

Knowledge and Behavioural Intentions for Intergenerational Sexual Relationships among Young Female Students in a Pre-Varsity Institution in Southwest Nigeria

Sunday Joseph Ayamolowo¹, PhD;  Love Bukola Ayamolowo^{2*}, MSc;  Esther Kikelomo Afolabi¹, PhD

¹Department of Nursing Science, Obafemi Awolowo University, Ile-Ife, Nigeria

²Medical and Health Services, Obafemi Awolowo University, Ile-Ife, Nigeria

*Corresponding author: Love Bukola Ayamolowo, Medical and Health Services, Obafemi Awolowo University, Ile-Ife, Nigeria. Tel: +23-481-32750008;

Email: ayamolowobukola@yahoo.com

Received April 25, 2020; Revised May 21, 2020; Accepted June 15, 2020

Abstract

Background: Sexual relationship between young women and older men is a major contributor to women's risk of HIV/AIDS and other sexually transmitted infections (STIs). This study assessed the knowledge, attitude, and behavioural intentions for intergenerational sexual relationships (IGS) among young female students in Nigeria.

Methods: We conducted study between July and August 2018 using a descriptive cross-sectional design. Using convenience sampling method, we selected 160 young female students enrolled in a Joint Universities Pre-Degree Educational Programme in a Nigeria university. For data collection, we employed a self-report questionnaire. Data were analysed by use of a Chi-square test. Alpha was set at 5%.

Results: The study revealed that 60% of the respondents had a moderate level of knowledge regarding IGS. More than half (56.3%) of the respondents had indifferent attitudes towards IGS. About two-thirds (62.5%) of the respondents had a moderate level of behavioural intentions. The main motive of young girls for IGS was to get money and gifts (83.8%). There was a significant association between monthly stipend ($P \leq 0.0001$), level of knowledge ($P \leq 0.0001$), attitude ($P \leq 0.0001$), and overall behavioural intentions to practice IGS among the students.

Conclusion: The study concluded that female students had a moderate level of behavioural intentions to practice intergenerational sexual relationships. There is a need for appropriate health interventions that will address both present and future engagement in intergenerational sexual relationships among young women and prevent negative health outcomes from unsafe sex among this age group.

Keywords: Transactional sex, Adolescent, Young women, Sexually transmitted infections, Sexual behaviour

How to Cite: Ayamolowo SJ, Ayamolowo LB, Afolabi EK. Knowledge and Behavioural Intentions for Intergenerational Sexual Relationships among Young Female Students in a Pre-Varsity Institution in Southwest Nigeria. Women. Health. Bull. 2020;7(3):18-26.

1. Introduction

Sexual relationship between young women and substantially older men is an important contributor to young women's risk of HIV/AIDS and other sexually transmitted infections (STIs). Intergenerational sexual relationships (IGS) are common sexual risk behaviours, and they are known to be a major driver of negative health outcomes amongst adolescents and young people (1, 2).

Globally, adolescents and young adults comprise over one quarter of the world population, which is the highest ever recorded in human history; approximately 90% live in low and middle-income countries (3). The demographic health surveys of many countries have shown that adolescents in modern societies experience puberty at younger ages compared with the previous generation (4). As a result, they are involved in early sexual intercourse, most of which is

unsafe and unplanned, exposing them to unwanted pregnancy, abortion, and sexually transmitted diseases (5, 6). Sexual risk behaviours such as unprotected sex, multiple sexual partners, lack of or inconsistency use of condoms, and drug abuse, are extremely detrimental to the health of adolescents and young adults, putting them at a high risk of HIV/AIDS and other sexually transmitted diseases (STDs) (5-7).

Worldwide, adolescents and young people represent a growing number of people with HIV as 510,000 young people between the ages of 10 to 24 have been newly infected with HIV, out of whom 190,000 were adolescents aged 10-19 (8). Globally, the HIV infection rate in young women is twice as high as in young men, and AIDS is the leading cause of mortality among young people (aged 10-24) in Africa and the second leading cause around the world (9). Moreover, based on the Nigerian national data, 3.7% of young women (15-24 years old) are living with HIV as compared with 2.4%

of young men (10). In Nigeria, trends in estimated new HIV infections between 2016 and 2020 revealed that the total number of new infections in females continued to surpass that of males. Over the years, more new infections have occurred among young women aged 15–24 years compared to their male counterparts (10).

IGS expose women to multiple risk behaviours (1, 11). The 2013 Nigeria Demographic and Health Survey revealed that approximately 18% of never-married women between the ages of 15–19 had sexual intercourse with men who were at least 10 years older. The regional variations in the Southwest (11%) are lower than in the Northwest (54%). However, amongst the Southwest States, Osun State, the setting of this study, had the highest prevalence (16.5%) of intergenerational sex amongst 15-to-19-year-old girls (12). In most cases, IGS becomes transactional and puts women at a disadvantage (13). Another major challenge is that younger women lack the capacity for sexual negotiation due to the fear of physical abuse, rejection, and their partner's objection (4, 14). The power differential between adolescent girls and older men is a particular risk factor for abusive relationships that can lead to violence. In patriarchal (male-dominated) contexts, which mark many African societies, transactional sexual relationships with “sugar daddies” compromise young women's ability to negotiate safe sex practices and increase the risk of male-perpetrated intimate partner violence (15, 16). Furthermore, multiple concurrent sexual partners and infrequent or no condom use are prevalent in transactional sexual relationships (11, 14, 15, 17). Infrequent or no condom use in cross-generational relationships is not unexpected because older men in these relationships have more income; thus, they have an advantage over teenage boys in negotiating for unprotected sex. Such men are also more likely to be infected with HIV since they have been sexually active for longer. Hence, infection caused by previous or present high-risk behaviours or relationships by one of the sex partners is easily transmitted to the unsuspecting younger partner (18, 19).

IGS between older men and young female adolescents, mostly in the form of transactional sex, have almost become a norm or an acceptable means of survival for the economically disadvantaged majority in many poor communities across the world. Unfortunately, many stakeholders, including parents, seemingly avoid to openly condemn this menace, thereby contributing to the widespread appeal and social approval of transactional sex among the teeming young populations despite its potential ramifications. It

is therefore essential to assess the knowledge, attitude, and behavioural intention for IGS among young female students. Our evaluation was done in a student-populated environment in order to reduce the negative health outcomes associated with the phenomenon.

2. Methods

Research Design

A descriptive cross-sectional research design was adopted in the study.

Study Setting

We carried out the study in The Centre for Distance Learning, Moro, Osun State, Nigeria between July and August 2018. This center is an accredited institution of higher learning commissioned by the Obafemi Awolowo University, Ile-Ife, Nigeria. It offers special courses at the pre-varsity, professional degree, and post-graduate degree levels. Students undertaking the pre-varsity programme reside in student hostels within and around the Moro campus of the institution. The programme is a replica of the Advanced Cambridge ‘A’ Level with relevant curriculum contents for prospective students seeking direct entry into Nigerian universities. This setting is suitable for the study owing to the possibility of a high level of peer pressure that can result in adolescent involvement in intergenerational or transactional sexual relationships as a means of survival or coping with the expected standard of living or social prestige within the student environment.

Target Population

The target population included 220 female students aged more than 15 (which is the accepted legal reproductive age in Nigeria) out of a total of 400 students admitted into the Joint Universities Pre-Degree Educational Programme (JUPEP).

Sample Size Determination

The sample size was calculated using Kennan's formula. A total sample of 139 was calculated and rounded up to 160 to allow for a 10% non-response rate. Considering the finite number of female students in the JUPEP programme, a convenience sampling method was used to select eligible participants within the school premises. We chose eligible female students present in the school at the time of the study until the desired sample size was achieved.

Data Collection

Data were collected through the use of a self-report structured questionnaire. Official permission to collect the data was secured from the management of the JUPEP study centre considered for the study. Written informed consent was obtained from the individual respondents prior to the administration of the questionnaire.

Validity and Reliability

A panel of experts in the sexual and reproductive health of adolescents validated the questionnaire as appropriate and relevant to the study, with a Content Validity Index of 0.89. A Pilot test was also conducted on 10% of the sample size with a similar context and population (not included in the actual study). The overall Cronbach's alpha of the pilot study was calculated to be 0.91, indicating that the instrument had a high level of internal consistency. Minor revisions were made to the questionnaire based on the findings of the pilot test.

Method of Data Analysis

We analysed the data using the Statistical Package

for the Social Sciences Version 20.0. We calculated the descriptive statistics using tabulations, percentages, and inferential statistics in accordance with the research objectives. A graded Likert scale was used to score the responses of the participants. The knowledge scale was graded as follows: Correct Response=1; Don't Know=0; Wrong Response=0. The scale on Attitude was graded as follows: Agree=3; Neutral/Undecided=2; Disagree=1; No Response=0. The Practice subscale was rated as follows: Yes=1; No=0; No Response=0. The total score of each respondent was computed for the grouped items related to Knowledge, Attitude, and Practice. The aggregate score was then used to grade the overall level of Knowledge into Low (0-33%), Moderate (34-66%), and High (67-100%) categories; the overall level of Attitude was graded into Negative (0-40%), Neutral (41-69%), and Positive (70-100%), and the behavioural intentions to Practice was categorized into Low (0-35%), Moderate/Likely (36-66%), and High (67-100%) using the rated options selected by the respondents in the questionnaire. The Knowledge Score and Attitude Score of each female respondent was calculated and used to generate the behavioural intention Score for likelihood of IGS among the respondents. Hypothesis testing was done using a chi-square test with a significance level of <0.05.

Table 1: Socio-demographic data of respondents

Variable	Frequency (n=160)	Percentage (%)
Age (Mean age:17±1.797)		
15-17 years	100	62.5
18-20 years	55	34.4
>20 years	5	3.1
Religion		
Christianity	150	93.8
Islam	9	5.6
Others	1	0.6
Parents' marital status		
Monogamous	134	83.8
Polygamous	12	7.5
Separated	5	3.1
Divorce	4	2.5
Others	5	3.1
Average monthly stipend (monthly pocket money)		
No response	3	1.9
1,000 to 10,000 Naira	118	73.8
11,000 to 20,000 Naira	29	18.1
Above 20,000 Naira	10	6.3
Monthly stipend sufficiently meet needs in school		
Yes	88	55.0
No	72	45.0
Sources of sponsorship for education		
Both parents	132	82.5
Father only	10	6.3
Mother only	14	8.8
Relatives	1	0.6
Self	3	1.9

*n: number

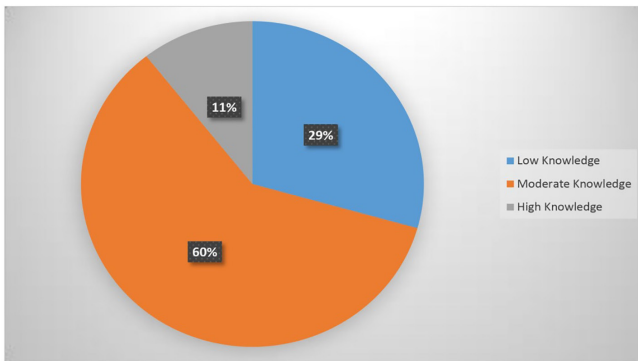


Figure 1: Level of knowledge of Intergenerational Sexual Relationship among female student

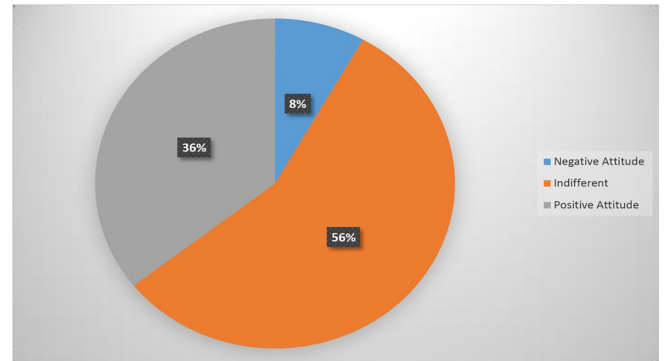


Figure 2: Summary of the attitude of female students towards Intergenerational Sexual Relationship

The Osun State Health Research Ethics Committee approved all research processes and methods in terms of ethical considerations (OSHREC/PRS/569T/147). Furthermore, written informed consent was signed by all the subjects whose participation was entirely voluntary.

3. Results

Table 1 presents the socio-demographic characteristics of the respondents, most of whom (62.5%) were in the age range of 15-17 years. The mean age of the participants was 17 years, with a standard deviation of 1.797. A majority of the subjects were Christians (93.8%) from monogamous families (83.8%). More than half of the respondents (55%) claimed that their monthly pocket money (stipend from parents/guardian) was sufficient for their needs in school; most of the participants (82.5%) were sponsored by both

parents. Notably, some female students (1.6%) claimed that their education was self-sponsored without help or support from anyone.

More than half of the female students (60%) had a moderate level of knowledge whereas only 11% had a high knowledge regarding IGS (Figure 1). Further descriptive analysis on respondents' knowledge of IGS revealed that almost half (46.2%) of them did not know the definition of intergenerational sex. Also, half of the respondents (50.6%) were aware of STIs and unwanted pregnancy as some of the major possible health implications of IGS; meanwhile, one-third (34.4%) emphasised the risk of HIV/AIDs as a major possible health implication for IGS.

Most (56%) of the participants had an indifferent attitude towards IGS while 36% had a positive attitude (Figure 2). Based on the results in Table 2,

Table 2: Reported practice of Intergenerational Sexual Relationships among female students

Practice of Intergenerational Sexual Relationships	Frequency	Percentage
Sex with someone who is at least 10 years older (n=160)		
Yes	14	8.8
No	143	89.3
Don't know	3	1.9
*Reason for sex with an older person (n=14)		
To get money for clothes	12	85.7
To get expensive gifts, jewellery or phones	10	71.4
To have fun and show off	5	35.7
General source of encouragement for sex with older men (n=160)		
School friends	1	0.6
Club friends	153	95.6
Don't know	6	3.8
Use of condom in the last sexual relationship (n=14)		
Yes	2	14.3
No	12	85.7
Future plan for sex with older men (n=160)		
No	6	3.8
Don't know	154	96.3

*Multiple responses allowed, *n: number

a majority (89.3%) claimed not to have had sex with someone at least 10 years older. On the other hand, 8.8% of the female students confirmed their previous practice. A majority of the students (95.6%) cited club friends as source of encouragement for sex with older men. Out of the 14 students who reported IGS, only two (14.3%) reported the use of a condom during their last sexual relationship. Very few respondents (3.8%) did not plan to have sex with older men in future.

Most of the participants (63%) had a moderate level of behavioural intention, and only a few (9%) had a high level of behavioural intention to practice IGS (figure 3). The need for money or material wealth (31.9%), social status or prestige (24.4%), and peer pressure (16.3%) were among the perceived factors for IGS among the students (Table 3). Table 4 depicts the chi-square tests for the association among the selected socio-

demographic characteristics, knowledge, and attitude of the respondents and IGS behavioural intention category. There was a significant relationship between

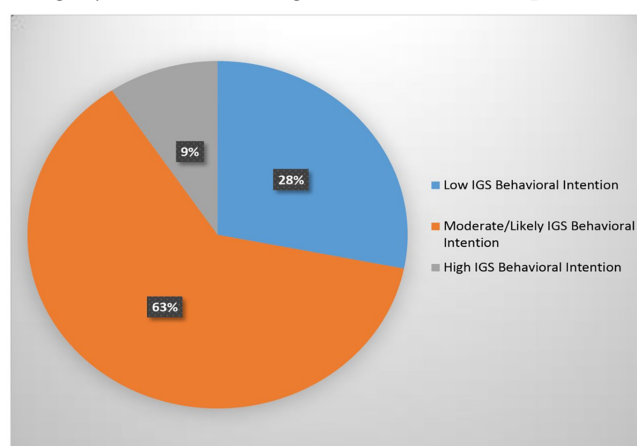


Figure 3: Behavioural Intention for Intergenerational Sexual Relationship

Table 3: Respondents' perceived reasons for adolescents' engagement in Intergenerational Sex

Variable	Frequency (n=160)	Percentage (%)
Money/material wealth	51	31.9
Social status/prestige	39	24.4
Peer pressure	26	16.3
Connection	21	13.1
Love	10	6.3
Security	3	1.9
Sexual abuse	3	1.9
Parental/family influence	3	1.9
Sexual satisfaction	2	1.3
Don't know	2	1.3

*n: number

Table 4: Association between socio-demographic characteristics and IGS behavioural intention category

Characteristics	IGS Behavioural Intention Category			P value
	Low IGS Behavioural Intention [Score 0-99]	Moderate/Likely IGS behavioural intention [Score 100-199]	High IGS behavioural intention [Score 200-299]	
Average Monthly Stipend(Naira)				<0.0001*
1000-10000				
11000-20,000	36(22.5)	73(45.6)	12(7.6)	
Above 20,000	6(3.8)	22(13.7)	1(0.6)	
	3(1.9)	5(3.1)	2(1.3)	
Age (years)				0.247
15-17	24(15.0)	64(40.0)	12(7.5)	
18-20	20(12.5)	33(20.6)	2(1.3)	
>20	1(0.6)	3(1.9)	1(0.6)	
Knowledge of IGS				<0.0001*
Low knowledge	39(24.5)	8(5.0)	0(0.0)	
Moderate knowledge	6(3.8)	88(55.0)	2(1.3)	
High knowledge	0(0.0)	4(2.5)	13(8.1)	
Attitude to IGS				<0.0001*
Negative attitude	12(7.5)	1(0.6)	0(0.0)	
Neutral attitude	27(16.9)	59(0.9)	4(2.5)	
Positive attitudes	6(3.8)	40(25.0)	11(6.9)	

*Chi-square test, statistically significant at 5%, *n: number, *IGS: Intergenerational Sex

the respondents' IGS, behavioural intention and their income ($P < 0.0001$), knowledge of IGS ($P < 0.0001$), and attitude to IGS ($P < 0.0001$). There was no significant relationship between the respondents' age and behavioural intention for IGS.

4. Discussions

Most of the respondents had a moderate level of overall knowledge whereas only a few reported a high level of knowledge concerning IGS. However, almost half of the respondents did not know the definition of intergenerational sex as a form of relationship between a woman and a man who is at least 10 years older. Most of the adolescent female students only defined intergenerational sex in terms of a relationship between a young woman and a married older man, mainly for the purpose of collecting financial and material benefits in exchange for sexual pleasure. This is a typical description for transactional sex; the female students' knowledge regarding IGS was mainly focused on the motives of collecting money and gifts within an extra-marital affair with a married man rather than on the age-disparate relationship between a woman and a man who is at least 10 years older. This finding clearly confirms the results of several authors who emphasized the prevalence of intergenerational sex among adolescent girls, mostly with the intention of enjoying financial and material benefits (9, 11, 13, 14, 20, 21). Furthermore, the above findings affirmed the growing evidence for transactional sex (exchanging sex for money or gifts) among female adolescents in sub-Saharan Africa and many other countries around the world (11, 14, 21). According to Bantebya and colleagues' risk of STDs and violence are possible consequences of intergenerational or transactional sex (13). Although half of the participants in the current study were aware of STIs and unwanted pregnancy as major possible health implications of IGS, only one-third emphasised the risk of HIV/AIDs.

More than half of the respondents held an indifferent attitude towards IGS while nearly one-third had a positive attitude towards it. This is similar to a study conducted in Nepal where 32.4% of the subjects had a positive attitude towards premarital sex (22). It has been noted that attitudinal disposition to IGS fuels the establishment and maintenance of massive concurrent relationships among students in higher institutions (11, 16, 23). In the present study, this was also confirmed by a majority of the respondents who agreed that many girls often relate to multiple sexual partners by dating as many rich men as possible to have multiple sources

of money and enjoy material gifts.

Multiple sexual partners, transactional sex, intergenerational sex, and unprotected sex are prevalent sexual risk behaviours among adolescents in Nigeria (24). In the present research, an overwhelming majority claimed not to have had sex with someone at least 10 years older. Only fourteen respondents confirmed the personal experience of IGS. Reasons for engaging in this activity were money for clothes, need for expensive gifts, jewellery, and phones, and to have fun and brag. The need for money or material wealth, social status or prestige, and peer pressure were among the factors perceived by respondents as being responsible for IGS among other adolescents. This finding supported the observation of previous similar studies, where peer pressure, quest for luxury goods in females, and family pressure played a role in younger women's involvement in transactional sex (13, 21, 25, 26). In the present study, very few respondents reported the use of a condom during their last sexual relationship with an older person. This is in line with a previous report (7), in which half of the respondents with sexual experience used condoms in their last sexual relationship. However, the low response rate concerning IGS among respondents in this study cannot be realistically supported as it clearly contradicts the statistical percentages and reports of the National Population Commission (12). Based on their reports, 29% of the females aged 15-19 years were sexually active, and 14% of never-married women were sexually active. It can be inferred that most of the respondents were cautious and gave socially desirable answers, probably portraying them as having a good reputation rather than being seen as promiscuous. Considering the above, the concept of 'behavioural intention', as explored in the Theory of Planned Behaviour (27), was applied as a predictor of likelihood for adolescent female students' current or future engagement in IGS. Most participants had a moderate level of behavioural intention while few had a high level of behavioural intention to practice IGS.

This study revealed a significant association between monthly stipend/pocket money and behavioural intention to practice IGS among female adolescent students. This finding confirms that adolescent sexual behaviour is shaped by a series of interlinking individual and family-related factors (14, 23). This is further corroborated by the fact that acute income poverty and its effects, subject many girls to a myriad of vulnerabilities, and it is identified as a key push factor for cross-generational sexual relationships (13). Poverty combined with the current materialist or consumerist

culture reportedly underpins the wide prevalence of women's engagement in sexual relationships (7, 14, 19). This study found no significant association between age and overall behavioural intention to practice IGS among female students. However, their level of knowledge and attitude towards IGS was found to significantly influence their behavioural intention.

Implications for Nursing Practice

School health nurses should advocate for sex education and take the lead in helping adolescent and young female students understand the risks and possible consequences of their choices. Nurses should counsel parents or guardians on the need to provide the minimum basic needs for their adolescent the students as an approach to discouraging them from IGS.

Limitations

Due to the response bias in the form of social desirability, most of the female adolescents and young students in this study provided cautious and socially desirable answers, leading to a low response rate regarding the practice of IGS. A qualitative study using interviewer-led focus group discussions will help to further establish the key factors associated with IGS. A large-scale, community-based research study is required to investigate other socio-economic and socio-cultural factors influencing the practice of transactional sex among adolescents and young women in rural and urban settings.

5. Conclusion

Female adolescents and young students had a moderate level of knowledge and behavioural intention for IGS. More than half of the female students demonstrated a neutral attitude towards this activity. This indicates the gradual social acceptance of IGS as a normative behaviour. It is necessary to implement an appropriate health campaign programme that will effectively address the behavioural intention of female students towards such relationships. Both present and future engagement in IGS must be addressed to prevent the negative health outcomes of unsafe sex among this age group.

Acknowledgements

We are thankful to the students who voluntarily participated in this study and grateful to the management of the Pre-Varsity Centre for allowing us

to carry out the study in their institution.

Ethical Approval

The Osun State Health Research Ethics Committee approved all research processes and methods in terms of ethical considerations (OSHREC/PRS/569T/147). Furthermore, written informed consent was signed by all the subjects whose participation was entirely voluntary.

Funding: This study received no grant from any institution

Conflicts of interest: None to declare.

References

1. Anema A, Marshall BD, Stevenson B, Gurm J, Montaner G, Small W, et al. Intergenerational sex as a risk factor for HIV among young men who have sex with men: a scoping review. *Curr HIV/AIDS Rep.* 2013;**10**:398-407. doi: 10.1007/s11904-013-0187-3. [PubMed: 24272070]; [PubMed Central: PMC4727934].
2. Harling G, Newell ML, Tanser F, Kawachi I, Subramanian SV, Bärnighausen T. Do age-disparate relationships drive HIV incidence in young women? Evidence from a population cohort in rural KwaZulu-Natal, South Africa. *J Acquir Immune Defic Syndr.* 2014;**66**:443-51. doi: 10.1097/QAI.000000000000198. [PubMed: 24815854]; [PubMed Central: PMC4097949].
3. UNFPA, UNESCO, WHO. Sexual and Reproductive Health of Young people in Asia and the Pacific: A review of issues, policies and programmes. 2015; Bangkok: UNFPA.
4. Shiferaw Y, Alemu A, Girma A, Getahun A, Kassa A, Gashaw A, et al. Assessment of knowledge, attitude and risk behaviours towards HIV/AIDS and other sexual transmitted infection among preparatory students of Gondar town, North-West Ethiopia. *BMC Research Notes.* 2011;**4**:505 -512. doi: org/10.1186/1756-0500-4-505.
5. Shrestha R, Karki P, Copenhagen M. Early Sexual Debut: A risk factor for STIs/HIV acquisition among a nationally representative sample of adults in Nepal. *J Community Health.* 2016;**41**:70-7. doi: 10.1007/s10900-015-0065-6. [PubMed: 26184108]; [PubMed Central: PMC4715759].
6. Kassahun EA, Gelagay AA, Mucbe AA, Dessie AA, Kassie BA. Factors associated with early sexual initiation among preparatory and high school

- youths in Woldia town, northeast Ethiopia: a cross-sectional study. *BMC Public Health*. 2019;**19**:378. doi: 10.1186/s12889-019-6682-8. [PubMed: 30947690]; [PubMed Central: PMC6450012].
7. Muche AA, Kassa GM, Berhe AK, Fekadu GA. Prevalence and determinants of risky sexual practice in Ethiopia: Systematic review and Meta-analysis. *Reprod Health*. 2017;**14**:113. doi: 10.1186/s12978-017-0376-4. [PubMed: 28877736]; [PubMed Central: PMC5588747].
 8. UNICEF. HIV and AIDS in adolescents. c2019- [cited 2020 Jul 5]. Available from: <https://data.unicef.org/topic/adolescents/hiv-aids/>.
 9. Avert.org. Young people, HIV and AIDS. c2020- [cited 2020 May 20]. Available from: <https://www.avert.org/professionals/hiv-social-issues/key-affected-populations/young-people>.
 10. NACA. National HIV Strategy for Adolescents and Young People – NACA Nigeria. c2016- [cited 2020 Mar 23]. Available from: <https://naca.gov.ng/national-hiv-strategy-adolescents-young-people/>.
 11. Beauclair R, Dushoff J, Delva W. Partner age differences and associated sexual risk behaviours among adolescent girls and young women in a cash transfer programme for schooling in Malawi. *BMC Public Health*. 2018;**18**:403. doi: 10.1186/s12889-018-5327-7. [PubMed: 29587710]; [PubMed Central: PMC5872581].
 12. National Population Commission. Nigeria Demographic and Health Survey. *Calverton, MD: National Population Commission and ORC/Macro*. c2013- [cited 2020 Apr 20]. Available from: <https://dhsprogram.com/pubs/pdf/FR293/FR293.pdf>
 13. Bantebya G, Ochen E, Pereznieta P, Walker D. Cross-generational and transactional sexual relations in Uganda: Income poverty as a risk factor for adolescents. Overseas Development Institute, London. Available from: <http://www.refworld.org/pdfid/547ed63c4.pdf>
 14. Dana LM, Adinew YM, Sisay MM. Transactional Sex and HIV Risk among Adolescent School Girls in Ethiopia: Mixed Method Study. *Biomed Res Int*. 2019;**2019**:4523475. doi: 10.1155/2019/4523475. [PubMed: 31346517]; [PubMed Central: PMC6620836].
 15. Toska E, Cluver LD, Boyes M, Pantelic M, Kuo C. From ‘sugar daddies’ to ‘sugar babies’: exploring a pathway among age-disparate sexual relationships, condom use and adolescent pregnancy in South Africa. *Sex Health*. 2015;**12**:59-66. doi: 10.1071/SH14089. [PubMed: 25702156]; [PubMed Central: PMC4546918].
 16. Ranganathan M, Kilburn K, Stoner MCD, Hughes JP, MacPhail C, Gomez-Olive FX, et al. The mediating role of partner selection in the association between transactional sex and HIV incidence among young women. *J Acquir Immune Defic Syndr*. 2020;**83**:103-110. doi: 10.1097/QAI.0000000000002225. [PubMed: 31714368]; [PubMed Central: PMC6970545].
 17. Folayan MO, Adebajo S, Adeyemi A, Ogungbemi KM. Differences in sexual practices, sexual behavior and hiv risk profile between adolescents and young persons in rural and urban Nigeria. *PLoS One*. 2015;**10**(7):e0129106. doi: 10.1371/journal.pone.0129106. [PubMed: 26171859]; [PubMed Central: PMC4501747].
 18. National Agency for Control of AIDS. *Global AIDS Response Country Progress Report*. Federal Republic of Nigeria, Abuja. 2015
 19. Fetene N, Mekonnen W. The prevalence of risky sexual behaviours among youth center reproductive health clinics users and non-users in Addis Ababa, Ethiopia: A comparative cross-sectional study. *PLoS One*. 2018;**13**(6):e0198657. doi: 10.1371/journal.pone.0198657. [PubMed: 29879164]; [PubMed Central: PMC5991709].
 20. UNAIDS. Transactional sex and HIV risk: From analysis to action. Joint United Nations Programme on HIV/AIDS, Avenue Appia, 1211 Geneva 27 Switzerland. c2018 [updated 2017 Dec; cited 2020 Jul. 08]: Available from: https://www.unaids.org/sites/default/files/media_asset/transactional-sex-and-hiv-risk_en.pdf
 21. Ranganathan M, MacPhail C, Pettifor A, Kahn K, Khoza N, Twine R, et al. Young women’s perceptions of transactional sex and sexual agency: a qualitative study in the context of rural South Africa. *BMC Public Health*. 2017;**17**:666. doi: 10.1186/s12889-017-4636-6. [PubMed: 28830394]; [PubMed Central: PMC5568133].
 22. Bhatta D, Koirala A. Adolescent students’ attitude towards premarital sex and unwanted pregnancy. *Health Renaissance*. 2013; **11**:145-149. doi: 10.3126/hren.v1i1.8222.
 23. Nilsson B, Edin K, Kinsman J, Kahn K, Norris SA. Obstacles to intergenerational communication in caregivers’ narratives regarding young people’s sexual and reproductive health and lifestyle in rural South Africa. *BMC Public Health*. 2020;**20**:791. doi: 10.1186/s12889-020-08780-9. [PubMed: 32460806]; [PubMed Central: PMC7251858].
 24. Aji J, Aji M, Ifeadike C, Emelumadu O, Ubajaka C, Nwabueze S, et al. Adolescent Sexual Behaviour and Practices in Nigeria: A Twelve Year Review. *Afrimedical Journal*. 2013; **4**:10-16.

25. Wamoyi J, Heise L, Meiksin R, Kyegombe N, Nyato D, Buller AM. Is transactional sex exploitative? A social norms perspective, with implications for interventions with adolescent girls and young women in Tanzania. *PLoS One*. 2019;14:4:e0214366. doi: 10.1371/journal.pone.0214366. [PubMed: 30939145]; [PubMed Central: PMC6445416].
26. Ranganathan M, Heise L, MacPhail C, Stöckl H, Silverwood RJ, Kahn K, et al. 'It's because I like things... it's a status and he buys me airtime': exploring the role of transactional sex in young women's consumption patterns in rural South Africa (secondary findings from HPTN 068). *Reprod Health*. 2018;15:102. doi: 10.1186/s12978-018-0539-y. [PubMed: 29843814]; [PubMed Central: PMC5972444].
27. Godin G, Kok G. The Theory of Planned Behaviour: A Review of its applications to health-related behaviours. *American Journal of Health Promotion*. 1996;11(2):87-98. doi:10.4278/0890-1171-11.2.87.