

Self-reported experiences of sexual violence among high school learners in KwaZulu-Natal, South Africa

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Abstract

Sexual violence is a global problem that affects societies worldwide. Almost a third of men and more than half of all women have experienced sexual violence. Hence, we investigated the manifestation of this phenomenon at a younger age.

Methods: In a cross-sectional study, we recruited 584 learners (grade 10) from rural and urban Districts to complete a self-administered questionnaire on their experiences of sexual violence. The I-Change Behavioural Model underpinned the study, and the analysis used unadjusted logistic regression for forced sex, with $P < 0.05$, Odds Ratios and 95% CI used to determine statistical significance.

Results: Slightly more boys ($n=293$, mean age 16.81 years, SD 1.72) than girls ($n=290$, mean age 16.00 years, SD 1.37) participated in the study; one learner did not indicate their sexual orientation. More boys ($n=58$, 20.8%) than girls ($n=43$, 15.6%) reported experiencing forced oral sex ($P < 0.005$), so was vaginal sex, which was reported by 12.1% ($n=34$) and 6.9% ($n=19$) of boys and girls ($P=0.028$), respectively. Learners with sexual experience were 9.32 times (95% CI 4.88 – 17.79, $P < 0.005$) more likely to have been forced to have vaginal sex, with forced vaginal sex positively associated with poverty ($P=0.015$).

Conclusion: In this study, the age and gender of forced sex perpetrators were not investigated, but these are important for tailored interventions.

Introduction

Sexual violence is a public health problem with mental, social and health ramifications, with the latter being inclusive of the risk of being infected with HIV and other sexually transmitted infections (1). Apart from being a violation of a person's rights, sexual violence has detrimental psychological and social consequences (2, 3). Sexual abuse refers to any coerced or forced sexual activity between an individual and another person or group. It covers any sexual act conducted without the victim's consent, even if she reluctantly accepts that sexual act; however, sexual violence has been used to refer to both sexual assault and sexual abuse (4, 5).

Sexual violence can result in self-shame, self-blame, helplessness and low self-esteem, with the people being violated likely to resort to perpetrating the same kind of violence on those weaker than themselves unless such individuals are assisted through proper interventions (3, 6). Globally, approximately 35.6% of women have suffered Sexual Violence, with significantly differing prevalence rates (7). It has been estimated that one-third of young people in South Africa have experienced some form of sexual violence/abuse in their lives (8, 9). Although females are at increased risk of sexual violence, men also experience sexual violence, and the population prevalence of male rape by other men estimated at between 2% and 8% (10, 11). Not only are men victimized by other men, but they can also face female partner violence, which accounted for 6% of male homicides worldwide (12, 13). A trend of female perpetrating sexual violence against men has also been reported in studies that were done in the US and the UK indicating that males are not the only perpetrators of forced sex (14, 15).

Literature has documented a number of risk factors that predispose adolescent girls and boys to becoming victims or perpetrators of sexual violence, with traditional notions of masculinity and the normalisation of interpersonal violence being key drivers in South Africa and in other parts of the world (6, 16). Violence against women by their male partners may be viewed as "normal" behaviour and justified as a way to discipline one's wife (17). There has also been an emphasis on the power imbalance between males and females, particularly when it comes to their sexual development (18). Other studies have stressed the importance of sexual self-efficacy and assertiveness in adolescents' communication with their partners in order to ensure healthy sexual development and well-being in their sexual encounters (19, 20).

Young people exposed to parental marital violence have been found to be more likely to display violent behaviour in their dating, and young people exposed to marital violence were found to be more accepting of violent behaviour than the non-exposed (21, 22).

Given the high rate of HIV prevalence in the 15-24 years age group in South Africa, sexual violence in this age group remains a cause for concern. For example, in 2013, the prevalence of HIV amongst people aged 15-24 years attending the antenatal clinics was 19.9% (23). Despite all the interventions that have been directed at reducing the burden of HIV over the years, the risk of HIV infection among adolescent girls and women between the ages of 15 to 24 years, is worrisome, and accounts for 25% of the new infections, compared to 12% of young men of the same age in Sub-Saharan Africa(24). Young women in an HIV endemic province of KwaZulu-Natal, are in constant danger of acquiring the HI virus, owing to a sugar-daddy (young girls who are in romantic relationships with older men, often for material gains) phenomenon (25) . Given the unequal power relations between older men and younger girls, the risk of forced sex is substantially increased. Studies have shown that women who are in age-disparate relationships were more likely to be infected with HIV than those in relationship that are age-similar (26).

This study aimed to determine the proportion of high school learners with self-reported experiences of sexual violence in KwaZulu-Natal (KZN) province, and the associated risk factors.

Methods

Study population and sample

The study population was high school learners attending government schools in the province of KwaZulu-Natal (KZN), one of the 9 South African provinces. Learners from 10 randomly selected High Schools in KZN from two districts, namely: eThekweni Metro (urban district) and Ugu (rural district). Schools were selected as comparable to other urban and rural government-funded schools in the province. The five schools in each district were selected using random numbers from the KZN Department of Education's list of schools. In each school, one grade 10 class was randomly selected, given that this grade marks halfway point in high school life. All the learners in selected classes were invited to participate in the study and information was provided to both the learners and their parents/caregivers to fulfil the consent-assent requirements. Written consent and assent were obtained from the parents and the learners, respectively. None of the invited potential participants refused to participate in the study.

Sample Size

The prevalence of sexual violence varies across studies (27, 28), hence we chose 50% prevalence to provide the optimal sample size. The sample was calculated using the formula: $n = \frac{Z^2pq}{d^2}$, $n = \frac{(1.96)^2(0.5)(0.5)}{(0.05)^2} = 385$. The sample size of 385 was established using the following parameters: Z statistic = 1.96 for the confidence level of 95%; P is 0.5 as prevalence of the expected evaluation. Q = 1-P = 0.5 and d = precision of 0.05. The sample size was increased to 580 to cater for any refusals, dropouts or unanswered questions. The school was the unit of the study, and 10 schools provided an estimate of the selection of at least 50-60 learners per school.

Study instrument

The self-administered questionnaire was field-piloted to 120 learners from 2 school/s. The results of the pilot were used to improve the survey questionnaire. Cronbach's alpha was used to determine the reliability of the instrument.

Development of the questionnaire used as the study instrument.

The study instrument was based on the I-change model (29) and was informed by learners' perceptions of sexual violence explored through focus group discussions involving both male and female learners at six high schools in both districts that participated in this study. However, the six schools that participated in the focus group discussions did not participate in the survey. The questionnaire was translated from English into isiZulu, and back translated prior to being field-piloted.

The questionnaire consisted of 24 questions, which were divided into socio-demographic questions, socio-economic questions, as well as experience and frequency of forced sex. The 5-point Likert scale comprising "always, often, sometimes, rarely, and never" as well as "strongly disagree, disagree, unsure, agree, strongly agree" were used to determine the experience and measure knowledge of the behaviour, positive and negative attitudes towards the behaviour, social influences and norms, self-efficacy, intentions, barriers, cues to action and action plans, guided by I-Change Model.

Data Collection

Four (2 Females and 2 Males) well trained research team went to the schools to introduce the study, made the appointments and left the information letters as well as the consent forms for the parents, requesting for their permission to include their children in the study. All parents granted permission for their children to participate in the study. All learners also assented to participate in the study, after being provided with full information about the study, including confidentiality issues and voluntariness of participation. While the research team explained the questionnaire, including the definition of the types of forced sex for clarity purposes, learners self-administered it anonymously. Each learner was given an envelope to put his/her anonymously completed questionnaire, seal it and submit to research team.

Data Analysis

The data were entered using Epidata, cleaned and then exported to IBM Statistical Package for the Social Sciences (SPSS) Statistics 23 for analysis. The descriptive analysis was done using univariate analysis. The responses of the boys and girls were compared using the following statistical tests. For the bivariate analysis, the learners' t-Test was used for continuous variables and Chi square or Fisher's Exact test for the categorical variables. Logistic regression was used for the unadjusted/adjusted multivariable analyses. The dependent variables were:

- Forced sex: “I was forced to have sex” (Vaginal, anal and/or oral sex)

The responses to the dependent variables were, Yes=1 and No=0. $P < 0.2$ was used as the inclusion criterion for the independent variables for the multivariable analysis.

These dependent variables were tested for associations with learners’ sex and their profile regarding their socio-demographic and socio-economic status. The associations with the variables from the I-Change Model, namely, their attitudes, social influences, self-efficacy, intentions and action plans and their sexual behavior were analysed.

Results

Socio-demographic profile of respondents

Of the 584 learners participating in this study, one learner did not record his/her sexual orientation, hence s/he was excluded in the analysis. Of the 583 participants, 50.3% (n=293) were males aged between 16 and 17 (mean age 16.81 years and SD 1.72) and 49.7% (n=290) were females aged between 15 and 16 (mean age 16.00 years and SD 1.37) ($P<0.005$). More girls (81.4%) than boys (65.6%) reported being Christians with sex differences in religious affiliations being statistically significant ($P<0.005$). Fewer than thirty percent of the boys (25.2%) and girls (23.4%) lived with both parents, while over 40% of the girls lived with their mothers only. Many learners did not live with a biological parent but for this variable there were no sex/gender differences. Most households had a cell phone but significantly more girls than boys came from households without cell phones ($P=0.009$) (Table 1).

Table 1: Socio-demographic profile of participants by sex n=583

Variable	n	Boys, n=293	n	Girls, n=290	Total	P value *
Mean Age (years) **	293	16.81 (SD 1.72)	290	16.00 (SD 1.37)	583	<0.005
Religion						
Christian	191	65.6%	236	81.4%	427	<0.005
Muslim	1	0.3%	3	1.0%	4	
Hindu	0	0.0%	1	0.3%	1	
African tradition	92	31.6%	43	14.8%	135	
Other	7	2.4%	7	2.4%	14	
Total	291[#]	100%	290	100%	581	
With whom learners live						
Both parents	74	25.2%	68	23.4%	142	0.234
Mother only	116	39.5%	125	43.1%	240	
Father only	33	11.2%	23	7.9%	56	
Grandparents	24	8.2%	25	8.6%	46	
Other family members	38	12.9%	47	16.2%	85	
Friends	1	0.3%	1	0.0%	2	
Other	8	2.7%	2	0.7%	10	
Total	293	100%	290	100%	583	
Does your household have a cellphone (Yes)	229	78.2%	247	86.1%	477	0.009
Does your household have a cellphone (No)	64	21.8%	40	13.9%	104	
Total	293	100%	287[#]	100%	581	

*Chi square; **t-test; #Some participants did not answer the question

The differences in the numbers of adults and children in households were small. There was no significant difference between the sexes in the number of young people less than 20 years of age in their household, and a similar pattern was observed in those above 20 years of age. The average number of people generating income in each household was less than two (Table 2). Boys reported going to bed hungry more often (mean of 0.54 nights/week) than girls (mean, 0.33 nights/week), although the differences were not statistically significant (P=0.071).

Table 2: Socio-demographic profile of participants by sex, mean score

Variable	Boys (mean score) n=286	Girls (mean score) n=287	P value*
Mean number of persons in your household 20 years and above (SD)	3.34 (2.16)	3.41 (2.0)	0.685
Mean number of persons in your household <20 years (SD)	2.75 (SD 2.21)	2.84 (1.94)	0.600
Mean number of people who generate an income in the household (SD)	1.68 (1.45)	1.64 (1.31)	0.741
Number of nights that you went to bed hungry last week (SD)	0.48 (1.13)	0.33 (0.92)	0.071

*t-test

Participants' self-reported experiences of different types of forced sex

Both sexes reported experiencing some type of forced sex, with experiences by sex showing statistically significance in that more boys 34 (12.1%) than girls, 19 (6.9%) reported having been forced to engage in vaginal sex ($P=0.028$). Similar pattern was observed with oral sex, whereby 20.8% ($n=58$) of the boys compared to the 15.6% ($n=43$) of their girl counterparts reported experiencing forced oral sex ($P<0.005$).

Table 3: Frequency (n, %) of reported forced vaginal sex

	0	1	2	3	4	5	6	Sub-total 1-6	Total	P value*
No. of times forced to have vaginal sex, n=557										
Boys	247 (87.9%)	11 (3.9%)	8 (2.8%)	4 (1.4%)	4 (1.4%)	1 (1.4%)	6 (2.1%)	34 (12.1%)	281 (100.0%)	0.028
Girls	251 (93.1%)	11 (4.0%)	2 (0.7%)	2 (0.7%)	1 (0.4%)	3 (1.1%)	0 (0.0%)	19 (6.9%)	276 (100.0%)	
No. of times forced to have oral sex, n=555										
Boys	220 (79.1%)	7 (2.5%)	7 (2.5%)	3 (1.1%)	11 (4.0%)	2 (0.7%)	28 (10.1%)	58 (20.8%)	278 (100.0%)	<0.005
Girls	234 (84.5%)	17 (6.1%)	6 (2.2%)	5 (1.8%)	1 (0.4%)	3 (1.1%)	11 (4.0%)	43 (15.6%)	277 (100.0%)	

*Fisher's exact test; Code: 0=Never, 1=Once, 2=twice, 3=thrice, 4=4 times, 5=5 times, 6=6 times

I-change factors associated with forced sex (Scores 1-5: 1= strongly disagree, 2=agree, 3= unsure, 4= disagree and 5= strongly agree)

Knowledge about forced sex was high for both the boys (mean score 4.25) and the girls (mean score 4.36). Regarding attitudes to forced sex, the mean score was below the value of three indicating disagreement with the statements about pros for forced sex '*When I have forced sex: I can show that I am the boss*'. Regarding favorable opinions of forced sex, girls and boys disagreed more strongly. Mean score 2.33 boys and 1.99 girls, P<0.005). Both boys and girls had views of being against Both boys and girls reported attitudes of being against forced sex "*For a boy to force a girl to have sex is wrong*" (mean score 3.87 boys and 3.99 girls). Girls (mean score 1.77) reported more disagreement with social influences for forced sex than the boys (mean scores 2.06), p<0.005, more disagreement regarding social support for forced sex, mean score 1.74 (girls) vs 1.94 (boys), p=0.005, but boys reported more modeling influences (mean scores 2.71 (boys) vs 2.51(girls), p=0.005). Learners had similar negative intentions to force anyone into sex (mean score 4.11 for boys and 4.12 for girls), but

the mean scores for boys “action plan” to avoid forced sex were low (2.76 boys vs 3.83 girls), although these differences were not statistically significant. (Table 6)

Table 6: Comparison by sex/gender of factors associated with learners experiencing or perpetrating forced sex (mean score, SD, P value) n=561

Variable	n	Boys (SD)	n	Girls (SD)	P value*
Forced sex					
Knowledge about forced sex	274	4.25 (0.85)	270	4.36 (0.84)	0.151
Positive attitude to forced sex	257	2.33 (1.02)	250	1.99 (0.81)	<0.005
Negative attitude to forced sex	278	3.87 (0.83)	278	3.99 (0.89)	0.108
Social influences-Norms	238	2.06 (0.96)	248	1.77 (0.79)	<0.005
Social support	280	1.94 (0.89)	281	1.74 (0.76)	0.005
Modeling	270	2.51 (0.79)	270	2.71 (0.83)	0.005
Self-efficacy regular/situation	245	3.79 (1.21)	240	3.93 (1.14)	0.202
Intentions	252	4.11 (1.09)	215	4.12 (0.95)	0.920
Action plans	278	2.76 (0.60)	269	3.83 (0.59)	0.138

*t-test; Code: 1=Strongly disagree, 2=Disagree, 3=Unsure, 4=Agree, 5=Strongly Agree

Forced vaginal sex reported by learners

In the unadjusted analysis of the learners who reported being forced to have vaginal sex, a statistically significant association was found with the school that they attended, OR 2.13 (95% CI 1.18 – 3.87, P=0.012). Their sex/gender was a statistically significant variable in that boys were more likely to be forced to have vaginal sex (OR 0.53, 95% CI 0.29 – 0.96, P=0.038). Increased age was another factor associated with being forced to have vaginal sex (OR 1.38, 95% CI 1.17 – 1.62, P<0.005) older learners were more likely to experience forced sex.

A socio-economic variable that appeared to increase the likelihood of learners being forced to have vaginal sex was poverty. This was indicated as a protective variable for learners coming from households that possessed assets (like refrigerator) which placed them in better economic strata and the 95% confidence intervals for this association were narrow. (OR 0.27, 0.12 – 0.62, P<0.005). Further, associated with the increased odds of being forced to have vaginal sex was if the learners had gone to bed hungry in the previous week (OR 1.28, 95% CI 1.03 – 1.58, P=0.021), also suggesting the increased risk of forced sex among those living in poverty. Learners who had sexual experience were 9.32 times (95% CI 4.88 – 17.79, P<0.005) more likely to have been forced to have vaginal sex.

The I-change variables associated with being forced to have vaginal sex were positive attitude (towards forced sex), social influence and modeling of forced sex. Increasing the odds of learners being forced to have vaginal sex thus were the *positive attitude to forced sex* (OR 1.43, 95% CI 1.43 – 1.05, P=0.021, the *support from peers for forced sex* (OR 1.64, 95% CI 1.21 – 2.22, P<0.005) and the *modelling of forced sex* (OR 1.47, 95% CI 1.02 – 2.11, P=0.035).

In the multivariable analysis for factors associated with forced sex, the fact that learners did have a refrigerator in their household was a protective factor (OR 0.17, 95% CI 0.04 – 0.70, P=0.015). There was also a statistically significant association with forced vaginal sex for learners who were sexually experienced (OR 11.09, 95% CI 4.53 – 27.16, P<0.005). There

was a trend associated with forced vaginal sex with the *modelling of forced sex* (OR 1.54, 95% CI 0.96 – 2.47, P=0.068). A concerning trend that appeared to be associated with forced vaginal sex amongst learners was the increase in the number of family members over the age of 20 years in their households (OR 1.13, 95% CI 0.99 – 1.29, P=0.055) (Table 7).

Table 7: Unadjusted and adjusted multivariable logistic regression analysis of factors associated with Learners experiencing forced vaginal, oral and anal sex (OR= odds ratio, 95% CI= confidence intervals, P value)

Variables	I have been forced to have forced vaginal sex		Unadjusted analysis		Adjusted Multivariable analysis	
	Yes	No	OR (95% CI)	P value	OR (95% CI)	P value
Demographics						
School (Ref, urban)	53	504	2.13 (1.18 – 3.87)	0.012		
Sex: Girls (Ref, boys)	53	504	0.53 (0.29 – 0.96)	0.038		
Age	53	503	1.38 (1.17 – 1.62)	<0.005		
Does your household have a fridge? (Ref no)	53	501	0.27 (0.12 – 0.62)	<0.005	0.17 (0.04. – 0.70)	0.015
How many nights did you go to bed hungry last week?	52	499	1.28 (1.03 – 1.58)	0.021		
Have you ever had sex? (Ref, no)	53	487	9.32 (4.88 – 17.79)	<0.005	11.09 (4.53 – 27.16)	<0.005
I-change model						
Positive attitude to force sex	45	440	1.43 (1.43 – 1.05)	0.021		
Social support to force sex	50	486	1.64 (1.21 – 2.22)	<0.005		
Modelling force sex	49	466	1.47 (1.02 – 2.11)	0.035	1.54 (0.96 – 2.47)	0.068
I have been forced to have forced oral sex						
Number of persons 20 years old and over	101	443	1.16 (1.05 – 1.28)	<0.005	1.13 (0.99 – 1.29)	0.055
How many nights did you go to bed hungry last week?	99	450	128 (1.07 – 1.53)	0.006		

Have you ever had sex? (Ref, no)	96	442	2.19 (3.39 – 3.47)	<0.005		
I-change model						
Positive attitude to force sex	89	397	1.51 (1.19 – 1.91)	<0.005		
Social influences to force sex	88	371	1.45 (1.13 – 1.85)	<0.005		
Social support to force sex	95	435	1.65 (1.29 – 2.12)	<0.005	1.85 (1.33 – 2.59)	<0.005
Modelling force sex	95	418	1.49 (1.13 – 1.97)	<0.005		

*Variables with P<0.2 were selected to be entered in the multivariable model; **Ref=Reference

Participants' self-reported experience of forced oral sex

In the unadjusted analysis, learners from increased numbers of family members that were over the age of 20-year-old were more likely to be forced to have oral sex (OR 1.16, 95% CI 1.05 – 1.28, $P < 0.005$). The number of nights learners went to bed hungry the previous week increased the odds of them being forced to have oral sex (OR 1.28, 95% CI 1.07 – 1.53, $P = 0.006$). Amongst learners who were sexually active, there were increased odds of being forced to have oral sex (OR 2.19, 95% CI 3.39 – 3.47, $P < 0.005$). The I-change variables which were associated with learners being forced to have oral sex, included having a *positive attitude to forced sex* which is to embracing forced sex (OR 1.51, 95% CI 1.19 – 1.91, $P < 0.005$) and experiencing *social influences* in support of forced sex (OR 1.45, 95% CI 1.13 – 1.85, $P < 0.005$). Reporting *social support for forced sex* also increased the likelihood of learners being forced to have oral sex (OR 1.65, 95% CI 1.29 – 2.12, $P < 0.005$). Lastly the *modelling of forced sex* increased forced oral sex OR 1.5 (95% CI 1.13 – 1.97, $P < 0.005$).

In the adjusted multivariable analysis there was a trend towards increased forced oral sex (OR 1.13, 95% CI 0.99 – 1.29, $P = 0.055$) with the number of persons 20 years and over in the household of the learners. *Social support to force sex* nearly doubled the odds of learners being forced to have oral sex OR 1.85 (95% CI 1.33 – 2.59, $P < 0.005$). (Table 8)

Discussion

A greater proportion of boys reported experiences of forced vaginal and oral forced sex compared to their girl counterparts. Forced oral sex prevailed more than forced vaginal sex. Forced vaginal sex was reported by nearly a fifth of the learners, a risk factor for HIV and other sexually transmitted infections.

Demographic Factors

Use of the Integrated Model for Behaviour Change as a conceptual framework, assisted in identifying motivational factors that were associated with forced sex. South Africa has seen many social changes and less than thirty percent of the learners lived with both their parents. Of the study sample, forty percent lived in households with their mothers as the household head and around a third of learners lived with other family members. These conditions may render them vulnerable to experiencing forced sex. As country South Africa has borne the brunt of a severe HIV/AIDS epidemic which has resulted in many children losing their parent/s, and children thus lack the care and support that having both parents can provide (30).

The schools in the study were all randomly selected co-educational government funded institutions, however, due to the lack of funding the schools are often not well equipped (31, 32). The learners at rural schools appeared to be nearly twice at risk of experiencing forced vaginal sex as those attending urban schools (OR 2.13, 95% CI 1.18-3.87), with poverty being one of the drivers of forced sex. Socio-demographic factors also proved important to understanding learners' experiences of forced sex. In any case, while learners spend the greatest share of their time at school, community dynamics, such as culture and social norms affect their experiences of sex, including forced sex (33, 34).

Forced vaginal sex

Sexual violence has serious implications on HIV/AIDS as well as unwanted pregnancies (35, 36). In the current study both sexes reported experiencing forced sex, although more boys 34 (12.1%) than girls, 19 (6.9%) reported that they had been forced to engage in vaginal sex ($P=0.028$). These findings are inconsistent with previous studies that have postulated females as victims of forced

sex (37). According to the South African Youth Risk Behaviour Survey (38), there was a higher prevalence for females (8.4%) being forced to have sex than males (5.9%). However, the 2008 report by the Medical Research Council indicated that 11% of the boys and 7% of the girls in Grades 8 to 11 whose ages ranged from 13 to 19 years old in KZN had experienced forced sex (39) and this report is consistent with our findings.

Other studies have reported on male victims of sexual violence by other men (40, 41). However, in this study, we did not investigate the sexual orientation of the perpetrators of forced sex. The Centre for the Study of Violence and Reconciliation emphasizes that sexual violence is the most common form of GBV reported by the South African Police Service (SAPS) (41, 42). However, no details were provided about the nature of the sexual offences nor about the victims or perpetrators. This study provided an interesting finding since the expectation was that more girls than boys would report forced vaginal sex. These findings require further investigation through large-scale studies. Nevertheless, one study undertaken in the same geographic area did report similar findings (43). This could be attributed to the interpretation of "being forced to have sex". Forced sex was thoroughly explained to the learners in this study in their native language, isiZulu, but it is possible that they felt forced to engage in sex by their partners or classmates. Another possible explanation is that girls who were victims dropped out of school owing to undesired pregnancy caused by forced intercourse and hence did not participate in the study. This result should be investigated further.

Factors associated with forced vaginal sex

The study showed that forced vaginal sex was more likely to happen in the rural schools (OR 2.13, 95% CI 1.18-3.87, $P=0.012$). Sexually active learners were more likely to have been forced to have vaginal sex, but girls were less likely than boys to report that they had been forced to have vaginal sex (OR 0.53, 95% CI 0.29-0.96, $P=0.038$). A factor that appear to increase the risk of learners experiencing forced sex was poverty, the lack of primary resources, such as the refrigerator (an essential requirement in all households. Even though the learners reported coming from households of lower socio-economic status, girls reported having more cell phones in their families. It would be essential to investigate to whom the cell phones belong in the household to determine how they sustain these items. Some studies suggest that girls choose to be in

relationships with older males to gain access to financial resources, and such studies speak of a growing body of evidence that supports the idea of South African adolescents, especially girls, engaging in sexual activities with older partners in exchange for financial gains (44, 45).

Both boys and girls had high scores for knowledge about forced sex. There were statistically significant gender differences concerning the learners' positive attitudes towards forced sex (mean score for boys 2.33 and 1.99 for girls, $P < 0.005$). Girls disagreed more strongly regarding the statement about forced sex. Boys and girls both agreed that there were social influences regarding forced sex. However, there were statistically significant gender differences with regard to the social influence norms, which could be a result of the social norms that the learners are exposed to in their households or society about masculinity in South Africa (46). Girls reported more disagreement with social support for forced sex than boys did (mean score 1.77 and 2.06 for boys, $P < 0.005$). Boys reported more modelling influences (mean score 2.71 for boys and 2.51 for girls, $P < 0.005$), suggesting that boys are more exposed to this kind of behaviour than girls.

A positive attitude to forced sex increased the odds of learners being forced to have vaginal sex (OR 1.43, 95% CI 1.43-1.05). Many studies have reported on the role of masculinity in the culture of violence (46-48).

Learners forced to have oral sex.

Both genders reported being forced to have oral sex, but there were statistically significant gender differences in that more boys 58 (20.8%) than girls 43 (15.6%) reported experiencing forced oral sex ($P < 0.005$). This could be due to boys reporting more on the behaviour because it is difficult to get accurate reports on sexual violence, which may be perceived as private and shameful (49).

Factors associated with learners forced to have oral sex

There have been other studies that have reported consensual oral sex (50, 51), but there is not much research that has been done on forced oral sex. Again, more boys were reported to be victims of sexual abuse, and more investigation needs to be done on these findings.

In the unadjusted analysis, learners who had increasing numbers of family members who were over the age of 20 years were more likely to be forced to have oral sex (OR 1.16, 95% CI 1.05 – 1.28). A large number of members of the family living under one roof may increase the odds of forced oral sex (52).

The number of nights learners went to bed hungry the previous week increased the odds of their being forced to have oral sex (OR 1.28, 95% CI 1.07 – 1.53). Poverty appears to play a role in the victimisation of adolescents. Amongst sexually active learners, there were increased odds of their being forced to have oral sex (OR 2.19, 95% CI 3.39 – 3.47). In this study, the age and gender of the sexual partner forcing sex were not investigated, and this would be important if interventions were developed. Positive attitudes, social influences, social support, and modelling forced sex increased the odds of learners being forced to have oral sex in the unadjusted analysis. Sexually active learners may choose oral sex to avoid the risk of pregnancy (53)

Study limitations

The study instrument used self-reports, which may be affected by social desirability bias leading to over- or under-reporting of the sensitive behaviours investigated in this study. As with most such studies, there were no independent measures of the sexual behaviours or the I-Change model variables. This study investigated learners' experiences of forced sex but did not investigate whether learners had perpetrated forced sex. In this study, the age and gender of the person forcing sex were not investigated, and this would be an essential factor if interventions were developed.

Conclusions

Random sampling of the ten schools in KZN, this data may feasibly represent the learners' experience of violence in other similar urban and rural KZN schools. They may also describe conditions in government high schools in different South African provinces. This study found that more boys than girls reported being forced to have sex, which increases the risk of contracting HIV, but according to the YRBS, there were higher prevalence rates for females being forced to have sex (38). Positive attitudes, social influences, social support, and modelling of violence need to be addressed to reduce sexual violence.

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