

Knowledge, Attitude and Risk Perception on Sexual-Reproductive Behaviours among Adolescents in Ejisu-Juaben Municipality, Ghana

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Abstract

Knowledge on reproductive health issues is essential in the promotion of positive reproductive behaviours among adolescent. The Study utilised a non-interventional cross-sectional study design to assess knowledge, attitude and risk perception on sexual-reproductive behaviours among adolescents, particularly high school students in the Ejisu-Juaben Municipality of Ghana. The study enrolled 820 participants using structured questionnaire as primary data collection tool and focus group discussion. Level of knowledge on reproductive health and risk related issues were rated more than 50%. Correct responses to knowledge and risk perception questions areas are the following; STI including HIV/AIDS cannot be avoided (42.0%), STI including HIV/AIDS go away without any medication (64.0%), only people who look sick can spread HIV/AIDS virus (73.0%), Teenage girl cannot get HIV from teenage boys who have had sex only a few times (62.2%), girls cannot get pregnant on sexual debut (61.0%), pregnancy can occur in mid-cycle (53.3%), no need of birth control method if a girl has sex once in a while (52.5%), urinating after sexual intercourse can prevent pregnancy (55.3%), a highly reliable method of avoiding pregnancy and STI/HIV is to use a condom (60.3%). Reproductive health knowledge and sexual-reproductive behaviours were not statistically significant ($p>0.005$), though sexual intercourse and non-protection on sexual debuts were significantly associated with reproductive health knowledge ($p<0.005$). Sexual -reproductive health education be incorporated into the curriculum of school, establishing health education department in all schools to promote positive health behaviours.

Keywords: Ghana, Ejisu-Juaben, Reproductive, Risk, Knowledge, Students.

Introduction

Reproductive health knowledge is essential concept in the prevention of adolescent reproductive risk behaviours. In a study by FFPAM, 2002, level of knowledge among older students was better than younger students. In South Africa, Jama (2006) found that older youth and men were much more likely to use condoms for the first time for at least three years since first sexual intercourse. Zadeh & Ahmad (2008) also reported other personal factors with significant relationship with incidence of high-risk sexual behaviours include the alcohol use, educational level (Tanhaei et al., 2013), lack of proper sexual knowledge and attitude, and improper sexual information sources (Nagamabadi et al., 2014, Latifnejad et al., 2014).

Lack of sex education is one of the reasons why young people are particularly vulnerable to STIs including education on STI prevention (Dehne & Riedner, 2001). A study in Ghana by Glover et al. (2003) documented that Ghanaian young people have substantial gaps in their reproductive health knowledge. Only 17% of overall and 22% of females and 13% of males correctly indicated when during the menstrual cycle pregnancy is most likely to occur. Ajuwon et al. (2006) in their study in Nigeria on sexual behaviour and experience of sexual coercion among secondary school students reported that overall, female students had higher levels of knowledge of reproductive health variables than male students.

In Ghana, a study by Rondini & Krugu (2009) in their study Knowledge, attitude and practices study on reproductive health among secondary school students in Bolgatanga, upper east region, observed that data collected show a low concerning familiarity of the students population with family planning methods and HIV/AIDS transmission, which, combined with minimal contraceptive use, pose them at high risk for unwanted pregnancies and sexual infections transmission.

The present study intended to assess the knowledge, attitude and risk perception on sexual-reproductive behaviours.

Research question

The study considered this research question as a foundation for the study; ‘what is the level of students’ knowledge, attitude and risk perception on sexual-reproductive risk behaviours and outcome’?

Research hypothesis

The study investigated the following null hypothesis;

1. There is no significant relationship between sex education at school and risky sexual-reproductive behaviours.
2. There is no significant relationship between reproductive health knowledge and sexual-reproductive behaviours.

Methodology

Study type and design

This study employed a cross-sectional study design to assess knowledge, attitude and risk perception on sexual-reproductive health among a representative sample of junior and senior high school students within the age group of 12 and 20 years in Ejisu-Juaben Municipality, Ghana. The study involved the use of a structured self-administered questionnaire and focus group discussions.

Study population

An estimated student population of eight thousand (8,000) were eligible to participate in the study for both the junior and senior high schools selected for the study. The study population comprised of students with or without indications of sexual-reproductive risk behaviours of both JHS and SHS within Ejisu-Juaben Municipality. The study selected the target population among students of not less than 12 years of age in both sexes as at the time of the study and who were present at school during the survey. The assumption was that students of 12 years of age or above stand a chance of being at risk of sexual-reproductive behaviours. Exclusion criteria were limited to less than 12 years of age, voluntary refusal to participate in the survey and mental disability.

Sampling techniques, sample size and pre-testing

Due to the combined nature of the Ejisu-Juaben Municipality, the study zoned its activities into Ejisu and its sub-communities and Juaben and its sub-community. The study employed a multi-stage sampling technique which used a two-stage cluster probability sample design to produce representative samples of junior high school (JHS) and senior high school students. Each zonal sample included both private and public schools.

The first sampling stage randomly selected seven junior high schools from each of the zones. In the second sampling stage randomly sampled 30 students, 15 males and 15 females from each junior high school.

With senior high schools, the first stage sampling involved selection of four (4) SHS in the municipality. The second sampling stage involves random selection of 5 classrooms within each of the four selected schools, and all students in each class being eligible to participate in the study.

The study enrolled twenty students each, ten males and ten females each of the selected class in all the four schools. In effect, a total of fourteen (14) JHS participated in the study as well as four (4) SHS.

A total of 820 students participated in the survey. A pilot test of the survey instrument was carried out on a sample of one non-participating school in the municipality with similar characteristics to establish adherence, control, skills and rate of questionnaire administering, which was meant to ensure effective correspondence and to help in the restructuring of the questionnaire.

Data collection instrument and techniques

Primary data was collected with the use of Modified Youth Risk Behaviours Survey (YRBS) questionnaire on formal interview basis in addition to focus group discussion. The Youth Risk Behaviour Surveillance System (YRBSS) was designed by the CDC to monitor six categories behaviours: those that contribute to unintentional injuries and violence; tobacco use; alcohol and other drug use; sexual behaviour that contributes to unintended pregnancy and sexually transmitted diseases;

dietary behaviour; and physical activity (CDC, 2010b). The YRBSS is the only national surveillance system that continually generates information about sexual behaviours among youth and related health outcomes throughout the United States (Morris et al., 1993). The questionnaire is the most representative source of information on risk behaviours of high school students in the United States (CDC, 2010a).

This study considered only the reproductive aspects of the questionnaire as well as others that had direct or indirect contributions to the present study, as well as questions related to the local conditions and relevant to the study. Secondary data extracted and manipulated to yield an interpretable outcome included records from published journals.

Well-trained field enumerators assisted data collection. The response rate was excellent, except in few cases of observed incomplete questionnaires.

Data handling and analysis

Data collected were subjected to editing to exclude or minimise errors, re-organised, coded and manipulated with appropriate software for efficient analysis. Access to the data was limited to the principal researcher at the initial stage of the research till completion. Detailed analysis of data was done with the use of computerised software such as SPSS 18 (SPSS, Inc.) and Microsoft Excel 2010, all compatible with Microsoft Windows 8 version.

The frequency of distribution, proportion and percentages for qualitative variables, mean± SD, correlations and odds ratios and associated 95% confidence intervals were computed, p-values ≤0.05 was considered statistically significant. Results were presented primarily in the form of tables and interpretations of findings made accordingly. Presented below are series of tests performed.

Ethical consideration

Approval and administrative clearance for the conduct of the study were obtained from Educational Directorate, Health Directorate and Heads of all participating schools. The aims and processes of the research were fully explained to the participants before the study and their informed consent obtained for participation in the study. Participants were informed about the content of the interview to enable them to understand the study and to give their full approval. The importance of the study was made known to the participants as well as the low physical and psychological risk associated. Nevertheless, participation was made voluntarily. Thus participants were given the right to or not to take part in the study.

Only consenting individuals were eligible for the study. Confidentiality and anonymity were as well guaranteed to the respondents as they were being dealt with individually.

Results

Background characteristic

Table 3. 1. Background characteristic of participants

Variables	n (%)	p-value
Age		≤ 0.05
Mean Age (SD), Years	16.28 (1.6)	
Sex		1.00
Male	410 (50)	
Female	410 (50)	
Total	820 (100)	
Education Status		0.48
JHS	420 (51.2)	
SHS	400 (48.8)	
Total	820 (100)	
Residential Status		≤ 0.05
Day	580 (70.7)	
Boarding/Hostel	240 (29.3)	
Total	580 (100)	

Religious Background		≤ 0.05
Christianity	753 (91.9)	
Muslim	54 (6.6)	
Traditionalist	8 (1.1)	
Others	3 (0.4)	
Total	819 (100)	
Perceived Religious Commitments		≤ 0.05
Somehow Faithful	156 (19.3)	
Faithful	326 (40.4)	
Very Faithful	325 (40.3)	
Total	807 (100)	

The study participant's background characteristics is shown in **Table 3.** above. Demographics measured include age, sex, education status, residential status at school, religious background and perceived religious commitments. A total of eighteen (18) schools were selected to participate in the study, fourteen (14) junior high schools and four (4) senior high schools. In all, 820 students were selected for the study, 410 males (50%) and 410 females (50%). Of these, a total of 420 (51.2%) and 400 (48.8%) participants were selected respectively from JSH and SHS cohort respectively. No statistically significant difference was observed among the groups regarding selected sample size [$p=0.485$].

By residency status at school, all the participants from JSH (100%) were day students where 40% and 60% were respectively day and boarding/hotel students for SHS. The minimum age of the participants was 12 years (female) whereas the maximum was 23 years (male). The mean age was 16.28 [$SD=1.6$], and modal age was 17 years (27.8%).

The majority were within the age bracket of 14 and 18 years (90.8%). Only 3% were less than age 14 years and 6.2% more than 18 years. Statistically, a significant difference was observed between gender and age [$p \leq 0.05$], males were older than their female counterpart. Majority of the participants were Christians (91.9%) with 6.6% being Muslims and 1.5% as traditionalist and others.

Attitude, awareness and risk perception on reproductive risk parameters

Attitudes towards sexuality, self-efficacy, level of awareness and risk perception on STIs including HIV/AIDS and knowledge on reproductive health-related issues were measured by the study. Some basic questions related to sexual risk behaviours were asked to participants so that they can express their attitude towards them [

Table 3.2]. The greater proportion (57.6+22.2) of the participants agreed to the question that 'condoms are easy to obtain and use' as against 20.2% who disagree with the statement. Males (51.2%) were more likely than females (48.8%) to have agreed that condoms are easy to obtain and use [$p \leq 0.05$].

Further, participants were asked for the level of their attitude toward the question 'I believe condoms should not be used if a person of my age is sexually active'. Surprisingly, slightly more than half (60.3%) disagree with the state, whereas less than half of the participants agreed to the statement (16.0+23.7). Males (49.8%) and females (50.2%) almost equally disagree to the statement [$p=0.606$]. The greatest percentage (46.8+29.2) of the participants agreed to the statement that masturbation is a serious health threat as opposed to 24.0% who disagreed, which means that participants are nearly eight times more likely not have engaged in masturbation. Of the proportion that agreed with the statement, males (52.6%) were more than females (47.4%) [$p=0.182$].

Table 3.2. Students' Attitude towards Sexual Risk Behaviours

Variables	n (%)	p-value
Condoms are easy to obtain and use		≤ 0.05
Strongly Agree	465 (57.6)	
Agree	179 (22.2)	
Disagree	163 (20.2)	
Total	807 (100)	
I believe condoms should not be used if a person of my age is sexually active		≤ 0.05
Strongly Agree	124 (16.0)	
Agree	183 (23.7)	
Disagree	466 (60.3)	
Total	773 (100)	
Masturbation is a serious health threat		≤ 0.05
Strongly Agree	363 (46.8)	
Agree	226 (29.2)	
Disagree	186 (24.0)	
Total	775 (100)	

By self-efficacy, participants were asked various questions to assess their levels of self-efficacy related to sexual and reproductive behaviours [Table 3. 3]. Of the entire participants, slightly more than half (51%) agree to refuse sexual intercourse without a condom, out of which males (51.5%) were more than females (48.5%) [$p=0.838$].

With regards to the participants who never had sex before, slightly more than half (56.6%) were very confident they could stay out of sexual activity until marriage, 23% were not confident as against 20% who never express their opinion. Females (56.4%) reported being more confident than will males (43.6%) do regarding staying away from sexual activity until marriage [$p \leq 0.05$].

Of the sexually active proportion of the participants, 60.3% were very confident they can stay with one sexual partner as against 18.8% who were not confident and 20.9% who never expressed their opinion. Females were found to be more confident to stay with one sexual partner than will males do [$p \leq 0.05$]. Slightly more than half (55.2%) of the participants were very confident to stay away from sexual activity when willingly not plan for sex as against 23.5% who were not confident, whereas 21.3% could not express their opinion.

Females (53.8%) were found very confident to stay away sex when not willing than compared to males (46.2%) [$p=0.024$].

Table 3. 3. Student's self-efficacy towards sexual risk behaviours

Variables	n (%)	p-value
Can you refuse to have sexual intercourse without a condom?		≤ 0.05
Don't Know	185 (24.3)	
Not Confident	203 (26.7)	
Very Confident	372 (49.0)	
Total	760 (100)	
Can you abstain from sexual intercourse until you marry if not done sex before		≤ 0.05
Don't Know	159 (20)	
Not Confident	185 (23.0)	
Very Confident	452 (57)	

Total	796 (100)	
Can you stay with only one sexual partner		≤ 0.05
Don't Know	167 (20.9)	
Not Confident	150 (18.8)	
Very Confident	481 (60.3)	
Total	798 (100)	
Can you refuse to have with someone if you don't want to do sex		≤ 0.05
Don't Know	169 (21.3)	
Not Confident	186 (23.5)	
Very Confident	437 (55.2)	
Total	792 (100)	

With regards to the level of awareness and risk perception on STIs including HIV/AIDS, the majority (89%) of the participants were very much aware of the existence, and high prevalence of HIV/AIDS as against few (11%) were not aware of HIV/AIDS and its increased prevalence. Of the proportions that were very much aware of the HIV/AIDS, 47.8% indicated there was no way they could get the disease as against 52.2% who indicated they were more likely to get the disease taken into consideration their related sexual lifestyles. No statistically significant difference was noted between the two groups [$p=0.233$, Table 3.].

Gender showed no statistically significant difference in this variable [$p=0.295$]. Majority 747 (92.5%) as against few 61 (7.5%) of the participants who perceived to have a high risk of contracting HIV/AIDS have never had an HIV/AIDS test. Similarly, gender showed no statistically significant difference in this variable [$p=0.087$]. Of the proportion that ever had an HIV/AIDS test, 25 (3.7%) were reported to have been tested positive [Table 3.4].

Males 16 (64%) were tested HIV/AIDS positive more than females 9(36%), though no statistically significant difference was observed among on gender [$p=0.488$].

Table 3. 4. HIV/AIDS and awareness

Variables	n (%)	p-value
Have you heard of HIV/AIDS		≤ 0.05
Yes	717 (89)	
No	89 (11)	
Total	806 (100)	
Concerned of Acquiring HIV/AIDS		0.233
Yes	399 (52.2)	
No	366 (47.8)	
Total	765 (100)	
Ever Gone For HIV/AIDS Test		
Yes	61 (7.5)	
No	747 (92.5)	
Total	808 (100)	
Positive Test Results		0.423
Yes	25 (44.6)	
No	31 (55.4)	
Total	56 (100)	

Research Question: What is the level of students' knowledge, attitude and risk perception on sexual-reproductive risk behaviours and outcome?

Table 3. 5. Students' knowledge on STIs (HIV/AIDS)

Variables	n (%)	Answer	p-value
STI (HIV/AIDS) cannot be avoided/prevented		False	≤ 0.05
True	279 (34.6)		
False	338 (42.0)		
Don't Know	188 (23.4)		
Total	805 (100)		
STI (HIV/AIDS) go away without medication		False	≤ 0.05
True	75 (10)		
False	504 (64.0)		
Don't Know	208 (26.0)		
Total	787 (100)		
Only people who look sick can spread HIV/AIDS virus		False	≤ 0.05
True	110 (13.6)		
False	592 (73.0)		
Don't Know	109 (13.4)		
Total	811 (100)		
Teenage girl cannot get HIV from teenage boys who have had sex only a few times		False	≤0.05
True	121 (15.0)		
False	501 (62.2)		
Don't Know	184 (22.8)		
Total	806 (100)		

By this measure which forms part of the individual level characteristics that predict related sexual behaviours, participants were examined on areas related to knowledge on STIs (HIV/AIDS), pregnancy and contraception [Table 3. 5 and Table 3.6]. Of the question STI including HIV/AIDS cannot be avoided, 42.0% got the responses correct whereas 34.6% got the response wrong as well as 23.4% who showed no opinion on the question.

Males (51%) were found to have responded correctly to the question asked than females (49%), though no statistically significant difference was observed for gender [$p=0.713$]. Again, participants were asked that STI including HIV/AIDS go away on its own without any medication.

Of this question, the majority (64.0%) responded correctly, whereas 10% responded wrongly as again 26 % who also showed no opinion. Females (50.4%) contributed to the correct response than males (49.6%), no statistically significant difference was observed for this variable on gender. [$p=0.593$].

Greater proportions (73.0%) of the participants could respond correctly to the question 'Only people who look sick can spread HIV/AIDS virus' whereas 13.6% and 13.4% responded wrongly and no opinion respectively. Males (51.5%) were more likely to have responded correctly to the question than will females (48.5%) do, though no statistically significant difference was observed for gender [$p=450$]. Participants were also asked 'Teenage girl cannot get HIV from teenage boys who have had sex only a few times. Of this, the majority (62.2%) responded correctly as against 22.8% and 15.0% who showed no opinion and responded wrongly restively. Males (52%) reported having answered this question correctly than females (48%) [$p=0.047$], no significant difference was noted for gender on this variable.

Knowledge levels related to pregnancy and contraception is presented below [Table 3.6]. The majority (61.0%) of the participants were able to respond correctly when asked a question on 'Girls cannot get pregnant the first time they have sex'. This was followed by 21.1% who neither express any

opinion on the question asked. The least proportion of 17.9% responded wrongly to the question. Males (52%) contributed to the greater percentage of the proportion who responded correctly to the question asked than females (48%) [$p=0.267$]. The majority (53.3%) of the respondents could respond correctly to the question on the occurrence of pregnancy in mid-cycle question asked. Males (53%) contributed to the correct responses than will females do (47%) [$p=0.148$].

Similarly, 52.5% could also respond correctly as against 15.8% who could not respond correctly when this question was asked, 'If a girl has sex only once in a while, she does not need birth control method'. Again, greater proportions of males (54%) contributed to the correct responses than females (46%) [$p=0.109$]. Participants were further asked if urinating/washing of vagina after sexual intercourse prevents pregnancy. Interestingly, slightly more than half (55.3%) could respond correctly, perhaps 30.5% showed no opinion and 14.3% responded wrongly. Males (55%) again contributed to the correct responses than will females (45%) do [$p=0.012$]. Participants were asked a question 'a highly reliable method of avoiding pregnancy, and STI/HIV is to use a condom', and more than half (60.3%) of the entire participants responded correctly, followed by 21.6% who could not answer correctly. 18.1% showed no opinion about the question. Of the proportion that correctly answered the question, males (50.9%) were higher than females (49.1%) [$p=0.191$].

Table 3.6. Students' knowledge on pregnancy and contraception

Variables	n (%)	Answer	p-value
Girls cannot get pregnant the first time they have sex		False	≤ 0.05
True	145 (17.9)		
False	495 (61.0)		
Don't Know	171 (21.1)		
Total	811 (100)		
Pregnancy is most likely to occur in mid-cycle		True	≤ 0.05
True	431 (53.3)		
False	108 (13.3)		
Don't Know	270 (33.4)		
Total	809 (100)		
If a girl has sex only once in a while, she does not need birth control method		False	≤ 0.05
True	126 (15.8)		
False	416 (52.0)		
Don't Know	257 (32.2)		
Total	799 (100)		
Urinating/washing vaginal after sex prevents pregnancy		False	≤ 0.05
True	116 (14.3)		
False	449 (55.3)		
Don't Know	247 (30.4)		
Total	812 (100)		
A highly reliable method of avoiding pregnancy and STI/HIV is to use a condom		True	≤ 0.05
True	489 (60.3)		
False	175 (21.6)		
Don't Know	147 (18.1)		
Total	811 (100)		

Sex education

Exposure to sex education is thought to be predictive of sexual and reproductive risk behaviours in adolescents, as well as related to participation in other health risk behaviours as according to problem behaviour theory. Concerning reproductive health and sexual health education and counselling participants were asked if they have ever received an education of such at school and how it influences their behaviour in relation to sexuality [

Table 3. 7]. The majority (74.7%) of the participants indicated they have ever received education and counselling on reproductive and sexual health as against few (25.3%) who did not. Of the proportions who indicated they had received education and counselling on reproductive and sexual health, majority (53%) were females compared to males (47%) [$p \leq 0.05$].

Out of those ever-received education and counselling, the majority (83.7%) indicated such education had a positive influence on their sexual and reproductive health behaviours whereas few (16.3%) indicated negative or no influence on their behavioural pattern. Of the proportion that had positive behavioural changes due to the education and counselling, females (51.8%) were more than males (48.2%). Of the proportion who also indicated negative influence, females (51%) were as well more than males (49%) [$p=0.890$].

Table 3. 7. Reproductive and sexual health education and counselling

Variables	n (%)	p-value
Sex Education and Counselling at school		≤ 0.05
Yes	599 (74.7)	
No	203 (25.3)	
Total	802 (100)	
Influenced of the Education & Counselling		≤ 0.05
Positive	504 (83.7)	
Negative	98(16.3)	
Total	602 (100)	

In additional to question on sexual and reproductive health education and counselling received from school, participants were further asked on the various alternative sources of sexual and reproductive health-related information and education including school source [**Table 3.8**]. Among the various sources indicated, the majority (52.9%) received education from school as their primary sources of reproductive and sexual health information, followed by family (15.2%).

Table 3.8. Sources of Reproductive Health Knowledge

Variables	n (%)	p-value
Sources		≤ 0.05
School	424 (52.9)	
Health personnel	88 (11.0)	
Friends	63 (7.9)	
Family	122 (15.2)	
Media	52 (6.5)	
Internet	33 (4.1)	
School + Health Personnel + Family	19 (2.4)	
Total	801 (100)	

Hypothesis 1: There is no significant relationship between sex education at school and risky sexual-reproductive behaviours

In testing for the hypothesis stated, analysis of bivariate correlation was performed to determine the magnitude of the association between sex education and reproductive risk behaviours variables [**Table 3.9**]. No statistically significant association was observed on sex education and the majority of the risky sexual-reproductive behaviour [$p > 0.05$], except sexual relationship and sexual intercourse respectively

which showed a statistically significant negative correlation with sex education [$r=-0.090$, $p=0.011$ and $r=-0.124$, $p=0.000$]. Thus, there is enough evidence in support of the null hypothesis; hence we failed to reject it. Rejection of the null hypothesis can only be possible in a sexual relationship and sexual intercourse.

Table 3.9. Relationship between Sex Education and Risky Sexual-Reproductive Behaviour

Variables	Sex Education		
	n	r	p-value
Sexual relationship	795	-.090*	0.011
Sexual Intercourse	793	-.124**	0.000
Early sexual debut	198	.130	0.068
Non-protection on sexual debut	230	.090	0.172
Pregnancy	227	-.045	0.497
Abortion	41	.110	0.494
Unsafe mode termination	35	.120	0.492
Sexual coercion	790	-.043	0.223
Multiple sexual partners	210	.090	0.193
Unsafe sex	204	.003	0.963
Non-use of contraceptives	796	-.007	0.843

**Correlation is significant at the 0.01 level (2-tailed).

*Correlation is significant at the 0.05 level (2-tailed).

Hypothesis 2: There is no significant relationship between reproductive health knowledge and sexual-reproductive behaviours

In testing for the relationship between reproductive health knowledge and sexual-reproductive behaviours, a knowledge index was adopted, which consisted of nine set of related questions. A degree of internal consistency was checked, and Cronbach's alpha reliability coefficient of 0.747 achieved, which was above the benchmark, thus permitting an analysis with the knowledge index developed due to an acceptable level of internal consistency.

Having carried out a correlational analysis between the various risk variables, there was enough evidence in support of the null hypothesis that there is no statistically significant relationship between reproductive health knowledge and sexual-reproductive behaviours except in sexual intercourse ($r=.130$, $p=0.000$) and non-protection on sexual debuts ($r=.159$, $p=0.015$) which was significantly associated with reproductive health knowledge [Table 3.10]. Thus, we failed to reject the null hypothesis by enough evidence in support of it.

Table 3.10. Relationship between Reproductive Health Knowledge and Risk Behaviours

Variables	n	r	p-value
Sexual relationship	810	0.065	0.065
Sexual Intercourse	808	.130**	0.000
Early sexual debut	200	.024	0.732
Non-protection on sexual debut	233	.159*	0.015
Pregnancy	230	.016	0.808
Abortion	41	.019	0.572
Unsafe mode termination	35	.034	0.848
Sexual coercion	805	.018	0.618
Multiple sexual partners	212	.130	0.059
Unsafe sex	202 -	.014	0.838
Non-use of contraceptives	811	.067	0.058

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Discussion

Sexual-reproductive health knowledge and risk perception

According to problem behaviour theory (Jessor & Jessor, 1977), factors that influence risky sexual-reproductive behaviours of adolescents included personal characteristic, behavioural and environmental factors. In addition to this is ecological system theory (Bronfenbrenner, 1979), in which behaviour is influenced by a set of interrelated factors that are immediate and distant to the individual. The present study measured personal characteristics predicting risky sexual-reproductive behaviours to include attitudes towards one's self about sexuality, self-efficacy, level of awareness and risk perception on STIs including HIV/AIDS and knowledge on reproductive health-related issues.

The greater proportion (79.8%) of the participants was of the view that condoms are easily obtained and use. This might positively influence the sexually active participant's desire to seek for condom use during sexual activity, thus helping prevent unwanted teenage pregnancies and its related outcomes. Similarly, a little more than half (60.3%) of participants disagree with the perception that condoms should not be used if a person of their age group age is sexually active, whereas 39.7% were in agreement with the perception.

Having negative views regarding when to use condoms might increase the chances of the participants indulging in unprotected sexual activity, which consequently may increase their chances of having unwanted pregnancies and contraction of STI including HIV/AIDS. Previous studies also reported other personal factors with significant relationship with incidence of high risk sexual behaviours (Zadeh & Ahmad, 2008) such as educational level (Tanhaei et al., 2013), lack of proper sexual knowledge and attitude, and improper sexual information sources (Nagamabadi et al., 2014, Latifnejad et al., 2014).

Masturbation was considered among the variables of reproductive health threats, and the majority (76) of the participants held the view that is a serious health threat as opposed to 24.0% who disagreed. This implies that there are higher chances of participants not engaging in masturbation, thus to avoid its related effects on the reproductive health. This contradicts that reported in the previous study in which masturbation was mentioned to carry no risk of pregnancy or sexually transmitted infections and may have benefits to sexual and emotional health (Horne and Zimmer-Gembeck, 2005; Smith et al., 1996). Improved understanding of masturbation is critical to a comprehensive understanding of healthy adolescent sexual development.

By self-efficacy, particularly among the sexually active participants, slightly more than half (51%) agreed to refuse sexual intercourse without a condom. This finding is far less than previously recording finding of 70% of the sexually active participant agreed to refuse sexual intercourse without a condom (Hernandez, 2003). Concerning the participants who never had sexual intercourse, a slightly more than half (56.6%) were very confident they could stay out of sexual activity until marriage whereas 23% were not confident.

Having a high level of self-efficacy in avoiding premarital sex can have a significant positive impact in reducing most of the complications that are likely associated with unwanted pregnancies as a result of premarital sexual activities. Additionally, of the sexually active participants, 60.3% were very confident they can stay with one sexual partner. Having single sexual partners is associated with less negative effect than multiple partners. The chance of spread of STIs is more likely to be less among participants with single sexual partner relationship.

Having multiple sexual partners is one of the important behavioural risk factors for HIV and STDs among adolescents and young adults, especially if they fail to use condoms correctly and consistently as reported by Bingenheimer (2015) and Chen et al. (2007). Slightly more than half (55.2%) of the participants were very confident to stay off sexual activity when willingly not plan for sexual activity with either an active partner or others.

Awareness and risk perception on STIs including HIV/AIDS is one of the predictive factors of indulgence in reproductive risk behaviours. The present study found the majority (89%) of the participants were very much aware of the existence and high prevalence of HIV/AIDS. Of the proportions that were very much aware of the HIV/AIDS, 47.8% indicated there was no way they could get the disease as against 52.2% who perceived to be more likely to get the disease taken into consideration their related sexual lifestyles, though no statistically significant difference was observed between the two groups. This finding is higher than previously recording finding in a study Among

High School Youth in Pawe Woreda Benishangul Gumuz Region, in which 26.7% of the participants reported high chance of acquiring Human Immune Virus (HIV) and Sexual Transmitted Infection (Mulatu et al. (2015). Having a high level of risk perception of contacting STI may in turn help in a change in sexual behaviours among participants.

The majority (92.5%) of the participants who perceived to have a high risk of contracting STIs including HIV/AIDS never checked for an HIV/AIDS status. Of the proportions that went for an HIV/AIDS test, the present study recorded a prevalence of 3.7% levels of self-reported HIV/AIDS among the participants.

Level of student's knowledge of sexual-reproductive risk behaviours a consequence

Level of knowledge of participants is also a component of individual-level variables that predict related sexual behaviours of participants. The study examined the various levels of knowledge of participants related to reproductive health. Of the question STI including HIV/AIDS cannot be avoided, 42.0% had the response correct whereas 34.6% got the response wrong as well as 23.4% who showed any opinion. This finding indicates there was little knowledge of participants on prevention of STI including HIV/AIDS since less than half of the participants got the right response, and this may limit their potentials in putting measure again prevention of STIs.

Additionally, the majority (64.0%) of the respondents could respond correctly when asked STI including HIV/AIDS go away on its own without any medication whereas 10% responded wrongly as against 26 % who also showed no opinion. This finding is higher than that reported by Hernandez (2003) in which 41.25% the participant could respond correctly to the same question. Those who responded wrongly were higher (44.7%) in the previous (Hernandez, 2003) than the present study. The present finding may translate into early treatment seeking behaviours when developed STIs, thus to reduce or limit its associated complications. A greater proportion (73.0%) of the participants could respond correctly to the question 'Only people who look sick can spread HIV/AIDS virus' whereas 13.6% and 13.4% responded wrongly and no opinion respectively. Again, finding from the present study is higher than that recorded in the previous study in which 52.1% could respond correctly to the same question (Hernandez, 2003). Finding from the present study suggest that majority of the participant are very much aware of the insidious nature of HIV/AIDS and thus having sufficient knowledge on this may contribute to the increased preventive effort to avoid acquisition of the disease among the participants.

The study as well recorded (62.2%) correctly responses as against 22.8% and 15.0% whose response showed no opinion and responded wrongly respectively when asked that 'Teenage girl cannot get HIV from teenage boys who have had sex only a few times'. This finding is comparable to that recorded by Hernandez (2003) in which 50.2% of the participant responded correctly to the same question. Though there were an above average correct responses by the present study, there are chances that slightly less than half are at risk of STI including HIV/AIDS due to their low level of knowledge on the basis of the question related to HIV/AIDS acquisition with age mate when into sexual activity.

Rondini & Krugu (2009) in their study on Knowledge, attitude and practices on reproductive health among secondary school students in Bolgatanga, Ghana, observed that there was a low familiarity of the student population with family planning methods and HIV/AIDS transmission, which, combined with minimal contraceptive use, pose them at high risk for unwanted pregnancies and sexual infections transmission.

On the basis of knowledge levels related to pregnancy and contraception, the majority (61.0%) of the participants were able to respond correctly when asked a question on 'Girls cannot get pregnant the first time they have sex'. The finding from the present study is comparable to that recorded in the previous study (50.2%) on the same question (Hernandez, 2003). Similarly, the majority (53.3%) of the respondent could respond correctly to the question on the occurrence of pregnancy in mid-cycle question asked. Knowledge on these measures will assist in taking preventive measures, most especially on sexual deduct and on having sexual intercourse at mid-cycle since pregnancy is bound to occur so long as one remains fertile at intercourse irrespective of being first or not.

Being protected all times during sexual activity is essential in reducing the chances that pregnancy and STIs may occur. On the basis of this, 52.5% of the participants could respond correctly as against 15.8% who could not respond correctly when asked the question that, if a girl had sex only once in a

while, she does not need birth control method'. The correct responses rate documented by this study about the above question though was above average, this is not satisfactory enough to guarantee that there will be low chances of acquiring STIs and getting pregnant when participant is infrequent into sexual activity.

There is a misconception that urinating after sexual intercourse can prevent pregnancy. At the level of the study participants, it was recorded that slightly more than half (55.3%) could respond correctly, perhaps 30.5% showed no opinion, and 14.3% responded wrongly when asked that urinating/washing of vagina after sexual intercourse prevents pregnancy. A little more than half of the participants (60.3%) responded correctly, followed by 21.6% who could not answer correctly and 18.1% showed no opinion when asked that 'a highly reliable method of avoiding pregnancy and STI/HIV is to use a condom. These findings imply that between 40-50% especially the females are at increased risk of getting unwanted pregnancies since they are likely to practice urination and washing of vagina after sexual intercourse rather than would have adopted effective pregnancy preventive measures including condom use.

Finding from the present study on the relationship between reproductive health knowledge and sexual-reproductive risk behaviours as index variable ($\alpha=0.747$) provided enough evidence in support of the null hypothesis which states there is no statistically significant relationship between reproductive health knowledge and sexual-reproductive behaviours. Notwithstanding this evidence, sexual intercourse and non-protection on sexual debuts were significantly associated with reproductive health knowledge.

Sexual-reproductive health education

Sex education is thought as a predictor of sexual and reproductive risk behaviours in adolescents, as well as participation in other health risk behaviours as according to problem behaviour theory. The present study considered two of these variables' protective factors. With regards to reproductive and sexual health education and counselling, the present study recorded majority (74.7%) of the respondents as those who indicated ever received school-based education and counselling on reproductive and sexual health, of which majority (83.7%) of this proportion expressed a positive influence of such education on their sexual and reproductive health behaviours. *'They teach us sex education in school, but some time the teachers shy and they do not go into details'*-(Group of JHS students). These findings suggest that exposure to school-based health education and counselling activities will have significant positive attitudinal and behavioural changes among adolescents which will ultimately influence their reproductive health lifestyle. Morris et al. (1993) mentioned that learning about HIV/AIDS helps adolescents acquire the knowledge and skills necessary to eliminate or reduce risks for infection. In a review of HIV/AIDS and sex education programs in developing and developed countries, Kirby, Laris, & Rolleri (2005) found that, overall, these programs were more likely to have a positive impact on sexual behaviour, including delaying the initial sexual experience, increasing condom use, and reducing the frequency of sexual activity and number of partners. The main sources of sexual and reproductive health-related information and education were recorded by the study to include school (52.9%), family (15.2%), health personnel (11.0%), friends (7.9%), media (6.5%), internet (4.1%) and a combination multiple sources (2.4%). This finding implies that participants have diverse sources of information and education on reproductive health-related issues and if fully and effectively utilised will have positive impact on adolescent reproductive health.

Conclusion

Level of knowledge on reproductive health and risk related issues observed more than 50% level of high level of knowledge. The following were recorded as positive responses to key questions asks; STI including HIV/AIDS cannot be avoided (42.0%), STI including HIV/AIDS go away on its own without any medication (64.0%), only people who look sick can spread HIV/AIDS virus (73.0%), Teenage girl cannot get HIV from teenage boys who have had sex only a few times (62.2%), Girls cannot get pregnant the first time they have sex (61.0%), occurrence of pregnancy in mid-cycle (53.3%), If a girl has sex only once in a while, she does not need birth control method (52.5%), urinating after sexual intercourse can prevent pregnancy (55.3%), a highly reliable method of avoiding pregnancy and STI/HIV is to use a condom (60.3%). Finding from the study concerning the relationship between

reproductive health knowledge and sexual-reproductive behaviours was not statistically significant. Notwithstanding this evidence, sexual intercourse and non-protection on sexual debuts were significantly associated with reproductive health knowledge.

Reproductive and sexual health education and counselling were received by 74.7% of the participants, of which majority (83.7%) indicated the positive influence of such education on their sexual and reproductive health behaviours. The study observed no statistically significant association between sex education and the majority of the risky sexual-reproductive behaviour, except sexual relationship and sexual intercourse respectively which showed a statistically significant negative correlation with sex education. Enough evidence in support of the null hypothesis which states there is no significant relationship between protective factor (sex education) and risky sexual-reproductive behaviour was generated. The null hypothesis can be rejected possibly on a sexual relationship and sexual intercourse as there was a significant negative correlation between sex education and risky sexual behaviours.

Based on the key findings from the study, it is recommended that sexual and reproductive health education be incorporated in the curriculum of both junior and senior high schools in the country to strengthen the knowledge-based and scope of the student on sexual reproductive health-related concepts, establishment of health education unit/department or adolescent friendly department in all schools tasked with promotion of positive health behaviours among student and staff.

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