

Self-esteem, Sexual-risk Behaviour and loveLife Exposure among South African Young Women

Julia S. Louw¹, Karl Peltzer² and Shandir Ramlagan²

¹*School of Psychology, National University of Ireland, Galway (NUIG), Ireland*

²*HIV/STI and TB (HAST) Research Programme, Human Sciences Research Council, Pretoria and Durban, South Africa*

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ABSTRACT Various risk behaviours have been identified to explain the increased risk of HIV infection among young women including factors such as poverty, gender-based violence as well as low levels of self-esteem. This study investigated young women's self-esteem, sexual-risk behaviour and exposure to loveLife, a youth HIV prevention programme. A population-based household survey of youth aged between 18-24 years in four South African provinces was conducted, using multi-stage stratified cluster sampling. The sample included 1417 women. Self-esteem was assessed with the 10-item Rosenberg self-esteem scale. Not having sex with someone older, partner reduction, self-efficacy, relationship control and having a sense of future predicted self-esteem. Higher levels of self-esteem were positively associated with exposure to loveLife. Overall, being in control of the relationship and having a sense of future are important factors in understanding sexual-risk behaviour in young women. loveLife programmes present great potential to enhance self-esteem for young women.

INTRODUCTION

The HIV prevalence in South Africa is estimated to be 12.6 percent in the general population, with females having an estimated prevalence of 21.2 percent among women between 15-49 years of age (StatsSA 2017). Females are more likely to be infected than males (Pettifor et al. 2004; UNAIDS 2017), highlighting women's increased risk of HIV. New infections among young women were reported to be thirty-seven percent in 2016 in South Africa (SANAC 2017). These findings indicate that young women engage in risky sexual behaviour that put them at risk of HIV infection. Various risk behaviours have been identified to explain this increased risk including a problem related to poverty, gender-based violence, women's low levels of self-esteem (Boden and Horwood 2006; UNAIDS 2017) and poor decision-making when engaging in sexual behaviour (Varga 2003; Doyle et al. 2016).

Some authors initially argued that the understanding of HIV transmission was a precursor

for adopting responsible decision-making in order to engage in protective sexual behaviours (Bazargan et al. 2000; Macintyre et al. 2004; Zainiddinov and Habibov 2016). However, Hoosen and Collins (2004) argue that knowledge of HIV risk does not necessarily determine safer sex practices, but that a number of environmental factors shape attitudes towards and decision-making around sex. These environmental factors include individual personal factors, interacting with the environment, culture and structural factors that foster HIV risk behaviours (Eaton et al. 2003; Yang and Xia 2015). Therefore Varga (1997) argues effectively that combating HIV and AIDS does not only entail encouraging safer sex practices but also emphasizes the subtle aspects of sexuality such as decision-making and sexual negotiation (Yang et al. 2010). Often, sexual decision-making translates into powerlessness in young women influenced by a multifaceted set of gender norms, social and cultural factors (Varga 1997; Edwards and Collins 2011). This lack of power in sexual relationships has been posited to increase women's risk of HIV infection (Weis et al. 2000; Greig et al. 2003; UNAIDS 2017). Women often find themselves constrained by their cultural context that enforces obedience to these gender norms, which often translates into gender inequality with men having more power over women, thus women

Address for correspondence:

Dr. Julia S. Louw
School of Psychology,
National University of Ireland,
Galway (NUIG), Ireland,
H91 RC96
Telephone: +353 833700278,
E-mail: julia.louw@nuigalway.ie

find it difficult to be firm and direct in their sexual preferences (Edwards and Collins 2011). As a result, many young women experience low levels of self-esteem given this lack of power, making it difficult to negotiate condom use with their partners.

Various intervention programmes such as Soul City, Ke Moja, Khomanani and the national Life Skills programme have been introduced to address vulnerability of young people in South Africa. One of these is the largest youth reproductive health and HIV prevention programme loveLife, with its model of behaviour interventions that draws on social ecological theory in designing its interventions. The loveLife programme entails high powered media awareness and education, development of adolescent-friendly reproductive health services, and outreach and support activities (loveLife 2018). It has been reported that one of the individual factors driving high-risk behaviour among youth is low self-esteem and feeling hopeless about the future (loveLife, 2017). This possible precursor of risk behaviour is generally referred to as an individual's evaluation of him or herself, including feelings of self-worth (Ferreira et al. 2014). It is among young women who have just left school that loveLife has seen the greatest spike in HIV infection which includes the same age range of this current study sample (loveLife 2012). The media platforms in particular, such as the magazine UNCUT, South Africa's largest circulation youth magazine as well as the web, mobile and radio had been most often reported as providing quality HIV messaging related to health information (loveLife 2018).

Studies indicate that young people who had an early sexual debut and those who were previously involved in risky sexual behaviours tend to have lower self-esteem (Kastbom et al. 2015). Their poor self-esteem renders them less likely to be assertive in sexual activities and thus they may fail to insist on condom use with their partners (Ethier et al. 2006; Njau et al. 2007; Kastbom et al. 2015). Furthermore, the more assertive and self-confident a young person is, the higher the likelihood that they would practice safer sex (Njau et al. 2007). Thus their self-esteem has an influence on their self-confidence in making responsible decisions when engaging in sexual behaviour. The notion that young women with lower self-esteem are more likely to engage in sexual-risk behaviours has often been hypothesized.

Sterk et al. (2004) for example, in their study predicting self-esteem levels of women at risk of HIV infection found self-esteem to be related to the number of times having oral sex, number of times having sex with paying partners and frequency of sexual risk-taking. Boden and Horwood (2006) in their study found that girls at age 15 with lower levels of self-esteem were associated with greater risks of unprotected sex. Furthermore, Ethier et al. (2006) found that among sexually active adolescent females (14-19 years), lower self-esteem was associated with initiating sex earlier and having had risky partners. Gupta et al. (2008) noted that society's construction of gender roles and young women's physical vulnerability make them particularly more vulnerable, therefore they bear a disproportionate burden of the disease. Furthermore, Gibbs et al. (2012) highlights that various external social determinants related to cultural beliefs influence and impact on the self-efficacy of young women. Although Hegdahl et al. (2016) found no clear pattern in differences among males and females in 18 countries in Sub-Saharan Africa, when examining HIV prevalence, clear evidence has subsequently been found to support this hypothesis, as it relates to power inequalities in relationships, where males control the decision-making on topics related to sexual and reproductive issues (Gibbs et al. 2012; Ferreira et al. 2014). This current study hypothesise that low levels of self-esteem may lead to poor sexual decision-making in females and that exposure to interventions such as loveLife will possibly help facilitate an increase in responsible sexual decision making.

For this reason it is crucial to address the impact of levels of self-esteem in sexual decision-making. This aspect needs to be taken into consideration when designing and evaluating sexual risk reduction interventions, particularly for young women. Therefore the purpose of this study is to investigate the association between self-esteem and HIV-related risk behaviours, and exposure to loveLife programmes to explore the factors associated with self-esteem levels.

METHODOLOGY

Sample and Procedure

A cross-sectional population-based household survey was conducted, using a multi-stage

stratified cluster sampling approach. This data is part of a large cross-sectional population-based household survey that was conducted in 2011 among youth aged between 18 to 24 years in four (out of nine) selected provinces in South Africa. A systematic random sample of 12 households was sampled and in each household all eligible household members were invited to participate and be interviewed in selected provinces, which included KwaZulu-Natal, Mpumalanga, Eastern Cape and Gauteng Province, providing both an urban-rural representation of South Africa. The selection of the provinces was guided by the inclusion of the two provinces with the highest HIV prevalence in the country, KwaZulu-Natal and Mpumalanga, the most urban province (Gauteng) and one rural province (Eastern Cape).

Instrument

A self-reported questionnaire was used to collect socio-demographic factors asking participants about their age, race, employment status, educational attainment, as well as the educational attainment of the mother and father or guardian.

Measures Sampled the Following Aspects

Self-esteem

Self-esteem was assessed with the 10-item Rosenberg self-esteem scale (Rosenberg 1965), with a score of 14 or less indicating low-self-esteem. A sample item is, "All in all, I am inclined to feel that I am a failure." Response options ranged from 0=strongly disagree to 3=strongly agree. Cronbach alpha for the Rosenberg self-esteem scale was 0.64 in this sample.

Sense of Future

This was assessed with 6 items such as "I have a plan for the future"; response options were agree or disagree. Sense of future was classified as those who indicated to all 6 items to have any sense of future. Cronbach alpha for this "sense of future" index was 0.63 in this sample.

Partner Risk Reduction Self-efficacy

This was assessed with 4 items such as "Would you be able to avoid sex any time you

didn't want it?" Response options were: No, Probably no, Probably yes, Yes. Cronbach alpha for this partner risk reduction self-efficacy index was 0.73 in this sample.

Poverty

This was assessed with 6 items on the availability or non-availability of shelter, fuel or electricity, clean water, medicines or medical treatment, food and cash income in the past week. Response options ranged from 1="Not one day" to 4="Every day of the week" Poverty was defined as higher scores on non-availability of essential items. Cronbach alpha for this poverty index was 0.70 in this sample.

Relationship Control or Decision-making Affecting the Relationship

This was assessed with 4 items (for those never in a relationship, they were asked imagine to be) such as "Your partner has more control than you do in important decisions that affect your relationship" Response options ranged from 1="Strongly disagree" to 4="Strongly agree." Higher scores on lack of relationship power were defined as lack of relationship control. Cronbach alpha for this relationship control index was 0.81 in this sample.

Religious Involvement

This was assessed with 1 item: "How important is attending religious gatherings in your life?" Response options ranged from 1=not important to 3=very important. Religious involvement was defined as "very important" in the attendance of religious gatherings.

Risk Behaviour

Various questions were asked to assess risk behaviour. These included: number of lifetime sexual partners, having had two or more sexual partners in the past year, inconsistent (not always) condom use with the last non-regular sexual partner, early sexual debut (below 15 years, ever forced to have sex, concurrent sexual relationships, sex with someone who is much older, sexual intercourse frequency and length of last relationship. In addition, every illicit drug use was included as a risky behaviour. Alcohol use

was assessed with the Alcohol Use Disorder Identification Test (AUDIT-C) questionnaire (Saunders et al. 1993), a measure of consumption of alcohol (such as the frequency of drinking, the quantity consumed at a typical occasion), and the frequency of heavy episodic drinking (that is, consumption of five standard drinks, 60 gram alcohol, or more on a single occasion). Using a cut-off score of 5 or more hazardous or harmful drinking was defined (Gual et al. 2002). Cronbach alpha reliability coefficient was in this study for the AUDIT-C 0.91.

Prevention Programme Exposure

This was assessed with the following items. Exposure to loveLife face to face programmes was assessed with 24 items, such as Gone to a loveLife clinic, participated in a loveLife community dialogue, or gone to a loveLife youth centre. Exposure to loveLife face-to-face programmes was summed up and coded as 0, 1-2, 3-4 or 5 or more programme exposures. Furthermore, longer term participation was assessed by having participated in loveLife programmes for at least one year. In addition, multi-media loveLife exposure was assessed with 6 items, such as "Have you ever watched a loveLife television show?" "Have you ever read unCut (loveLife) youth magazine?" Response options were 1=Yes or 2=No. The 6 multi-media programmes were summed up and coded as 1=0-1 media exposures, 2=2-4, and 3=5-6 loveLife media exposures.

Data Analysis

For the purpose of this study, the researchers restricted their analysis of self-esteem experiences to only female participants ($n=1417$) in the sample. Data analysis consisted of both descriptive and inferential statistics. After the datasets were edited, programs were written to calculate the sample weights. Weighted data was analysed using STATA software, taking into account the complex multi-level sampling design. STATA software (svy methods) was used to obtain the estimates of key indicators and significance values (p-values) that take into account the complex design and individual sample weights. Associations between key outcomes of self-esteem, sexual and HIV risk behaviour, and individual, social and structural variables and HIV programme exposure were evaluated

calculating standardised coefficients. Unconditional multivariate linear regression was used for evaluation of the impact of explanatory variables for key outcomes of self-esteem and sexual and HIV risk behaviour. All variables statistically significant at the $P<.05$ level in bivariate analyses were included in the multivariate models.

Ethical Consideration

Ethical approval for the study was obtained from the HSRC Research Ethics Committee. Participants signed informed consent forms.

Survey Response Rate

A total of 5,768 households were sampled and approached for the interview. Among these households, some were vacant, invalid or destroyed and thus not eligible households for the survey. Only 94.8 percent of households were valid and out of the valid households, 93.6 percent agreed to be interviewed. Only households that indicated they had a person aged 18 to 24 years were eligible for an individual questionnaire administration. Out of the eligible and valid households, 47.2 percent were eligible for an individual interview, 1.3 percent refused the individual interview and 2.3 percent of individuals were absent from the household, thus the individual interview response rate was 96.4 percent.

RESULTS

Socio-demographic Characteristics

The sample size ($n=1417$) included the majority of women being Black African. The majority of the sample (61.6%) completed grade 12 and higher compared to their parents, mothers (31.1%) and fathers (37.8%) having completed grade 12 and higher. Half of the sample (51.3%) was students at the time with 39.8 percent being unemployed; however, more than half (67.2%) indicated that they have a sense of future. Most (89.9%) are involved in religious activities. Out of the participants, 12.9 percent reported hazardous or harmful alcohol use, 4.3 percent taking alcohol before sex and two percent having tried drugs. Women participants reported teenage pregnancy of 19.3 percent ($n=282$), 15.5 percent reported having two or more sexual partners in the past year, nineteen percent had had

sex with someone much older and 7.1 percent reported lifetime STIs. Only 23.7 percent (n=351) participated in loveLife programmes in one year or more, 20.8 percent (n=261) participated in 1-2 loveLife face-to-face programmes and 48.1 percent (n=653) were exposed to loveLife multimedia programmes (see Table 1).

Self-esteem as a Predictor of Sexual and HIV Risk Behaviour

Self-esteem was assessed with the 10-item Rosenberg self-esteem scale with a score of 14 or less indicating low self-esteem (N= 71; SD=3.6) (see Table 1) and mean levels of 19.1 (SD= 3.3). Table 2 presents the standardized coefficients that summarize analyses examining the relationship between participants' self-esteem level and sexual and HIV risk behavior. Higher self-esteem was associated with not having sex with someone much older ($p<0.01$), partner risk reduction self-efficacy ($p<0.001$), having relationship control ($p<0.001$), a sense of future ($p<0.001$) and being HIV negative ($p<0.01$). In the forced multivariate linear regression model, not having sex with someone much older, partner risk reduction self-efficacy, relationship control and having a sense of future remained significantly associated with the self-esteem variable (see Table 2).

Associations of Self-esteem with Socio-demographic Characteristics, Substance Abuse and Exposure of loveLife Multi-media Programmes

Examining which socio-demographic variables were associated with participants' self-esteem, a higher level of self-esteem was positively associated with educational attainment, Grade 12 or higher for self, Grade 8-11 for the mother, grade 12 or higher for the mother, and grade 12 or higher for the father. With regard to the substance use measures, low levels of self-esteem were associated with having tried drugs, alcohol use before sex in the past 3 months, using cannabis before sex in the past 3 months and using drugs before sex in the past 3 months. Higher levels of self-esteem were positively associated with exposure to loveLife multi-media programmes. The items were entered into a multivariate model together and alcohol before sex in the past 3 months ($p<0.01$) and exposure to loveLife multi-media programmes ($p<0.001$) remained significantly associated (see Table 3).

Table 1: Socio-demographic characteristics, substance abuse, HIV/STI risk behaviour and HIV prevention programme exposure of study sample (n=1417)

Variable	N or M	% or SD
Low self-esteem	71	3.6
Self-esteem	19.1	3.3
Sense of future	909	67.2
<i>Socio-demographic Variables</i>		
<i>Education-Self</i>		
Low (<Grade7)	39	2.3
Medium (Grade 8-11)	513	35.5
High (Grade 12 or more)	835	61.6
<i>Education-Mother</i>		
Low (<Grade7)	426	33.4
Medium (Grade 8-11)	452	35.4
High (Grade 12 or more)	426	31.1
<i>Education-Father</i>		
Low (<Grade7)	381	34.1
Medium (Grade 8-11)	323	28.1
High (Grade 12 or more)	432	37.8
<i>Activity</i>		
Student	614	51.3
Employed	134	9.0
Unemployed	521	39.8
Religious involvement	1088	89.9
Relationship control (range 4-16)	11.9	2.5
Poverty index (range 6-24)	7.9	2.8
<i>Substance Use</i>		
Hazardous or harmful alcohol use	173	12.9
Current tobacco use	73	4.3
Ever drugs	34	2.0
Alcohol before sex in past 3 month	73	4.3
Cannabis before sex in the past 3 month	13	1.6
Drugs before sex in the past 3 month	3	0.2
<i>HIV/STI Risk Behaviour</i>		
<i>Sexual Frequency in Past Month</i>		
0	186	22.6
1-5	381	51.0
6-50	182	26.4
Ever forced to have sex	58	7.3
Teenage pregnancy	282	19.3
Two or more sexual partners in past year	200	15.5
Inconsistent condom use with last irregular sexual partner	136	57.7
Never condoms with transactional partner	104	55.5
Sex with someone much older	232	19.0
Length of last sexual relationship (>3 months)	740	94.5
Diagnosed HIV positive vs negative	69	8.5
Partner risk reduction self-efficacy (range 4-16)	14.2	2.5
Lifetime STI	113	7.1
<i>Programme Exposure</i>		
<i>One Year or More loveLife Participation</i>		
loveLife Face-to-face Participation		
0	916	63.1
1-2	261	20.8
3-4	102	6.3
5 or more	133	9.8
<i>loveLife Multi-media Programme Exposure</i>		
0-1	262	21.6
2-4	653	48.1
5-6	427	30.3

Table 2: Self-esteem as a predictor of sexual and HIV risk behaviour

<i>Outcome variables</i>	<i>Standardized coefficient (β) [SE]</i>	<i>Adjusted standardized coefficient (β) [SE]</i>
<i>Sexual Frequency in Past Month</i>		
0	1	
1-5	0.08 (0.69)	
6-50	0.22 (0.80)	
Ever forced to have sex	-1.11 (0.90)	
Teenage pregnancy	0.46 (0.96)	
Two or more sexual partners in the past 12 months	-0.46 (0.99)	
Sex with someone much older	-1.64 (0.53)**	-1.26 (0.46)***
Length of lastsexual relationship (>3 months)	1.23 (0.70)	
Inconsistent condom use with non-regular partner	-1.38 (0.84)	
Never condoms with transactional partner	1.84 (1.09)	
Partner risk reduction self-efficacy	0.46 (0.14)***	0.47 (0.19)*
Relationship control	2.32 (0.49)***	2.41 (0.61)***
Sense of future	1.69 (0.39)***	1.73 (0.43)***
Ever had STI	-1.00 (0.66)	
HIV positive (vs. Negative)	-1.81 (0.66)**	0.14 (0.81)

DISCUSSION

The current study investigated the association between self-esteem and sexual decision-making, and exposure to loveLife among young women in South Africa. The findings indicate various associations with self-esteem and decisions related to sexual-risk behaviour. Among the young women sampled, some of them (15.5%) did engage with more than one sexual partner within the past 12 months. This is consistent with previous research (Weiss et al. 2000; Naidoo et al. 2015) that report a greater number of sexual partners being associated with younger girls, who report lower levels of self-esteem. This puts them at a greater risk of contracting STIs and HIV (UNAIDS 2017; loveLife 2018). Even though young males were more likely to engage in multiple partnerships than females, as was found in the population-based household surveys conducted by the HSRC (Shisana and Simbayi 2002; Shisana et al. 2005), the 2008 household survey found a significant increase in multiple sexual partnerships in females, particularly among African females aged 20-34 (Shisana et al. 2009). The significant finding in a forced multivariate linear regression model - that young women in the current study have sex with much older men, is of huge concern. This may result in poor sexual negotiation and decision-making for these young women, given the social and cultural context of how gender roles are viewed in the South African context (Hoosen and Collins

2004; Conrad et al. 2014; Kastbom et al. 2015). Varga (1997) noted that this intricate set of factors pose a potential threat to HIV infection. Exacerbating this problem is the present study sample reporting nineteen percent of teenage pregnancy, a clear indication of young women having unprotected sex and not taking responsible decisions regarding their sexual behavior (Gibbs et al. 2012; Ferreira et al. 2014).

A positive association was observed in the bivariate analysis between high levels of self-esteem and exposure to loveLife multi-media programmes for more than two years. loveLife operates within the theory of reasoned action theory, in which individuals take into account the implications of their behaviour within a particular context, before they decide to change their behavior (Pettifor et al. 2007; loveLife 2012). loveLife programmes thus aim to inspire and motivate young people to take control of their lives. Given that women are more often subject to gender inequity based on social and cultural factors (Sia et al. 2016), it is argued that these loveLife programmes may have a more constructive and encouraging impact on their lives (loveLife 2018). This is observed in the current study finding, indicating that higher levels of self-esteem were associated with being HIV negative, not having sex with someone much older, partner risk reduction self-efficacy, having relationship control, educational attainment and a sense of future. This all relates to responsible actions related to sexual practices, which are

Table 3: Developing a multivariate model to predict level of self-esteem

<i>Socio-demographic Variables</i>	<i>Standardized coefficient (β) [SE]</i>	<i>Adjusted standardized coefficient (β) [SE]</i>
<i>Education-Self</i>		
Grade >7	1	1
Grade 8-11	0.32 (0.53)	0.38 (0.90)
Grade 12 or more	2.13 (0.72)**	1.42 (0.92)
<i>Education-Mother</i>		
Grade >7	1	1
Grade 8-11	0.69 (0.35)*	0.13 (0.46)
Grade 12 or more	2.31 (0.67)***	1.07 (0.65)
<i>Education-Father</i>		
Grade >7	1	1
Grade 8-11	0.77 (0.70)	0.03 (0.53)
Grade 12 or more	1.77 (0.47)***	0.80 (0.73)
<i>Activity</i>		
Student	1	-
Employed	-0.26 (0.68)	
Unemployed	-0.14 (0.59)	
Poverty index	0.21 (0.21)	-
Importance of religion	0.26 (0.42)	-
<i>Substance Use</i>		
Hazardous or harmful alcohol use	0.66 (1.53)	
Current tobacco use	-0.26 (1.67)	
Ever drugs	-3.95 (1.52)**	-0.93 (1.04)
Alcohol before sex in past 3 months	-3.04 (0.95)**	-2.11 (0.68)**
Cannabis before sex in the past 3 months	-5.31 (1.65)***	-2.81 (1.61)
Drugs before sex in the past 3 months	-5.05 (0.43)***	-0.85 (1.67)
<i>Love Life Programme Exposure</i>		
One Year or More loveLife Participation	0.06 (0.6)	-
<i>loveLife Face-to-face Participation</i>		
0	1	-
1-2	-0.22 (0.3)	
3-4	0.22 (0.5)	
5 or more	0.08 (0.8)	
<i>love Life Multi-media Exposure</i>		
0-1	1	1
2-4	1.19 (0.3)***	1.20 (0.33)***
5-6	2.03 (0.6)***	2.35 (0.55)***

possibly the results of a sense of self-respect and confidence among these young women (Ferreira et al. 2014; Doyle et al. 2016). In addition, being exposed to loveLife multi-media programmes remained significantly associated with higher levels of self-esteem in the multivariate model.

According to Njau et al. (2007), increasing self-esteem will increase self-confidence as well as self-worth and thus delay the sexual debut (Ethier et al. 2006; Kastbom et al. 2015) while increasing safer sex practices.

The current sample reported risky behaviour around alcohol and drug use that may have an impact on responsible decision-making related to safe sex practices. In the multivariate linear regression model, low levels of self-esteem were associated with having tried drugs, alcohol use before sex in the past 3 months, using cannabis before sex in the past 3 months and using drugs before sex in the past 3 months. Sterk et al. (2004) found in their study that the more drug-related problems women experience, the lower their level of self-esteem was. Alcohol and drug use have been associated with an increased risk of HIV, thus leading to impairment in judgement and responsible decision-making regarding sexual behaviour (Kalichman et al. 2007a; Kalichman et al. 2007b; loveLife 2012). Even though it is encouraging that only a very small percentage (4%) of the sample reported using alcohol before sex and only two percent having tried drugs, the big concern still remains in how to effectively reduce risky behaviours among young women as this makes them vulnerable to unsafe sex practices. In an effort to reduce the high rate of infection among young women and adolescent girls in South Africa, the government have been considering offering pre-exposure prophylaxis (SANAC 2017) to address worrying concern.

CONCLUSION

The study found that young women struggle to take responsible decisions pertaining to their sexual behaviour. However, being exposed to loveLife multi-media programmes has a positive impact on their level of self-esteem. There is a dire need for upscale prevention intervention programmes such as loveLife among the youth, in order to have a substantial impact on the HIV epidemic in general, but more so on sexual-risk behavior of young women. Effectively communicating relevant and current information regarding sexual practices via the media and/or other forms of prevention programmes, is urgently needed, with a particular focus on young people, and on a regular basis.

RECOMMENDATIONS

The study confirms the importance of HIV prevention programmes such as loveLife, particularly the positive association with increased levels of self-esteem. Given this result, it is rec-

ommended that substantial investments be made in such programmes, and that these are implemented over a longer period of time rather than once-off interventions. Furthermore, in light of the findings presented, it is further suggested that the South African government have a renewed focus on reaching young people with more updated, tailored approaches, with appropriate messages through the media and print. Perhaps new social network platforms should be included, given the impact of technology, to enforce reasonable sexual decision-making. Furthermore, creating adolescent-friendly health services in public health clinics where young people would feel comfortable to access the necessary information they need, would be beneficial. The present study clearly indicates that young females in South Africa experience difficulty with asserting themselves when making important decisions related to their sexual behaviour. Therefore, the priority is to focus on understanding the needs of and providing support to young women with how best to converse on issues related to sexual health, and how best to share and speak to their partners on the topic. Communication strategies should encourage freedom of expression about sex, sexuality and sexual reproductive health needs of young people, specifically for young women.

LIMITATIONS

This is a cross-sectional study and the focus was on a specific sample, therefore the study results should be interpreted with caution and the findings are only generalizable to the population of the study sample. As with any survey research, an inherent weakness is the heavy reliance on the participants' self-report responses, the accuracy of which is often quite difficult to estimate. Additionally, there is a possibility of a degree of under-reporting by participants and desirable responses may have been given.

REFERENCES

- Bazargan M, Kelly EM, Stein JA, Husaini BA, Bazargan SH 2000. Correlates of HIV risk-taking behaviors among African American college students: The effect of HIV knowledge, motivation, and behavioral skills. *J Nat Med Assoc*, 92: 391-404.
- Boden JM, Horwood LJ 2006. Self-esteem, risky sexual behavior, and pregnancy in a New Zealand birth cohort. *Arch Sex Behav*, 35(5): 549-560.
- Conrad SM, Swenson RR, Hancock E, Brown LK 2014. Sex differences and HIV risk behaviors: The interaction between the experience of multiple types of abuse and self-restraint on HIV risk behaviors. *J Child Sex Abuse*, 23(5): 558-576.
- Doyle KL, Woods SP, Morgan EE, Iudicello JE, Cameron MV, Gilbert PE, Beltran J 2016. HIV neurobehavioral research program (HNRP) group: Health-related decision-making in HIV disease. *J Clinical Psych Med Set*, 23(2): 135-146.
- Eaton L, Flisher AJ, Aarø LE 2003. Unsafe sexual behaviour in South African youth. *Soc Scien Med*, 56: 149-165.
- Edwards AE, Collins CB 2011. Exploring the influence of social determinants on HIV risk behaviors and the potential application of structural interventions to prevent HIV in women. *J Health Dispar Res Prac*, 2: 141-155.
- Ethier KA, Kershaw TS, Lewis JB, Milan S, Niccolai LM, Ickovics JR 2006. Self-esteem, emotional distress and sexual behavior among adolescent females: Inter-relationships and temporal effects. *J Adoles Health*, 38: 268-274.
- Ferreira M, Bento M, Chaves C, Duarte J 2014. The impact of self-concept and self-esteem in adolescents' knowledge about HIV/AIDS. *Procedia-Soc Behav Scien*, 112: 575-582.
- Gibbs A, Willan S, Misselhorn A, Mangoma J 2012. Combined structural interventions for gender equality and livelihood security: A critical review of the evidence from southern and eastern Africa and the implications for young people. *J Inter AIDS Soc*, 14(1): 1-10.
- Greig F, Koopman C 2003. Multilevel analysis of women's empowerment and HIV prevention: Quantitative survey results from a preliminary study in Botswana. *AIDS Behav*, 7: 195-208.
- Gupta GR, Parkhurst JO, Ogden JA, Aggleton P, Mahal A 2008. HIV prevention 4 structural approaches to HIV prevention. *Lancet*, 372: 764-775.
- Gual A, Segura L, Contel M, Heather N, Colom J 2002. AUDIT-3 and AUDIT-4: Effectiveness of two short forms of the alcohol use disorders identification test. *Alcohol Alcohol*, 37: 561-596.
- Hegdahl HK, Fylkesnes KM, Sandøy IF 2016. Sex differences in HIV prevalence persist over time: Evidence from 18 countries in sub-Saharan Africa. *PLoS One*, 11(2): e0148502.
- Hoosen S, Collins A 2004. Sex, sexuality and sickness: Discourses of gender and HIV/AIDS among KwaZulu-Natal women. *SA J Psych*, 34: 487-505.
- Kalichman SC, Simbayi LC, Jooste S, Cain, D 2007a. Frequency, quantity, and contextual use of alcohol among sexually transmitted infection clinic patients in Cape Town, South Africa. *Amer J Drug Alcohol Abuse*, 33: 687-698.
- Kalichman SC, Simbayi LC, Kaufman M, Cain D, Jooste S 2007b. Alcohol use and sexual risks for HIV/AIDS in sub-Saharan Africa: Systematic review of empirical findings. *Pre Sci Spring*, 8: 141-151.
- Kastbom ÅA, Sydsjö G, Bladh M, Priebe G, Svedin CG 2015. Sexual debut before the age of 14 leads to poorer psychosocial health and risky behaviour in later life. *Acta Paedia*, 104(1): 91-100.
- loveLife 2012. *Talking Points: A Study on HIV, Sexual Risk Behaviour, and Access to Opportunity among*

- Young People in South Africa*. Johannesburg: loveLife. loveLife 2018. loveLife Make Your Move. From <<http://www.lovelife.org.za/>> (Retrieved on 8 March 2018).
- Macintyre K, Rutenberg N, Brown L, Karim A 2004. Understanding perceptions of HIV risk among adolescents in KwaZulu-Natal. *AIDS Behav*, 8: 237-250.
- Naidoo P, Chirinda W, Mchunu G, Swartz S, Anderson J 2015. Social and structural factors associated with vulnerability to HIV infection among young adults in South Africa. *Psych Health Med*, 20(3): 369-379.
- Njau B, Mtweve S, Barongo L, Manongi R, Chugulu J, Msuya M, Mwampeta S, Kiwale B, Lekule J, Jalipa H 2007. The influence of peers and other significant persons on sexuality and condom-use among young adults in northern Tanzania. *Afric J AIDS Res*, 5: 33-40.
- Pettifor AE, Measham DM, Rees HV, Padian NS 2004. Sexual power and HIV risk, South Africa. *Emerg Infect Dis*, 10(11): 1996-2004.
- Pettifor AE, MacPhail C, Bertozzi S, Rees HV 2007. Challenge of evaluating a national HIV prevention programme: The case of loveLife, South Africa. *Sex Transm Infect*, 83: 70-74.
- Rosenberg M 1965. *Society and the Adolescent Self-image*. Princeton, NJ: Princeton University Press.
- Saunders JB, Aasland OG, Babor TF, De La Fuente JR, Grant M 1993. Development of the alcohol use disorders identification test (AUDIT): WHO collaborative project on early detection of persons with harmful alcohol consumption II. *Addict*, 88: 791-804.
- Shisana O, Simbayi LC 2002. *Nelson Mandela/HSRC Study of HIV/AIDS: South African National Prevalence, Behavioural Risks and Mass Media*. Cape Town: HSRC Press.
- Shisana O, Rehle T, Simbayi LC, Parker W, Zuma K, Bhana A, Connolly C, Jooste S, Pillay V 2005. *South African National HIV Prevalence, HIV Incidence, Behavior and Communication Survey*. Cape Town: HSRC Press.
- Shisana O, Rehle T, Simbayi LC, Zuma K, Jooste S, Pillay-van-Wyk V, Mbelle N, Van Zyl J, Parker W, Zungu NP, Pezi S, The SABSSM III Implementation Team 2009. *South African National HIV Prevalence, Incidence, Behaviour and Communication Survey 2008: A Turning Tide among Teenagers?* Cape Town: HSRC Press.
- Sia D, Onadja Y, Hajizadeh M, Heymann SJ, Brewer TF, Nandi A 2016. What explains gender inequalities in HIV/AIDS prevalence in sub-Saharan Africa? Evidence from the demographic and health surveys. *BMC Pub Health*, 16(1): 1136.
- South African National AIDS Council (SANAC) 2017. *Let Our Actions Count: National Strategic Plan 2017-2022*. Pretoria, South Africa: SANAC.
- Statistics South Africa (StatsSA) 2017. *Mid-year Population Estimates 2017*. Pretoria: StatsSA.
- Sterk CE, Klein H, Elifson KW 2004. Self-esteem and at risk women: Determinants and relevance to sexual and HIV-related risk behaviors. *Wom Health*, 40: 75-92.
- UNAIDS 2017. *Ending AIDS: Progress towards 90-90-90 Targets*. Geneva: UNAIDS.
- Varga CA 1997. Sexual decision-making and negotiation in the midst of AIDS: Youth in KwaZulu-Natal, South Africa. *Health Trans Rev*, 7: 45-67.
- Varga CA 2003. How gender roles influence sexual and reproductive health among South African adolescents. *Stud Fam Plan*, 34: 160-172.
- Weiss E, Whelan D, Gupta G 2000. Gender, sexuality and HIV: Making a difference in the lives of young women in developing countries. *Sex Relation Ther*, 15: 233-245.
- Yang X, Xia G, Li X, Latkin C, Celentano D 2010. Social influence and individual risk factors of HIV unsafe sex among female entertainment workers in China. *AIDS Educ Prev*, 22(1): 69-86.
- Yang X, Xia G 2015. Effectiveness of a peer-assisted multicomponent behavioral intervention in HIV risk reduction among female entertainment workers in China. *AIDS Educ Prev*, 27(5): 446-64.
- Zainiddinov H, Habibov N 2016. Trends and predictors of knowledge about HIV/AIDS and its prevention and transmission methods among women in Tajikistan. *Eur J of Pub Health*, 26(6): 1075-1079.

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