimes, 4(1.7%) almost always felt committing suicide and 8(3.3%) often felt committing suicide, however 139(57.7%) never felt committing suicide.

Results from the study indicated that majority 76(31.5%) of the respondents strongly agreed that they usually feel stressed, followed by 63(26.1%) who disagreed that they usually feel stressed, 60(24.9%) agreed that they usually feel stressed while 10(4.1%) strongly disagreed that they usually feel stressed. The majority of the respondents 141(58.5%) disagreed that they have ever attempted to committee suicide in the last 12 months, while the minority 70(29%) agreed. 101(41.9%) respondents agreed that there is a special person in my life who cares about my feelings and 108(44.8%) with the statement.

The study findings revealed that a majority of respondents, 151 (62.7%), agreed that they receive the emotional help and support they need from their families, while 58 (24.1%) disagreed with this statement. Additionally, the results indicated that 107 (44.4%) of the respondents agreed that they have a special person with whom they can share joys and sorrows, whereas 103 (42.8%) disagreed with having such a person.

Relationship between psychological factors and early sexual involvement among adolescents in Oruchinga Refugee settlement

Table 9: Bivariate analysis of psychological factors and early sexual involvement among adolescents in Oruchinga Refugee settlement (N=241).

Variable	Response	Have you been involved in early sexual behavior?		X^2	P value
		Yes n=114	No n=127		
Have you ever felt stressed?	Yes	59(51.8%)	81(3.8%)	6.087	0.048
	No	20(17.5%)	30(23.6%)		
If yes, how often do you feel stressed?	Sometimes	59(51.8%)	78(1.4%)	1.214	0.750
	Often	4(3.5%)	3(2.4%)		
	Almost always	0(0.0%)	1(0.8%)		
Have you ever felt committing suicide?	Yes	28(24.6%)	17(13.4%)	6.194	0.045
	No	51(44.7%)	88(9.3%)		
If yes, how often do you feel like committing suicide?	Sometimes	28(24.6%)	12(9.4%)	20.305	0.000
	Often	8(7.0%)	0(0.0%)		
	Almost always	4(3.5%)	0(0.0%)		
Do you usually feel stressed	SD	4(3.5%)	6(4.7%)	20.885	0.000
	D	31(27.2%)	29(22.8%)		
	A	43(37.7%)	20(15.7%)		
	SA	12(10.5%)	64(50.4%)		
Have you attempted suicide in the last 12 months?	SD	4(3.5%)	19(15.0%)	8.464	0.076
	D	55(48.2%)	63(49. %)		
	A	28(24.6%)	33(26.0%)		
	SA	4(3.5%)	5(3.9%)		
There is a special person in my life who cares about my feelings	SD	8(7.0%)	17(13.4%)	7.202	0.126
	D	35(30.7%)	48(37.8%)		
	A	43(37.7%)	48(37.8%)		
	SA	4(3.5%)	6(4.7%)		
I get the emotional help & support I need from my family.	SD	4(3.5%)	7(5.5%)	10.529	0.032
	D	24(21.1%)	23(18.1%)		
	A	55(48.2%)	50(39.4%)		
	SA	8(7.0%)	38(29.9%)		
There is a special person with whom I can share joys and sorrows.	SD	12(10.5%)	20(15.7%)	7.524	0.111
	D	31(27.2%)	40(31.5%)		
	A	39(34.2%)	42(33.1%)		
	SA	8(7.0%)	18(14.2%)		

The psychological factors of ever feeling stressed (x^2=6.087, p-value of 0.048), feeling committing suicide (x^2=6.194, p-value of 0.045), usually feeling not stressed (x^2 = 20.688, p-value of 0.000) and getting emotional help and support from family (x^2=10.529, 0.032) were statistically significantly associated with early sexual involvement among adolescents. The presence of a caring individual in my life who values my emotions (χ2=7.202, p = 0.126) and having a person with whom I can share both joys and sorrows (χ2=7.524, p = 0.111) did not show a significant association with early sexual involvement among adolescents.

Results from Qualitative Analysis of Data Collected in Interviews

From the results of the interviews, there were various reasons given that account for early sex practices

In interviews, one agency representative (TPO) said, *"Adolescents want to taste sex and discover what it feels like*, "*To know why they refuse us to practice it."* Another one (WTI) said, "*Satisfying desires and due to adolescent age, they have high desires", "because of high libido after watching pornography and they don't know how to behave sexually when they are out of control / on fire"*

Another representative from OPM said*, "Adolescents don't want to be called kataala, (meaning someone who is ignorant) at the time of marriage"* There is a saying which they used that *"men never like virgins but rather experienced ones"* and many phrases were used but it feels a shame for publicity. *"For those who stay in rental houses parents behave badly, after hearing what they do, the following day they also want to practice". For girls they can't show love without playing sex and it "makes body building in girls".*

To others the cause was due to peer influence. *"Due to peer, if so and so has done it how about me"? "Testing man hood", "lack of self control"* "*Freedom to use and availability of condoms and family planning pills, since the girl cannot get pregnant and for the boy, I say since there are condoms why don't I do?" "You don't get birth pains during child birth" "Some of their parents are so permissive and they fail to monitor them"*. Another representative said "there is a tendency of some parents to push their children when they see / hear no rumours about them for being in love with anybody. This is common with those parents who gave birth when they were still young".

Amazingly also, one teenager said boldly that "*during adolescence they feel they are higher than even parents, because feel what they do is best no need for reprimand or rebuke".* On the other hand, they gave many positive outcomes especially with boy. All agency representatives said they "they feel good and proud and even they don't want to hide it as it stabilises our minds". This calls for every person to get involved in protection of the future generation.

Discussions

Prevalence of sexual activity among adolescents in Oruchinga Refugee settlement.

In this study, it was observed that less than half of the respondents (47.3%) had engaged in sexual activity, while 52.7% had not yet done so. Among those who had engaged in sexual activity, 89.9% reported initiating sexual intercourse by the age of 15.

Comparing these findings with other studies conducted in different countries among adolescents, variations in prevalence were noted. For instance, data from the Uganda Demographic and Health Survey (UDHS) conducted in 2011 indicated that approximately 14% of young women and 16% of young men had their first sexual encounter before the age of 15, while 57% of young women had their first encounter before the age of 18.

Similarly, results from a descriptive cross-sectional study conducted in urban areas of Tanzania revealed that 40.2% of 550 secondary school students from eight schools reported having had sexual intercourse, with an average age of initiation at 16.02 years. In contrast, data from the 2013 Youth Risk Behavior Surveillance System (YRBSS) in the United States indicated that only 5.6% of adolescents began sexual activity before age 13, showing a significantly lower prevalence compared to Uganda.

In South Africa, research conducted by Flisher and Aarob (2012) indicated that between 50% and 60% of adolescents had initiated sexual activity by the age of 16. Similarly, Guiella and Nyovani (2014) conducted a study in Burkina Faso, finding that 66% of participants had their first sexual experience between the ages of 12 and 14.

The results of this study are consistent with those of a cross-sectional study carried out in Uganda's Wakiso district, where 55.9% of respondents indicated having engaged in sexual activity, and 50.4% reported initiating sexual intercourse at 16 years of age or younger. Furthermore, a prospective cohort study conducted by Turyasingura (2008) in Uganda revealed that sexual debut typically took place between the ages of 10 and 14, with the average age being 13 years.

The Influence of Demographic and Socio-Economic Factors on Early Involvement in Sexual Behavior Among Adolescents

Most of the respondents were DRC, Congolese where the majority were aged 14 and above. The findings showed that many Christians participated in the study compared to Muslims and other religions. The findings also revealed that the majority of the participants had studied up to upper primary level but most of their parents had studied secondary level or less. The findings of the study revealed that they attended religious services at least once a week. The results reported that most respondents felt that religion is important. This revealed that demographical factors influenced early involvement in sexual behavior among adolescents.

According to a study, the most active age range for sexual practices was 13-15 years. This aligns with a cross-sectional study in Ethiopia, which found that early adolescents (12-14 years) had higher rates of early sexual debut, potentially influenced by puberty (Gebregiorgis, 2010). Similarly, a Ugandan study reported sexual initiation as early as 10-14 years (Turlyasingula, 2008). In Burkina Faso, 66% of young people initiated sexual activity between 12 and 14 years (Guiella and Nyovani, 2014). Conversely, a cohort study in Ghana, Nigeria, Burkina Faso, Malawi, and Uganda found no significant relationship between age and early sexual practice among adolescents (Oluwatoyin et al., 2014).

Religion significantly influences early sexual practices. A U.S. study showed that teens with poor religious involvement were more likely to engage in early sexual activity (Kristin and Richards, 2010). In contrast, adolescents with strong religious affiliations tend to delay sexual practices (Holder, 2011; Fehring, 2010; Costa, 2009; Sheeran, 2010; Turbin et al., 2016).

Parental education also impacts early sexual behavior. Studies in South Africa showed that early sexual engagement was significantly associated with the educational level of parents (Swartz, 2012; Preston-Whyte, 2010). Effective communication between parents and children is crucial, as adolescents often discuss important matters with their mothers but rarely with their fathers. When sex-related topics are discussed, some studies suggest it can lead to increased experimentation, while others indicate it helps avoid risky behaviors (Nathanson, 2011).

Media exposure is another factor. The study revealed that 53.7% of adolescents accessed media, compared to 80% in a South African study, potentially due to age group differences (Nyasa Chadoka, 2014). Media exposure, including TV programs, magazines, and videos, influences the timing and initiation of sexual behaviors (Brown et al., 2005; Brown and L'Engle, 2009; Parkes et al., 2013; Chandra et al., 2008; Strasburger et al., 2010; Collins et al., 2004).

Economic status also plays a role. Most adolescents reported not receiving everything they needed in life due to their parents' unemployment or self-employment status. This lack of resources may contribute to early sexual activity, with many adolescents reporting their first sexual experience between 13 and 15 years with a boyfriend, often influenced by peer pressure.

Forced sexual encounters were also reported, with a significant portion of adolescents experiencing their first sexual encounter under duress, aligning with findings from other studies (Blanc et al., 2016; Neema et al., 2016). Although low, alcohol and substance use before sex were

noted, often influenced by family members, reducing inhibitions and increasing the likelihood of unprotected and coercive sex (Andersson et al., 2004; Stafstrom et al., 2012; Benson et al., 2007).

Community and religious efforts to combat early sexual behavior include disciplining and discussions in gatherings. Most community members actively fight early sexual behavior, with 90% taking initiatives such as involving religious leaders in preaching against the vice (Fraser, 2015).

The Influence of Environmental Factors on Early Involvement in Sexual Behavior Among Adolescents

The study found that the majority of respondents (78.8%) had been living with both biological parents over the past year. Additionally, 77.2% of respondents reported that their parents, guardians, relatives, or siblings monitored their lifestyle, including their friends and activities. Only a small percentage (12.0%) used alcohol or drugs once a week. Most respondents (72.2%) did not own a mobile phone, and those who did primarily used them for taking pictures, playing music, or games. A significant majority (83.4%) did not use social media, and those who did rarely encountered sex-related ads or information.

The study also revealed that 87.1% of respondents received information on sexual and reproductive health from various agencies within the camp, particularly ALIGHT and TPO. A majority (64.7%) found this information beneficial for their sexual and reproductive lives. These findings are consistent with studies by Guiella et al. (2014) and Gebregiorgis (2010), suggesting that environmental factors in crowded areas can lead to early sexual practices among adolescents.

Early Involvement in Sexual Behavior Among Adolescent Girls

It was revealed from the study findings that parents or guardians of respondents had a low level of education which was the factor leading to poor communication between adolescent girls and parents or guardians about sexual intercourse. Results also showed that adolescents are exposed to pornographic photos or videos. Results from the study also revealed that peer pressure from fellow adolescents who have already been involved in sexual intercourse and early exposure to pornographic materials did not cause early initiation of sexual intercourse among adolescents. However, low socio-economic background of adolescents causes of early initiation of sexual intercourse by adolescents to a large extent, drug or alcohol abuse among adolescents was also among the causes. The results also revealed that a dysfunctional family set up, poor knowledge of the negative effects on early initiation of sexual intercourse were among the causes of early initiation of sexual intercourse among adolescents.

According to Dawn (2009), the secondary school environment in East Africa significantly influences higher rates of early sexual activity among teenagers. Dawn observed a notable association between a teenager's engagement in early sexual behavior and the school environment they attend. Adolescents attending schools with inadequate nutrition, limited extracurricular activities, and situated in urban areas face heightened risks of initiating early sexual activity. Furthermore, teenagers whose mothers or sisters experienced teenage pregnancies are more inclined to become sexually active early in their own teenage years.

The Influence Psychological Factors on Early Involvement in Sexual Behavior Among Adolescents

The findings of the study revealed that respondents ever felt stressed sometimes on a usual basis. The study findings reported that a few of the respondents had ever tried to commit suicide sometimes. However, most of the respondents never attempted to commit suicide in the last 12 months. It was also found that respondents had a special person in their life who cared about their feelings and got the emotional help & support they needed from their family. Results also revealed that respondents had a special person with whom they can share joys and sorrows with.

The findings in the currents study were consistent with Hall et al. (2016) who found that adolescents experiencing high levels of stress are more likely to engage in risky sexual behaviors. The study reported that 42% of adolescents who felt consistently stressed were more likely to have early sexual experiences compared to their less stressed peers. Suicidal thoughts also showed a strong correlation with early sexual activity, with 35% of adolescents who reported suicidal ideation having engaged in sexual activity by the age of 15, compared to 19% of those without such thoughts. This suggests that the psychological distress associated with stress and suicidal thoughts may drive adolescents to seek intimacy and validation through early sexual involvement, often as a coping mechanism.

Similarly, Markham et al. (2010) demonstrated the protective role of family support against early sexual initiation. The study found that adolescents who reported receiving strong emotional support from their families were 30% less likely to engage in early sexual activity compared to those who lacked such support. Specifically, adolescents with a supportive family environment had a 16% rate of early sexual involvement, while those without family support showed a 23% rate. This highlights the importance of a nurturing and supportive family environment in mitigating the psychological factors that contribute to early sexual behavior.

Conclusions and Recommendations

In the Oruchinga Refugee Settlement, 47.3% of adolescents engaged in early sexual activities, with most having their first experience between ages 13 and 15. Key demographic factors,

such as age, gender, religion, parental education, and cultural beliefs, contributed to early sexual involvement. Socioeconomic influences included parental education on sexual matters, sources of sexual information, employment status, peer pressure, substance use, and engaging in transactional sex. Environmental factors, including residence and family structure, were also significant, although school type was not. To address these issues, parents need education on effective sexual communication with adolescents, and Ugandan policies on sexual and reproductive health for refugees should be reviewed. Religious leaders can promote abstinence through seminars, while media access should be regulated to prevent exposure to pornography. Peer support groups should be trained to help adolescents navigate peer pressure, bodily changes, and the benefits of delaying sexual activity.

Authors' abbreviations

SK: Susan Kabajuma; NN: Novatus Nyemara; RB: Ronald Bahati

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Authors' contributions

The authors of this manuscript made the following contributions to this manuscript Concept: SK, conceived the concept, Data collection; SK, NN: Data analysis: First draft: SK, NN, RB, Final revision: SK, NN, RB Read and approved final manuscript: SK, NN, RB.

Competing interests

The authors declare that they have no competing interests

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