

ORIGINAL RESEARCH

Adolescent health and Sexuality

## Perceptions of self as influencers of sexual debut among in-school adolescents in Nyamira County, Kenya

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Received: 2 February 2021; Accepted: 20 February 2021; Revised: 28 March 2021; Available online: April 2021

### Abstract

**Background:** Self-esteem, defined as a person's perception of their worthiness, is a social vaccine that possibly inoculates young people against a wide range of social vulnerabilities. Young people with high esteem exhibit self-confidence to decline sex when not ready for it. In this regard, high self-esteem may be protective against teenage sexual debut.

**Objective:** To determine perceptions of self as guided by social constructs that could lead to sexual debut among in-school adolescents in Nyamira County through the lens of the theory of reasoned action.

**Methods:** A mixed-method study design employing the collection of both quantitative and qualitative data was used. The study was conducted in mixed-day, girls-only boarding, and boys-only boarding secondary schools in Nyamira County. Four hundred students (200 males and 200 females) from mixed-day secondary schools and single-sex boarding secondary schools aged 14-18 were recruited and included in this study. Focused Group Discussions (FGDs), case narratives, and key informant interviews were utilized in collecting qualitative data. **Results:** Of the 400 students, 61% had ever had sex. Of the males, 66.5% and the females, 55.5% had ever had sex.

More students in mixed day schools (63.5%) had ever had sex than single-sex schools (58.5%). Most students (75.3%) had normal self-esteem. Students' level of self-esteem did not vary between the mixed-day secondary schools and the single-sex secondary schools. No association was found between perceptions of self and ever having sex among in-school adolescents, regardless of the school type (day or boarding) and gender of the students. In FGDs and case narratives, students pointed that one's mental status played a role in initiating sex.

**Conclusion:** Esteem boosters are unlikely to curtail sexual debut among in-school adolescents in Nyamira county. Other drivers of sexual debut need to be investigated to address the impact of sexual debut among the in-school adolescents in the county.

**Keywords:** Adolescent, self-perception, sex, debut, in-school, self-esteem

**Conflict of Interest:** None

**Funding:** None

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## Introduction

During adolescence, young people naturally experience a decline in self-esteem. This is due to the psychological and biological changes that create powerful new emotions and conflicts within the adolescent. Forces outside of the young person, such as the environment, then determine how the individual integrates those feelings (1). The Rosenberg Self Esteem Scale is used to measure a subject's perception of self-worth (2). A person's self-worth refers to their overall feeling of self and how they perceive themselves in various aspects of life. These aspects include academic excellence, social aptitude, athletic excellence, physique, job acumen, romantic attraction, a person's conduct, and how well a person develops close friendships with others. Like everyone else, adolescents desire self-worth, personal safety, a sense of belonging, and a positive contribution to the world around them. These needs have to be met for them to morph into healthy adults. In the past, these needs have been met at the family and community levels. However, current research shows that few adolescents receive this internal and external support anymore to prepare them for adulthood (3).

Biologically, there is delayed maturation of the adolescent's prefrontal cortex, an area responsible for inhibition and self-control (4). All these cause them to engage in high-risk behavior such as having unprotected sex, drug and substance abuse, among others (5). In Kenya, in 2016, 26% of the new HIV infections were among women aged 15-24 years (6). Nyamira County, one of the 47 counties in Kenya, has the fourth highest burden of teenage pregnancy and motherhood in the country, at 28% against a national average of 18%. Sexual debut in women ages 20-49 in Nyamira County is 17.1 years, while men in the same age group is 18.1 years, against a national average of 18.0 years and 17.4 years, respectively (7). Psychological states as precursors of premarital sexual behavior have been poorly studied, especially in Nyamira County, hence this study.

## Methods

### Study design

A cross-sectional mixed-method study design was employed in the collection of quantitative and qualitative data. The study used surveys, Focused Group Discussions (FGDs), case narratives, and key informant interviews. The use of a mixed-method approach allowed for extensive triangulation of data and generation of in-depth information to respond to the study objective. The theory of reasoned action guided the study.

### Study site and population

This study was conducted in Nyamira County, located in the southwestern part of Kenya. The county has five sub-counties, namely Nyamira North, Nyamira South, Manga, Borabu, and Masaba North. However, due to their homogeneity, the study was conducted in two sub-counties (Manga and Nyamira South sub-counties). The study compared mixed-day secondary schools, girls-only boarding secondary schools, and boys-only boarding secondary schools. Students in mixed-day secondary schools continually interact with the opposite sex both in and out of school. The initiators for sex are both in the school environment and the broader community. Students from boarding single-sex secondary schools, on the other hand, only get to interact with the opposite sex during interschool functions and when schools close for the holidays.

### Sampling procedure and sample size determination

In the two sub-counties, two mixed-day secondary schools, two girls-only boarding schools, and two boys-only secondary schools were randomly selected. The schools were then categorized into two groups: mixed-day secondary schools on one arm and single-sex boarding secondary schools on the other arm. An equal sample size was drawn from each category. Schools in the two sub-counties were picked by simple random sampling using a computer-generated randomization list. A sensitization meeting was held in the selected schools with the school administration for ownership, engagement, and social mobilization. Subsequently, in each school, students were assessed for study eligibility, selected by simple random sampling, and recruited for further interviews.

The sample size was determined using Fisher's formula:

$$n = \frac{z^2 pq}{e^2}$$

Where:

n = required sample size

Z = Z score value at 95% confidence level (standard value of 1.96)

p = the proposed percentage of students with sexual debut.

q = 1-p (variance expected in the responses assumed to be 50:50 proportion rate)

e = level of precision or margin of error at ±5% (standard value of 0.05).

According to the 2014 Kenya Demographic Health Survey (KDHS), 50% of women aged between 20-49 years had their first sexual intercourse before 18 years, whereas 56% of men of the same age group had sexual activity before 18 years. Based on these statistics, an average exposure of early sexual intercourse of 50% was assumed for both girls and boys for sample size determination purposes.

Therefore,

$$n = \frac{(1.96)^2 (0.5)(0.5)}{(0.05)^2}$$

$$= 384.16$$

Rounded off to the next 100 = 400

Thus, n=400 respondents.

A sample of 400 students was therefore utilized in this study. Half the students were on the mixed-day secondary school arm and the other half on the girls-only and boys-only boarding secondary school arm. Each of the single-sex schools had 50 students, while the mixed-day secondary schools had 100 students each.

Twelve FGDs were also conducted where purposive sampling was utilized to select sexually active students identified during the survey. Of note, two FGDs for the various genders were undertaken in each of the two mixed-day secondary schools.

#### Data collection and management

The Rosenberg's Self Esteem Scale was used to determine the self-esteem score for the students. A set of 10 statements were posed to the students, to which they were scored according to their responses. Scores between 15-25 indicated average self-esteem, while scores below 15 indicated low self-esteem.

Self-administered questions were utilized in the quantitative survey. Qualitative data were tape-recorded and transcribed for analysis. All data were stored in a password-protected computer. Strict confidentiality was maintained at all times. Data were collected over six months between January and June 2019 and entered into a password-protected computer.

#### Data analysis

Quantitative data were analyzed using the IBM Statistical Package for Social Sciences (SPSS) Version 20 statistical software. Qualitative data were transcribed and analyzed using a thematic analysis approach with MAXQDA software Version 2018.2. The study's qualitative outcome measures included self-perception – how the young people regarded themselves, whether their self-

actualization was through sex as guided by general perception.

#### Ethical consideration

The National Commission granted authorization to conduct the study in Nyamira County for Science Technology and Innovation (NACOSTI) on 14 July 2018, (NACOSTI/P/18/82597/23352). Ethical approval was granted by the Kenyatta National Hospital - University of Nairobi Ethics Committee on 4 October 2018, reference number KNH-ERC/A/362.

#### Results

Four hundred students (200 males and 200 females) in mixed-day secondary schools and single-sex boarding schools were interviewed. Of these 400 students, 244(61%) had ever had sex, while 156(39%) students had not had sex. Focused group discussions and case narratives with sexually active students were done. More qualitative data was obtained from key informant interviews with parents, heads of counseling of schools, sub-county heads of Education, sub-county heads of Health, a Chief, and a Gusii Elder.

Most of the students (88.7%) were aged 16-18 years, the majority were single (97.5%) and of the protestant faith (61.3%). More students in mixed day schools (63.5%) had ever had sex than single-sex schools (58.5%). However, this was not statistically significant ( $p=0.19$ ). Male students were more likely than female students to have ever had sex [OR=1.59(95% CI 0.83,1.85),  $p=0.03$ ]. All of the ten married students had had sex (Table 1).

In Mixed Day secondary schools, most male (67%) and female students (60%) had ever had sex. Of the younger students (14-15 years), most had not had sex compared to the older students (16-18 years). In all the levels of Education, the majority of the students had ever had sex. No matter the religion, most of the students had ever had sex. However, only age showed evidence of association with ever having sex ( $p=0.04$ ). In single-sex boarding schools, most boys (66%) had ever had sex compared to the girls (51%). On age, apart from the 16-year-olds, the majority of the students had ever had sex. Only gender was statistically significant with ever having sex ( $p=0.03$ ) (Table 2).

It was a general societal perception that young people were having sex. One parent from Nyansabakwa secondary school commented:

'Students today, there is no faithful student. All of them engage in sex.'

[KII\_F\_Parent\_Nyansabakwa:4-4(0)]

In one school, the girls in the FGD estimated all the girls in the school to have had sex. In another school, the head of counseling estimated it to be 80% of students.

Deductions were made because of the high rates of teenage pregnancy in the county. An elder said:

‘We have cases of young girls becoming pregnant and having children, so that means they have sex.’ [KII\_Village Elder\_70:8-8(o)]

The education officer in Nyamira South sub-county said:

‘It has been happening and it is happening and there are so many cases of teenage pregnancy. Young mothers dropping out of school is common to a point it’s like

fashion. Like this year, we had three children sitting KCPE and giving birth and 11 others were pregnant during KCSE. And we discovered that when you address it, it’s like people are not bothered. It’s like the way of life.’

[KII\_EO\_:18-18(o)]

The majority of the students had average self-esteem of 301(75%), with the students having a mean score of 15.64. The findings were similar when analyzed according to school type and gender (Table 3).

No evidence of an association was found between perception of self and ever having sex among in-school adolescents in Nyamira County. This was regardless of school type and gender (Table 4).

**Table 1:** Comparison between demographic characteristics of sexually active and non-sexually active in-school adolescents

Variable		Total n=400 n(%)	No sex n(%)	Ever had sex n(%)	Odds Ratio 95% Confidence Interval	p-value
School type	Mixed	200(50.0)	73(36.5)	127(63.5)	1	0.19
	Single boarding	200(50.0)	83(41.5)	117(58.5)	1.23(0.83-1.85)	
Gender	Male	200(50.0)	67(33.5)	133(66.5)	1	0.03
	Female	200(50.0)	89(44.5)	111(55.5)	1.59(1.06-2.39)	
Age	14	23(5.8)	10(43.5)	13(56.5)	1	0.03
	15	22(5.5)	10(45.5)	12(54.5)	1.08(0.33-3.51)	
	16	84(21)	36(42.9)	48(57.1)	0.98(0.38-2.47)	
	17	150(37.5)	65(43.3)	85(56.7)	0.99(0.41-2.41)	
	18	121(30.2)	35(28.9)	86(71.1)	0.53(0.21-1.32)	
Education	Form 1	16(4.0)	8(50.0)	8(50.0)	1	0.23
	Form 2	71(17.8)	26(37.1)	44(62.9)	0.59(0.20-1.76)	
	Form 3	122(30.5)	55(45.1)	67(54.9)	0.82(0.29-2.33)	
	Form 4	191(47.8)	67(34.9)	125(65.1)	0.54(0.19-1.49)	
Marital status	Single	390(97.5)	156(40.0)	234(60.0)	1	0.03
	Married	10(2.5)	0(0.0)	10(100.0)	6.62(0.84-52.26)	
Religion	Catholic	144(36.9)	50(34.7)	94(65.3)	1	0.2
	Protestant	239(61.3)	100(41.7)	140(58.3)	1.30(0.85-1.99)	
	Muslim	7(1.8)	2(33.3)	4(66.7)	0.92(0.16-5.21)	

**Table 2:** Comparison between demographic characteristics of sexually active and non-sexually active in-school adolescents in mixed-day and single-sex boarding secondary schools

		Mixed Day secondary schools					Single-sex boarding secondary schools				
Variable		Total n=400 n(%)	No sex n(%)	Ever had sex n(%)	Odds Ratio 95% Confidence Interval	p-value	Total n=400 n(%)	No sex n(%)	Ever had sex n(%)	Odds Ratio 95% Confidence Interval	p-value
Gender	Male	100(50.0)	33(33.0)	67(67.0)	1	0.3	100(50.0)	34(34.0)	66(66.0)	1	0.03
	Female	100(50.0)	40(40.0)	60(60.0)	1.35(0.76-2.41)		100(50.0)	49(49.0)	51(51.0)	1.87(1.06-3.30)	
Age	14	11(5.5)	6(54.5)	5(45.5)	1	0.04	12(6.0)	4(33.3)	8(66.7)	1	0.27
	15	13(6.5)	7(53.8)	6(46.2)	1.03(0.21-5.15)		9(4.5)	3(33.3)	6(66.7)	1.00(0.16-6.26)	
	16	31(15.5)	8(25.8)	23(74.2)	3.45(0.82-14.47)		53(26.5)	28(52.8)	25(47.2)	0.45(0.12-1.66)	
	17	79(39.5)	35(44.3)	44(55.7)	1.51(0.42-5.36)		71(35.5)	30(42.3)	41(57.7)	0.68(0.19-2.48)	
	18	66(33.0)	17(25.8)	49(74.2)	0.31(0.08-1.14)		55(27.5)	18(32.7)	37(67.3)	1.03(0.27-3.87)	
Education	Form 1	13(6.5)	6(46.2)	7(53.8)	1	0.33	3(1.5)	2(66.7)	1(33.3)	1	0.54
	Form 2	31(15.5)	12(38.7)	19(61.3)	1.36(0.37-5.02)		39(19.5)	14(35.9)	25(64.1)	3.57(0.30-42.99)	
	Form 3	60(30.0)	26(43.3)	34(56.7)	1.12(0.34-3.74)		62(31.0)	29(46.8)	33(53.2)	2.28(0.20-26.42)	
	Form 4	96(48.0)	29(30.2)	67(69.8)	1.98(0.61-6.41)		96(48.0)	38(39.6)	58(60.4)	3.05(0.27-34.85)	
Marital status	Single	193(96.5)	73(37.8)	120(62.2)	1	0.15	197(98.5)	83(42.1)	114(57.9)	1	0.14
	Married	7(3.5)	0(0.0)	7(100.0)	4.2(0.51-34.84)		3(1.5)	0(0.0)	3(100.0)	1.728(1.53-1.95)	
Religion	Catholic	64(32.0)	20(21.2)	44(68.8)	1	0.57	81(40.5)	31(38.3)	50(61.7)	1	0.5
	Protestant	131(65.5)	51(38.9)	80(61.1)	0.71(0.38-1.34)		118(59.0)	52(44.1)	66(55.9)	0.79(0.44-1.40)	
	Muslim	5(2.5)	2(40.0)	3(60.0)	0.68(0.11-4.40)		1(0.5)	0(0.0)	1(100.0)	0.62(0.04-10.28)	

\*P-value is statistically significant at p&lt;0.05 level

**Table 3:** Self-perception by in-school adolescents in Nyamira county

		n(%)	Mode	Mean score
Students (n=400)	Low self-esteem	99(24.8)	17	15.64
	Normal self-esteem	301(75.3)		
Mixed day schools (n=200)	Low self-esteem	42(21.0)	17	15.81
	Normal self-esteem	158(79.0)		
Single-sex boarding schools (n=200)	Low self-esteem	57(28.5)	17	15.46
	Normal self-esteem	143(71.5)		
Male students (n=200)	Low self-esteem	44(22.0)	17	15.61
	Normal self-esteem	156(78.0)		
Female students (n=200)	Low self-esteem	55(27.5)	17	15.66
	Normal self-esteem	145(72.5)		

**Table 4:** Comparison of self-perception between sexually active and non-sexually active in-school adolescents in Nyamira county

	Self-esteem	n(%)	No sex	Ever had sex	Odd ratio 95%CI	p-value
All students (n=400)	Low	99(24.8)	45(45.5)	54(54.5)	1	0.08
	Normal	301(75.3)	111(36.9)	190(63.1)	0.70(0.44-1.11)	
Mixed day schools (n=200)	Low	42(21.0)	16(38.1)	26(61.9)	1	0.81
	Normal	158(79.0)	57(36.1)	101(63.9)	0.92(0.45-1.85)	
Single-sex boarding schools (n=200)	Low	57(28.5)	29(50.9)	28(49.1)	1	0.09
	Normal	143(71.5)	54(37.8)	89(62.2)	0.59(0.32-1.09)	
Male students (n=200)	Low	44(22.0)	19(43.2)	25(56.8)	1	0.09
	Normal	156(78.0)	48(30.8)	108(69.2)	0.59(0.29-1.16)	
Female students (n=200)	Low	55(27.5)	26(47.3)	29(52.7)	1	0.37
	Normal	145(72.5)	63(43.4)	82(56.6)	0.86(0.46-1.60)	

During the FGDs, students were aware of the role one's mental status plays at the beginning of having sex.

One male student from a single-sex secondary school said,

"Having good mental status will make someone have better self-control and will not rush to have sex to feel good. But may do so because of other reasons like watching ponography"

[FGD\_M\_Nyansabakwa(case narrative 1):40-40(o)]

Another male student from the same school commented as follows:

'If you are anxious, and you come and find someone, a teacher, for example, one coming for teaching practice and willing to have sex with you, you may mess around.' "[FGD\_M\_Nyansabakwa(case narrative 2):56-56(o)]

From the FGDs, it was seen that girls preferred older men. One girl said:

'There are those who engage with older people not of their age, and there are those with the same age.' [FGD\_F\_Bondeka:12-12(o)]

Another girl said:

'Mostly girls have sex with older men.' , [FGD\_F\_Bondeka:14-14(o)]

Most boys went out with girls their age or younger, but a few went out with older women. In a case narrative, a male student said:

'The eldest I have had sex with is 38 years.' [FGD\_M\_Nyansabakwa(case narrative 2):206-206(o)]

When asked why he said:

'Maybe that's the way I am. I like the older adults because I consider them romantic. Those 28-30. Especially when you lack parental love. You get to have sex with that people because they provide that love.'

[FGD\_M\_Mynasabakwa(case narrative 1):176-176(o)]

On being asked how they compare to school girls, he said:

'A huge difference. These people bath well. They are very romantic.'

[FGD\_M\_Nyansabakwa(case narrative 1):193-194(o)]

Students' reasons for having sex for the first time included having sexual feelings, wanting to experience what people talked about, and curiosity. One student reported being raped by her uncle, one other by the cousin, and another by the boyfriend.

Most male students had multiple sexual partners at any one time, while most female students reported

having only one sexual partner at the time of the study.

The lack of a support system in matters of sex came out in the study, with very few students saying they would discuss the subject with their parents. Half the students discussed it with their friends, but those who said they wouldn't discuss it with anyone.

One student from Bondeka girls secondary school said:

'There will be rumors about you. People will talk about it. Then the rumors spread.' [FGD\_F\_Bondeka:203-203(o)]

Another student in the same school said during a case narrative:

'Sometimes I would rather keep it to myself, because sometimes when you share it with others, they tell it to other students. So, I would rather just feel the pain alone.'

[FGD\_F\_Bondeka: 172 – 172 (o)]

A boy from Nyansabakwa secondary school said:

'I don't tell them about myself because they may use my case as an example.' [FGD\_M\_Nyansabakwa(case narrative 1):114 - 114 (o)]

The education officer said they were having challenges as sexual cases were not reported, significantly affecting his work. He said:

'You discover that people ...ok...sexual cases are not reported. Because if you report, then it will be seen like opening up your secrets.' [KIL\_EO\_:18 - 18(o)]

On contraception use, it came across that some used and some did not use. There was an understanding of HIV risk, and some of those interviewed got pregnant due to having unprotected sex. One girl said,

'I was in love, and I didn't think of that. So I didn't think of using protection, and from there, I got pregnant.' [CN\_F\_Bogwendo:17-20(o)]

There was also the issue of inconsistent use of contraception. One boy said,

'You buy the condom, but on the scene, you use it on the first round or the girl would complain you are forced to remove.'

[FGD\_M\_ Nyansabakwa(case narrative 1):74-74(0)]

There was, however, a general understanding of the risks of having unprotected sex, the risks of pregnancy, STIs, and HIV. One student said,

‘You have unprotected sex. And then after three months when you go for testing, you find yourself HIV positive.’

[FGD\_M\_ Nyansabakwa(case narrative 2):86-87(0)]

## Discussion

This study evaluated whether perceptions of self as guided by social constructs led to sexual debut among in-school adolescents in Nyamira County. In the survey, it was found that 61% of students had ever had sex. It was a general perception by the key informants that the adolescents were having sex. In this study, most students had average self-esteem, both boys and girls. Students' level of self-esteem also did not vary between the mixed day and the single-sex secondary schools. On further analysis, no association was found between perceptions of self and ever having sex among in-school adolescents in Nyamira county, the school type and gender of students regardless. In focused group discussions, students were aware that one's mental status played a role in having sex. If stronger mentally, one is thought to have better self-control and could defer sexual engagement (8). The theory of reasoned action was therefore found to be unsatisfactory with this group of respondents since their self-perception and attitude towards sex did not drive their sexual debut. This could mean that there could be other socioecological factors driving sexual debut among these in-school adolescents in Nyamira county.

According to theorists, the following influence human behavior: a person's self-esteem level, community factors such as religion and parental involvement, and public policy. Adolescents with low self-esteem tend to be anxiously unsure of themselves and are likely to use sex as a means to get attention and approval from others. Therefore, there has been a concerted effort by sexuality educators to improve adolescents' self-esteem to promote healthy decision-making and avoid negative consequences of engaging in sex (9). However, many studies have reported conflicting results. For example, in this study, most in-school adolescents had average self-esteem, with no significant association between self-esteem and sexual debut, regardless of school type and gender. Marston et al. reported that adolescent males with high self-worth were more likely to initiate first sex than those with low self-esteem (10). However,

another study found that abstinent adolescents were more confident, with greater determination and more remarkable ability to deploy refusal skills in delaying first sex (11). Similar findings were found in a study done in Ethiopia (12).

Mental distress is associated with an early sexual debut (13). Depressed individuals may lack optimism for the future and see sex as a means to an end. Ekundayo et al. posited that depressed adolescents might engage in sexual activity as a form of "self-medication" (14). On the other hand, Ellis argued that people with high self-esteem are more likely to minimize risky behavior consequences, convincing themselves that the behavior will not cause harm to themselves and others (15).

## Study strengths and limitations

This study had several strengths. A mixed-method study design was employed in the collection of quantitative and qualitative data. This mixed-method approach allowed for extensive triangulation of data and generation of in-depth information to respond to the study objective. This study was not subject to lost-to-follow-up as all participants were collected at the same time.

However, the study was not without limitations. It was carried out in only one county, and may not be generalizable to Kenya. The interviews were conducted by adults on adolescents, among other participants. This might have led to underreporting and misreporting by the adolescents about their sexuality. Adults have been known to admonish adolescents about their sexuality and refusal to abstain from sex (16). There were fewer participants in the younger age groups. This probably was due to the sensitive nature of the topic under study. Hence, more of the older students who were more confident in themselves came forward and participated in the study. This could have resulted in a selection bias. A limitation of trust by the students had been anticipated. That some students would not open up fully and give truthful information. Therefore, to mitigate against this and minimize information bias, students were assured of utmost confidentiality and informed that data collected would purely be utilized for research.

## Conclusion

The majority of the in-school adolescents in Nyamira County, regardless of the type of school and gender, were having sex. However, most of the students were found to have average self-esteem, and no association was seen between how they perceived themselves and their sexual debut.

## Recommendations

Prevention programs in schools and the community should broaden sexual health promotion and include other factors, besides self-perceptions, that could influence sexual debut among in-school adolescents.

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## Acknowledgment

The authors would like to acknowledge the County Government of Nyamira and the principals of the various secondary schools for facilitating this research.