

Behavioural factors affecting condom-use negotiation among South African female youth

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Abstract

Background

In the fight against HIV/AIDS and unintended pregnancies, studies have shown that sexual partners who can communicate about condom use and safer sex have lower likelihood of HIV and unintended pregnancy.

Objective

We used Theory of Planned Behavior (TPB) to construct the behavioural factors that could be associated with condom-use negotiation among South African female youth.

Methods

The study used responses from females aged 15-34 years from the 2016 South African Demographic and Health Survey (SADHS) data. Multivariate logistic regression modelling was employed to analyze the data.

Results

The study found that female youth who did not intend to use contraceptive had lower risk of condom-use negotiation. Female youth who had tested for HIV (OR; 3.07, CI: 1.72-5.49), ever experienced emotional violence (OR; 1.58, CI: 1.01-2.48) and used condom at last sex (OR; 1.83, CI: 1.22-2.74) were more likely to negotiate for condom use.

Conclusion

Female youth should be exposed to behavioral change interventions that can positively impact negotiation for condom use with their partners.

Keywords: Condom use, Negotiation, DHS, South Africa, Theory of Planned Behaviour

Introduction

Non-use or inconsistent use of condoms has been highlighted as one of the crucial factors that increase an individual's chances of being infected with HIV and other Sexually Transmitted Infections (STIs) (Seutlwadi, Peltzer, Mchunu, & Tutshana, 2012). Condom— when correctly and consistently used can prevent more than 90% of sexually transmitted diseases (STDs) (Marfatia, Pandya and Mehta, 2015). In the fight against HIV/AIDS and unintended pregnancies, studies have shown that sexual partners who can communicate about condom use and safer sex have lower likelihood of HIV and unintended pregnancy (Marfatia et al., 2015; Mchunu et al., 2012). Beyond condom use communication, it has been found that those who are able to persuade their sexual partners to use condoms are more likely to use condom (Tassiopoulos et al. 2009). Therefore, promotion of condom use is important, particularly in South Africa, where unprotected heterosexual engagement is a major means of HIV transmission and risk of unintended pregnancy (Mchunu et al., 2012; Tassiopoulos et al. 2009; Townsend, Mathews, & Zembe, 2013).

The global estimate of condom use was 15.8 billion in 2015 (Stover et al, 2017). Yet, there exists evidence that condom use has increased over time (Costa et al, 2009; Ramanathan et al 2013; Stover et al, 2017). In the United States, study showed that the use of condom increased from 29.5% in 2002 to 33.7% between 2011 and 2015 (Copen, 2017). In India, condom use increased from 2.7 million in 2004 to 15.4 million in 2008 (Ramanathan et al, 2013). In South Africa, condom use at last sex by females increased from 19.7% in 2002 to 58.1% in 2008 (Shisana et al, 2010).

But, despite the increase in condom use, consistent use of condoms remains a challenge and several behavioral factors have been identified as the reasons for this inconsistent condom use (Cumber et al, 2016; Van Rossem and Meekers, 2011). Meanwhile, individuals who do not consider themselves at risk of acquiring HIV are not likely to use condom (Lofti et al, 2012). Other reasons for inconsistent use a condom include reduction of sexual pleasure, cost, and the fact that it's embarrassing to buy (Cumber et al, 2016; Tavory and Swidler, 2009).

While a few studies have been conducted on condom use and condom use intention in South Africa (Jemmott et al., 2007; Protogerou, Flisher, Wild, & Aaro, 2013), there is literally no study on condom-use negotiation using Theory of Planned Behaviour and using quantitative approach at same time has been conducted in South Africa yet. The present study seeks to fill this knowledge gap by investigating the behavioral factors that are associated with condom-use negotiation among South African female youth using a nationally representative sample, namely, the 2016 South Africa Demographic and Health Survey (SADHS).

Conceptual framework and Literature review

A commonly used behavioral model in scientific study is the Theory of Planned Behavior (TPB) (Ajzen, 1991). According to TPB, individual's behavior is influenced by attitudes towards specific behavioral intentions. The theory further posits that behavior intentions depend on attitude toward behavior, subjective norms and perceived behavioral control (Adzen, 1991). The theory directs attention to specific beliefs that underlie attitude, subjective norm and perceived behavioral control. Attitude represents a person's perception of some certain actions as positive or negative. Attitude towards a particular action or behavior is seen as reflecting on the repercussion of conducting an action. One of the most well-known behavior with respect to utilization of condoms is the aversion reliance that condoms help diminishes the danger of unintended pregnancy and STDs including HIV (Christofides et al., 2014; Jonas et al, 2016). Other factors include; smoking and drinking, and contraceptive use.

Subjective norms involve the key people or character around a person. Specifically, it refers to behavioural expectations of what most people approve or disapprove. In addition, subjective norm can be described as the perceived social influence to engage or not to engage in a behavior. In our study, the important reference of subjective norms as used from previous study include; partner drink alcohol, number of sexual partner, coerced sex and use of internet (Guan et al, 2016). Regarding perceived behavioural control, it speaks to the control beliefs about things that would promote or hamper individual's behaviour towards condom use and negotiation. In the context of condom negotiation, significant factors that are likely to facilitate or impede condom negotiation during sexual intercourse are: refusal of sex, pregnancy, abortion, condom use at last sex, and HIV test.

Existing research has implicated several factors in regard condom-use negotiation. For instance, experience of violence in a relationship predicts women's fear of condom-use negotiation with partner because the suggestion of condom use may create a potential violent situation (Pitpitan et al., 2012). The study of Bharat et al (2013) on condom-use negotiation with clients among female sex workers in India found that experience of violence is high and associated with high risk behaviour such as condom use negotiation. Violence was also reported to be one of the reasons why some women cannot negotiate condom use with a partner in another study conducted in Cambodia (Maher et al., 2013).

Studies have also identified a strong association between coerced sex and condom-use negotiation. For example, the study by Pitpitan et al (2012) on condom-use negotiation, HIV testing and HIV risks among women from alcohol-serving venues in Cape Town, South Africa, found that women who had experience sexual abuse had fear of negotiating condom use with their partners. An exploratory study on unwanted unprotected sex among adolescent girls found that forced sex could limit girls' ability to negotiate for condom use (Teitelman et al., 2011). Some studies suggest that women who smoke and drink alcohol usually report fear of condom negotiation. A study on condom negotiation across different relationship types by young women in sex work in Cambodia found that having a sexual partner who drank alcohol sometimes made it impossible to negotiate condom use with them because it could lead to violence (Maher et al., 2013).

Even though studies on the association of contraceptive use and condom-use negotiation are scarce, the few studies that have explored this association have reported significant findings. For instance, using a condom or contraception for both boys and girls was found to be significantly associated with capacity to negotiate in a study on contraception determinants among the youth of Sierra Leone (Labat et al, 2018). A study on factors associated with condom use among university female students in Uganda found that confidence to negotiate condom increased the likelihood of actual condom use by 38.5%, a finding that has been attributed to educational status and awareness of unsafe sex-related risks (Muhindo et al, 2018). The study by Exavery et al., (2012) on the role of condom-use negotiation on condom use among women of reproductive age in Tanzania found that women who were confident to negotiate condom use with partners were more likely to use condom at last sexual intercourse than those who were not confident to negotiate condom use with partners.

Few studies have documented the association of HIV testing and condom-use negotiation. The study by Pitpitan et al (2012) on condom negotiation in Cape Town South Africa found an inverse association between HIV testing and condom-use negotiation. Their study found that fear of condom negotiation was negatively related to HIV testing because the fear of condom negotiation may also lower the likelihood of HIV testing.

Data and Methods

The data for the present study come from the individual files of women of reproductive ages of 15 to 49 years old of the 2016 South Africa Demographic and Health Surveys (SADHS). A total 9878 females were qualified to participate in the women individuals' interviews, however, 8514 females were effectively interviewed with a response rate of 86%. Out of the 8514 women that were interviewed, 5605 women were between the ages of 15 and 34 years and therefore classified as youth for the present analysis.

The outcome variable is condom-use negotiation. For the purpose of this study, "condom-use negotiation" is measured as a binary (yes or no) using the following variable: "respondent can ask partner to use a condom"

The explanatory behavioral variables are smoking (measured as 0=No and 1=Yes), contraceptive use and intention (measured as 1=Currently using, 2=Intend to use and 3=Does not intend to use), delay or avoid pregnancy (measured as 0=No and 1=Yes), coerced sex (measured as 0=No and 1=Yes), emotional violence (measured as 0=No and 1=Yes), multiple sexual partner (measured as 1=One or none and 2=More than one), partner drinks alcohol (measured as 0=No and 1=Yes), can refuse sex (measured as 0=No and 1=Yes), condom use at last sex (measured as 0=No and 1=Yes), HIV test (measured as 0=No and 1=Yes), pregnancy (measured as 0=No or unsure and 1=Yes), and abortion (measured as 0=No and 1=Yes).

The analysis is done at three levels, namely, univariate, bivariate, and multivariate. The univariate analysis involves the use of such descriptive statistics as percentages and frequencies to look at the distribution of the study population. At the bivariate level, we use the Pearson Chi-Square statistics to examine the relationship between condom-use negotiation and each explanatory variable in the model. The assumptions of Chi Square test are that the sample size must be large enough and cannot be used for correlated data.

The formula is written as: $\chi^2 = \sum \frac{(o-e)^2}{e}$.

Where o = observed values

e = expected values

\sum = sum

Finally, at the multivariate level of the analysis, we employ the multivariate logistic regression model to examine the association of selected factors and condom-use negotiation among South Africa female youth. Variables that are significant in the bivariate analysis are analyzed using the unadjusted and the adjusted logistic regression analysis models. Further, we conduct a forward stepwise logistic regression analysis to select variables that best predict condom-use negotiation. Logistic regression model is a technique for describing the association between a dependent variable which is dichotomous using values 0 or 1 (i.e. failure or success) and a set of explanatory variables. Logistic regression model is expressed as:

$$\text{Log}(p/1-p) = a + \sum \beta_i X_i + e$$

Where p = the event of occurrence (outcome variable)

X = the explanatory variables

β = the size of the coefficient of explanatory variable

e = the marginal error

All data are weighted and analyzed using Stata 14 version. Results were interpreted by using odds ratio and statistical significance was declared if P-value is less than 0.05 while confidence interval was set at 95%.

Results

Table 1 shows the sample characteristics of the respondents in the survey. The table shows that 7.2% of the female youth had their first sexual experience before the age of 15 years. The majority (57.8%) of the respondents are between the ages of 25-34 years and those aged 15-24 years constitute 42.2% of the sample. Eight percent (7.7%) of the women have no education and primary education, 81.5% have secondary education, while 10.8% have tertiary education.

Female youth residing in urban areas constitute 55% while those in rural areas comprise 45% of the sample. Almost 90% (89.3%) of the sample are black African, while 10.7% belong to other population groups. Many of the female youth (45.9%) belong to poor household wealth index, 24% belong to the middle household wealth index and 30.1% belong to the rich household wealth index. Sixty-seven percent of the women have never been married, while about a third (33%) are ever married.

The KwaZulu-Natal province has the highest proportion of the female youth (16%), followed by the Mpumalanga province (14.2), Eastern Cape province (12.9), Limpopo province (12.2), Gauteng province (10.6%), North West (10.3%), Free State (9.6%), Northern Cape (7.8%) and Western Cape (6.5%). Table 1 also shows that the majority of the female youth (72.3%) are not working, while 27.7% working. Regarding sex of the household head, most of the female youth (57.4%) report living in households headed by females, while 42.6% report living in households headed by males.

Table 1 Percentage distribution of South Africa female youth by socio-demographic characteristics

	Frequency	Percentage
Age		
15-24	1935	42.2
25-34	2654	57.8
Education		
No education and primary	355	7.7
Secondary	3739	81.5
Higher	495	10.8
Place of residence		
Urban	2523	55.0
Rural	2066	45.0
Race		
African	4097	89.3
Others	492	10.7
Wealth index		
Poor	2108	45.9
Middle	1102	24.0
Rich	1379	30.1
Marital status		
Never married	3077	67.0
Ever married	1512	33.0
Employment status		
Not working	3316	72.3
Working	1273	27.7

Province		
Western cape	298	6.5
Eastern cape	594	12.9
Northern cape	357	7.8
Free state	439	9.6
KwaZulu-Natal	732	16.0
North west	473	10.3
Gauteng	484	10.6
Mpumalanga	653	14.2
Limpopo	559	12.2
Sex of household head		
Male	1953	42.6
Female	2636	57.4

Bivariate analysis

Table 2 shows the results of the bivariate analysis of condom-use negotiation and the selected behavioral variables in the study. The table shows that smoking cigarette and tobacco, abortion, being currently pregnant and number of sexual partners have no significant relationship with condom-use negotiation. The results in table 2 show that 61.3% of female youth who are currently using contraceptives can negotiate for condom-use, 21% of female youth that intend to use contraceptive in the future can negotiate for condom while 17.7% of female youth that does not intend to use contraceptives in the future can negotiate for condom use.

Prevalence of condom-use negotiation with regards to HIV testing shows that 95.7% of female youth who have tested for HIV can negotiate for condom use while only 4.3% of female you who have not tested for HIV can negotiate for condom use. Eighty-four (83.8%) of the female youth who have delayed or avoided pregnancy can negotiate for condom use against 16.2% that have never delayed or avoided pregnancy.

Nearly 50% (48.4%) of the female youth that have never used the internet can negotiate for condom use negotiation use while 51.6% of female youth that ever used the internet can negotiate for condom use. Table 2 also shows that only 1.8% of female youth that have experienced coerced sexual intercourse can negotiate for condom use while 98.2% of female youth that have never experienced coerced sexual intercourse can negotiate for condom use. Only 18.9% of female youth that have experienced emotional violence can negotiate for condom use while 81.1% of female youth that have never experienced emotional violence can negotiate for condom use.

The rate of condom-use negotiation is slightly higher (53.3%) among female youth whose partners drink alcohol than those whose partners do not drink alcohol. Condom-use negotiation is higher (89.4%) among female youth that can refuse sexual intercourse with their partners compared to 10.6% of female youth who cannot refuse sex. Condom use at last sex with a partner shows a significant relationship with condom-use negotiation. Surprisingly, condom-use negotiation is higher (71%) among female youth who did not use condom with partners at last sex than those who used condom with partner at last sex.

Table 2: Bivariate result showing Chi-square analysis of condom-use negotiation by behavioural variables of South Africa female youth

	Condom-use negotiation		P-value (χ^2)
	Yes (%)	No (%)	
Smoking cigarette and tobacco			
No	85.8	89.6	0.24 (1.38)
Yes	14.2	10.4	
Contraceptive use			
Currently using	61.3	47.6	0.00 (30.0)
Intend to use	21.0	20.3	
Does not intend to use	17.7	32.1	
Ever delay or avoid pregnancy			
No	16.2	30.7	0.00 (30.6)
Yes	83.8	69.3	
HIV test			
No	4.3	11.7	0.00 (22.8)
Yes	95.7	88.3	
Use of internet			
Never	48.4	58.3	0.00 (8.88)
Ever	51.6	41.7	
Abortion			
No	87.0	88.6	0.47 (0.52)
yes	13.0	11.4	
Currently pregnant			
No or unsure	91.6	91.7	0.95 (0.00)
Yes	8.4	8.3	
Coerced sex			
No	98.3	58.3	0.00 (19.9)
Yes	1.8	41.7	
Emotional violence			
No	81.1	87.5	0.03 (4.92)
Yes	18.9	12.5	
Partner drinks alcohol			
No	53.3	70.9	0.00 (21.8)
yes	46.9	29.2	
Sexual partner			
One or none	96.4	97.9	0.18 (1.76)
More than one	3.6	2.1	
Can refuse sex			
No	10.6	79.7	0.00 (556.7)
Yes	89.4	20.3	
Condom use at last sex with partner			
No	71.0	84.4	0.00 (20.6)
Yes	29.0	15.6	

Multivariate analysis

Table 3 presents both the unadjusted and adjusted odd ratios for the association between condom-use negotiation and the selected behavioral factors. As the table shows, female youth who do not intend to use contraceptives in future have 0.43 lower risk of condom-use negotiation compared to female youth who are currently using contraceptive. However, the result was rendered insignificant after controlling for other behavior factors in the adjusted analysis.

Table 3 also shows that there is a statistically significant relationship between ever delay or avoid pregnancy and condom-use negotiation in the unadjusted analysis but insignificant in the adjusted analysis. Female youth who have ever delayed or avoided pregnancy are 2.29 times more likely to negotiate for condom use compared to those who have never delayed or avoided pregnancy.

HIV testing status is significantly associated with condom-use negotiation in the unadjusted analysis. Specifically, female youth who have ever tested for HIV are 2.96 times more likely to negotiate for condom use compared to those who have never tested for HIV. However, after adjusting for other behavioral factors, the result was rendered insignificant. Female youth who have ever used the internet are 1.49 times more likely to negotiate for condom use in the unadjusted analysis, however, in the adjusted analysis, no significant result was achieved.

There is a statistically significant association between coerced sex and condom-use negotiation in both the unadjusted and adjusted analysis. Specifically, table 3 shows that female youth who have ever being forced to perform sexual act 0.03 times less likely to negotiate for condom use. After controlling for other factors in the study, the magnitude of the direction changes; female youth who have ever had coerced sex 0.04 times less likely to negotiate for condom use.

A significant association is noted in the association between emotional violence and condom-use negotiation in the unadjusted analysis. Surprisingly, female youth that have ever experienced emotional violence are 1.63 times more likely to negotiate for condom use compared to those who have never experienced emotional violence. However, after controlling for the presence of other factors in the adjusted analysis, the result is rendered insignificant.

Having a partner who drink alcohol is found to be a significant factor of condom-use negotiation in the unadjusted analysis. Result from Table 3 shows that condom-use negotiation is 2.13 times higher among female youth whose partners drink alcohol compared to those whose partners don't drink alcohol. However, the result is rendered insignificant in the adjusted analysis. Female youth that used condom with partners during last sex are 2.21 times more likely to negotiate for condom use compared to those that did not use condom with partners at last sex. However the result is not significant after controlling for the presence of other variables in the adjusted analysis.

Just like coerced sex, "can refuse sex" has a significant association with condom-use negotiation in both the unadjusted and adjusted models. The unadjusted analysis shows that female youth who can refuse sex with partner are 33.16 times more likely to negotiate for condom use compared to those that cannot refuse sex with partner. After controlling for other variables in the adjusted analysis, results shows that female youth that can refuse sex with partner are 27.77 times more likely to negotiate for condom use compared to those that cannot refuse sex with partner.

Table 3. Logistic regression analysis identifying associations between behavioral factors and condom-use negotiation as reported by female youth 15-34 in South Africa 2016

	Unadjusted analysis		Adjusted analysis	
	Odds ratio	(95% CI)	Odds ratio	(95% CI)
Contraceptive use				
Currently using	1		1	
Intend to use	0.80	0.57-1.13	1.58	0.07-36.27
Does not intend to use	0.43	0.32-0.58*	0.30	0.02-5.36
Ever delay or avoid pregnancy				
No	1		1	
Yes	2.29	1.70-3.08*	2.65	0.08-86..04
HIV test				
No	1		1	
Yes	2.96	1.86-4.71*	5.47	0.13-225.2
Use of internet				
Never	1		1	
Ever	1.49	1.14-1.93*	1.43	0.16-12.91
Coerced sex				
No	1		1	
Yes	0.03	0.00-0.24*	0.04	0.00-0.76*
Emotional violence				
No	1		1	
Yes	1.63	1.06-2.52*	5.60	0.44-71.61
Partner drinks alcohol				
No	1		1	
yes	2.13	1.54-2.94*	0.17	0.01-3.01
Can refuse sex				
No	1		1	
Yes	33.16	23.26-47.26*	27.77	1.20-644.7*
Condom use at last sex with partner				
No	1		1	
Yes	2.21	1.56-3.13*	1.61	0.14-18.90

Table 4 presents the stepwise logistic regression analysis to identify the behavioural factors that best predict condom-use negotiations. Contraceptive use, ever delay or avoid pregnancy, HIV testing status and violence were found to be significantly associated with condom-use negotiation while the association of “use of internet” and condom-use negotiation was insignificant.

Like the unadjusted logistic analysis, only one category (does not intend to use) was found to be significant in the stepwise logistic regression analysis. Female youth that do not intend to use contraceptive are 0.49 times less likely to negotiate for condom use compared to female youth that are currently using contraceptives. Table 4 also shows that female youth that used condom at last sexual intercourse are 1.83 times more likely to negotiate condom use compared to female youth that did not use condom at last sex.

Female youth that have tested for HIV are 3.07 times more likely to negotiate condom use compared to female youth that never tested for HIV. Finally, table 4 shows that female youth that

have experienced emotional violence are 1.58 times more likely to negotiated condom use compared to female youth that have never experienced emotional violence.

Table 4. Stepwise logistic regression analysis identifying associations between behavioral factors and condom-use negotiation as reported by female youth.

	Adjusted analysis	
	Odds ratio	(95% CI)
Contraceptive use		
Currently using	1	
Intend to use	0.90	0.60-1.36
Does not intend to use	0.49	0.33-0.71*
HIV test		
No	1	
Yes	3.07	1.72-5.49*
Use of internet		
Never	1	
Ever	1.26	0.92-1.73
Emotional violence		
No	1	
Yes	1.58	1.01-2.48*
Condom use at last sex		
No	1.83	1.22-2.74*
Yes		

Discussion

Efforts to develop effective interventions to reduce unwanted pregnancies and HIV/AIDS among South African youth requires an understanding of the modifiable determinants of such behaviours; that is, the important factors that interventions should target. The present study sought to make a contribution to the existing body of knowledge regarding the behavioural factors that are associated with condom-use negotiation among female youths in South Africa, using the 2016 South Africa Demographic and Health Survey data.

Coerced sex was found to be significantly associated with condom-use negotiation in our study. Specifically, we found that female youth that have experienced coerced sex were less likely to negotiate for condom use. This finding is consistent with a previous finding in South Africa which suggested that women who have experienced coerced sex have fear of negotiating condom use. This finding suggests that coerced sex could limit female youth's ability to negotiate for safer sex.

Emotional violence was found to be associated with condom-use negotiation in our study. Female youth who had experienced emotional violence were more likely to negotiate for condom use than those who had never experienced emotional violence. This finding contradicts a previous study in Cape Town, South Africa, which found that women who had experienced violence from a partner were less likely to negotiate condom-use with their partner (Pitpitan et al 2012). Also, our finding on violence and condom-use negotiation contradicts the finding by Maher et al. (2013) in Cambodia which suggests that violence can result in the reduction of condom use negotiation with a partner. A plausible explanation for the association between violence and condom-use

negotiations could be that the discussion of condom use with a partner can create a violent situation in the first place.

The present study found that HIV testing is associated with condom-use negotiation. Female youth who had tested for HIV were more likely to negotiate for condom use compared to those who never tested for HIV. This finding is consistent with a previous finding by Pitpitan et al., (2012) in Cape Town in South Africa. A possible explanation could be that female youth who have tested and aware of their HIV status have the confidence to negotiate for condom use unlike those that have never tested because not being aware of their HIV status may reduce the fear that comes with inconsistent condom use.

The finding that condom use at last sexual intercourse is significantly associated with condom-use negotiation is consistent with previous studies in Tanzania by Exavery et al., (2012) and Uganda by Muhindo et al (2018) which found that those that could negotiate for condom use were significantly more likely to use condom at last sexual intercourse. Our finding also corroborates the findings of Mittal et al., (2013) on HIV risk among women from domestic violence agencies which found that women who engaged in sexual risky behaviours, including inconsistent condom use, were more likely to fear abuse during condom-use negotiations. Because study is cross sectional in nature, we cannot ascertain if condom use at last sexual intercourse led to condom-use negotiation or vice-versa. However, a plausible explanation could be that condom-use negotiation and condom use at last sexual intercourse might be attributed to the awareness of unsafe sex-related risks.

The present study found that female youth that do not use and don't intend to use contraception have lower risk of negotiating condom use. A plausible explanation is that those who use contraceptives might possess essential good practice of sexual behaviour, which may give them the necessary capability to negotiate for condom use unlike those who have never used contraception before. Our finding is consistent with a previous study on contraception determinants in youth of Sierra Leone which found that using a condom or contraception for both boys and girls were significantly associated with capacity to negotiate (Labat et al, 2018).

Conclusion

This study used the theory of planned behaviour to examine the behavioural factors associated with condom-use negotiation among female youth in South Africa. Our findings supported some of the TPB behavioural constructs such as contraceptive use, HIV testing, ability to refuse sex , coerced sex, violence and condom-use at last sexual intercourse as cue for action for behavioural change on condom-use negotiation. The study showed that some behavioural factors using the TPB constructs were independently associated with condom-use negotiation. For instance, all the variables constructed under attitude (smoking, contraceptive use and intention and delay or avoid pregnancy) were all independently associated with condom-use negotiation. Similarly, emotional violence, multiple partners and partner drinks alcohol which all fall under subjective norms were independently associated with condom-use negotiation. Lastly, perceived behavioural control (condom use at last sex, HIV testing, pregnancy and abortion) were all independently associated with condom-use negotiation.

In conclusion, the present study has demonstrated that exposure by female youth to behaviour change interventions that can positively impact on how to better negotiate for condom use with partner. It is thus important that HIV intervention stakeholders to understand the importance of the identified TPB constructs that have been noted to have significant probability of influencing condom-use negotiation in providing strategies on the benefits of condom use and

negotiation skills to overcome HIV-risk and unwanted pregnancy behaviours among female youth in South Africa.

Policy implications

The findings of this study have many implications for policy. First, an effective behavioural change programme for teenage pregnancy, unwanted pregnancy and HIV prevention should address condom use utilization and related barriers by putting emphasis on skills for correct condom use and negotiation for safer sex. Secondly, motivational educational interventions such as programmes that encourage correct and consistent condom use and condom negotiation skills are essential to bringing about behaviour change. Thirdly, future research should explore self-efficacy, perceived risk of condom use, and gender perspective of condom-use negotiation among South African youth in general

Study's Limitations

A few limitations ought to be considered while interpreting the results from this study. Firstly, the possibility of a socially desirable response cannot be completely ruled out. This is because participants could have given inaccurate responses regarding their sexual behaviours. Secondly, the dataset used was cross sectional in nature. Therefore, the findings are correlations rather than as causes. Lastly, some variables that could have helped us explore our findings on behavioural factors and condom-use negotiation were missing in our dataset. Vital variables such as self-efficacy, perceived risk of condom use, and gender perspective among other. However, the present study has strengths despite the limitations noted above. First, the study uses a nationally representative sample of female youths in South Africa. Secondly, the study is the first of its kind to examine the direct relationship between contextual and behavioural risk factors as predictors of condom negotiation in South Africa. Therefore, discoveries from this study can be utilized to illuminate on programs and policies. Lastly, the fact the dataset used information of women who are within the ages of 15-34 years which reduces recall bias compared to older women; information on the youth's recent experiences was analyzed.

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