



Substance Use, Self-esteem, and Locus of Control as Predictors of Risky Sexual Behaviour among University Undergraduates

Emmanuel E. Uye^{1*}

Sunday A. Atunwa²

Nofisat M. Bello¹

& Peter O. Olapegba¹

Authors' Affiliation:

¹Department of Psychology, University of Ibadan, Nigeria

²Department of General Studies, Adeseun Ogundoyin Polytechnic, Eruwa, Oyo State

Corresponding author:

emmanuel.e.uye@gmail.com

ABSTRACT

Risky sexual behaviour has been on the increase among young adults and it poses great threat to the nation's public health system. Studies have reported inconsistent predictors of risky sexual behaviour among young adults. Therefore, this study investigated substance use, self esteem, and locus of control as predictors of risky sexual behaviour among undergraduates of the University of Ibadan. The study adopted cross-sectional survey design while randomly selecting six faculties and accidentally sampled 409 participants for the study. Four instruments: Alcohol Use Disorders Identification Test, Self-Esteem Scale, Locus of Control Scale, and Risky Sexual Scale were used for data collection. Data were analyzed using t-test of independent samples and multiple regression and tested hypotheses at a $p < .05$ level of significance. The result showed that substance use ($r = .536, p < .05$), self esteem ($r = .441, p < .05$), locus of control ($r = -.128$) significantly correlated with risky sexual behaviour among the study population. Also, substance use, self-esteem and locus of control jointly predicted risky sexual behaviour ($R^2 = .23, F(3, 405) = 9.616, p < .05$) which accounted for 23% of variance explained. It is concluded that substance use, self-esteem, and locus of control are good predictors of risky sexual behaviour among the study population. The study recommended putting in place preventive measures on substance use such as regular programmes to sensitize the students on the problems caused by substance use, lack of self-esteem and locus of control among the students.

Keywords:

Substance use,

Self-esteem,

Locus of control,

Risky sexual behaviour,

Undergraduates

Introduction

More than 1.2 billion of the world population constitutes young people who are less than 25 years of age. The majority of this population live in developing country (United Nations Population Fund, UNPA, 2023). Young people are found to engage in high risk behaviour such as smoking cigarettes, drinking alcohol, use of drugs, and other gender-based violence and these behaviours could also lead to risky sexual behaviour (Kotchick et al., 2019). The young people are at risk of practising risky sexual behaviours because of their developmental, physiological, and behavioural changes (Alamview et al., 2013; Ogundare et al., 2020). This is characterised by increased autonomy, peer influence, risk-taking behaviour such as initiation of sex and alcohol/drug use (Ogundare et al., 2020). Risky sexual behaviour relates to sexuality which increases the susceptibility of individuals to problems that affects their sexual and reproductive health such as being affected by sexually transmitted diseases (STDs), human immunodeficiency virus (HIV), unwanted and unplanned pregnancy, abortion and psychological distress (Gabhainn et al., 2018; Cooper, 2006). Risky sexual behaviour includes having more than one sexual partners, early sexual initiation, inconsistent use of condom, and having sex with commercial sex workers (Metzler et al., 2018; Kotchick et al., 2019, Miller et al., 2020). Some factors have been implicated as predictors of risky sexual behaviour among undergraduate students.

One factor considered in this study to predict risky sexual behaviour is substance use which involves indiscriminate use of non-prescribed drugs that affect

the normal behaviour of individuals (Sahu, & Sahu, 2012). Substance use is the major problem facing many adolescents. However, their uses come at the cost of various psychological, social and economic problems at the societal level in general, while the individual user tends to face different risky behaviour which youths are the most vulnerable age group (Leigh & Stall, 2018; Miller et al., 2020). Idowu et al. (2018) reported prevalence of substance use among the adolescents. They found that substance use contributes significantly to risky behaviours such as risky sexual behaviour, early sexual debut, among others. Similarly, a survey of 2,220 secondary school students in Barbados revealed prevalence of cigarette smoking among 21.3% of the sample, use of alcoholic beverages at about 10.9 years, inhaling solvents by 10.4 years, marijuana used by 12.6 years. One study found young males drinking alcohol and 'ganja' smoking as a "rite of passage" rather than substance use. Study has compared the prevalence of substance use among youths in the United States and the Caribbean (Henderson & Borba, 2020). They found that substance used among youths in US who used alcohol was 74%, Marijuana 38%, and cocaine 8% compared to 52%, 17% and 2%, among Caribbean youths, respectively. The use of these substances is a trigger to youths' involvement in risky sexual behaviour (Nene, 2017).

The second factor considered in this study to predict risky sexual behaviour is self-esteem which is described as the way individuals evaluate their self-worth (Hepper, 2016). Adolescents who exhibit low self-esteem are prone to substance use and are at the risk of engaging in risky sexual behaviour (Spencer et

al., 2019). Mann et al. (2017) found that individuals with low self-esteem would lead them to self-destructive behaviours such as engagement in unprotected sex and promotion of further substance use. How individual feels regarding the sexual prowess directly or indirectly affects their mental well-being and this in turn, affects how the individual deals with relationships in sexual situations (Lameiras-Fernandez et al., 2013).

The third factor considered in this study as likely to predict risky sexual behaviour is locus of control which is how an individual attribute the control agents to either oneself (internal locus of control) or to an outside influence such as chance, luck, other powerful people (i.e., external control) (Rotter, 1966). Murray-Harvey (2010) found locus of control as a significant predictor of risky sexual behaviour among college students. Students with external locus of control reported higher on risky sexual behaviour than those with internal locus of control (Pharr et al., 2015). Studies have suggested locus of control as an important factor when considering preventing risky behaviour including sexual behaviour among youths (Mangeni et al., 2018).

The fourth factor considered in this study as likely to influence risky sexual behaviour is the gender of the participants. Found that males had higher risky sexual behaviour than the female counterparts (ZadehMohammed et al., 2008). The proportion of youths engaging in risky sexual behaviour has been reported to be more among males than the female counterparts (Centre for Disease Control, CDC,

2018). In addition, over 12% of boys more than 10% of girls reported to have at least three sexual partners (CDC, 2018). However, Solimani et al. (2006) found no significant difference between genders and risky sexual behaviour.

Finally, age of the adolescents is considered in this study as likely factor that can influence risky sexual behaviour. Young people particularly those age 15-24 years are found to be at high risk of behavioural problem including substance use practices and risky sexual behaviour due to their developmental stage (Geremew et al., 2022). Lejuez et al. (2017) revealed that many youths think of experimenting with substance use as an acceptable part of transition into adulthood. Specifically, Mangeni et al., (2018) found that smoking and drinking are the most prevalent activities among adolescents between 15 and 17 year age bracket. Only few youths take serious the negative consequence of substance dependency. Studies have found substance use to increase the sexual activities of young individuals and as a result, many have ended up engaging in unsafe and risky sexual behaviours (Perera & Abeysena, 2018).

As the problems of substance use are in the increased, and many students suffered from low self-esteem, and the belief that they are controlled by external forces, there is need to investigate factors that contributes to sexual risky behaviours among undergraduate students.

Therefore, the purpose of this study was to examine substance use, self-esteem and locus of control as predictors of risky sexual behaviour among

undergraduates of the University of Ibadan. The following specific objectives were stated:

1. To determine whether substance use, self-esteem and locus of control will significantly correlate with risky sexual behaviour among undergraduates of the University of Ibadan.
2. To examine whether substance use, self-esteem and locus of control will jointly and independently predict risky sexual behaviour among undergraduates of the University of Ibadan.
- 3 To established whether older undergraduates will significantly influence risky sexual behaviour among undergraduates of the University of Ibadan.

This study would help to explain the roles of substance use, self-esteem, and locus of control on risky sexual behaviour among undergraduate students. The results of this study would help to design effective and appropriate intervention strategies on risk reduction method and promotion of good sexual health behaviour among undergraduates in the study population. The finding would help parents and schools to come up with measure to boost adolescents' self-esteem to discourage them from engaging in risky sexual behaviour and substance use. Finally, the study would help to provide baseline data for further studies.

Hypotheses

1. Substance use, self-esteem and locus of control will significantly correlate with risky sexual behaviour among undergraduates of the University of Ibadan.

2. Substance use, self-esteem and locus of control will jointly and independently predict risky sexual behaviour among undergraduates of the University of Ibadan.

3. Older undergraduates will significantly report higher on risky sexual behaviour than their younger counters.

Method

Design

This study adopted cross-sectional survey research design. The rationale behind the choice of research design was premised on the fact that the study focused on a particular population having different socio-demographic characteristics within a particular period in time. The independent variables were substance use, locus of control and self-esteem, while the dependent variable was risky sexual behaviour.

Setting

The study was conducted in the University of Ibadan. Specifically, the study was carried out among undergraduate students across the six faculties randomly selected.

Sampling technique

The study adopted multi-stage sampling technique. The first stage of sampling was simple random sampling of six faculties: Agriculture, Arts, Education, Technology, Sciences and Social Sciences while accidental sampling technique was used to select participants across the six faculties.

Participants The descriptive data showed that 225(55%) participants were male undergraduates while 184 (45%) were female undergraduates. In term of age, 236 (58%) participants were classified as younger undergraduates while 173(42%) were classified as older undergraduates. With respect to family types, 297(73%) of the participants were from monogamous family while 112 (27%) were from polygamous family.

Instruments

Risky Sexual Behaviour This was measured using Risky Sex Scale (RSS), a 14-item scale developed by O'Hare (2001). The scale assesses the prevalence of sexual risky behaviour among a sample of college students. The scale has the following dimensions: risky sex expectancy (RSE), risky sex behaviours (RSB), and gender-based sexual risk perception (GSRP). The scale is presented on a 5-point Likert's response format ranging from strongly disagree(1), disagree (2), undecided(3), agree(4) and strongly agree (5). Sample items include: 'I am more romantic when I drink' and 'Women are more likely to be sexually assaulted if they have been drinking than if they have not been drinking'. The subscale Cronbach's alpha were RSE = 0.85, RSB = 0.78 and GSRP = 0.64. All the three RSS subscales were significantly inter-correlated: RSE with RSB, $r = .66$, $p < .05$, RSE with GSRP, $r = .16$, $p < .05$, and RSB with GSRP, $r = .25$, $p < .05$.

Alcohol Use Disorders Identification Test (AUDIT). This is a 10-item scale developed by World Health Organization in collaboration with Babor et al. (2001) to assess alcohol consumption,

drinking behaviours, and alcohol-related problems. Both a clinician-administered version and a self-report version of the AUDIT are provided in the scale. However, the self-report version was adapted in the study. It is a 5-point Likert's scale that ranges from strongly disagree (1) to strongly agree (5). Sample items are: 'How often do you a drink containing alcohol?' and 'Have you or someone else been injured because of your drinking?' Scores above the mean implies high level of alcohol use, while scores below the mean connotes low level of alcohol use.

Self-Esteem Scale This is a 10-item scale developed by Rosenberg (1965). The scale assesses an individual's feelings of self-worth when the individual compares self to other people. Response format range from strong agree (4) to strongly disagree(1) with items 2, 5, 6, 8 and 9 being reversed. A high score indicates high self-esteem, while low self-esteem indicates low self-esteem. A correlation of at least .80 is suggested for at least one type of reliability as evidence; however, standards range from .5 to .9 depending on the intended use and context for the instrument. Sample items include: 'On the whole, I am satisfied with my life' and 'I certainly feel useless at times'. Rosenberg (1965) reported internal consistency ranges from .77 to .88. Ayoade (2016) reported adequate internal consistency of this scale in Nigeria to be 0.78.

Locus of Control This was measured using a brief version of Rotter's locus of control scale developed by Lumpkin (1985). The scale consisted of 9-item. The response format is from strongly disagree (1), disagree (2), undecided (3), agree (4) to strongly agree (5). Sample items include: 'My life is

determine by my own action' and 'My life is chiefly controlled by powerful others'. The scale has internal locus of control Cronbach's alpha of 0.65, while external locus of control is 0.72.

Procedure

Letter of Introduction was collected from the Department of Psychology, University of Ibadan to identify the researchers. The researchers approached the potential participants in their various faculties. The researchers briefly explained the purpose of the study to them and those who gave their contents were given the questionnaires to fill. They were told participation in the study was voluntary and that if they find the contents of the questionnaire offensive,

they can decline to complete the questionnaire. The questionnaires were collected on the spot. A total of 420 questionnaires were administered and collected while 11 questionnaires were incompletely filled and were discarded. The remaining 409 (i.e., 97%) questionnaires were used for the analysis.

Data Analysis

Both descriptive and inferential statistics were used in the analysis of the data collected. Hypothesis one was tested using zero-order correlation, hypothesis two was tested using multiple regression analysis, hypotheses three was tested using t-test for independent samples.

Results

Hypothesis 1: Substance use, self-esteem and locus of control will be significantly correlated with risky sexual behaviour among undergraduates of the University of Ibadan. This was tested with a zero-order correlation and the result is presented in Table 1.

Table 1: Zero-ordered correlation of the study variables

S/N	Variable	1	2	3	4
1	RSB	-	.536**	-.128	-.441*
2	Substance use		-	-.293*	.172*
3	Self- esteem			-	-.308
4	Locus of control				-

RSB =Risky Sexual Behaviour

Table 1 reveals the interrelationship among variables of the study. Risky sexual behaviour had a significant positive relationship with substance use ($r = .536, p < .05$) and locus of control ($r = .441, p < .05$). However, risky sexual behaviour did not correlate with self esteem ($r = -.128, p > .05$).

Hypothesis 2: Substance use, self-esteem and locus of control will jointly and independently predict risky sexual behaviour among undergraduates of the University of Ibadan. This was tested using multiple regression analysis and the result is presented on Table 2.

Table 2: Multiple Regression Showing Joint and Independent Predictors of Risky Sexual Behaviour

Criterion	Predictors	β	T	p	R	R^2	F	p
RSB	Substance Use	.308	4.151	<.05				
	Self-esteem	-.113	-2.106	>.05	.480	.231	9.616	<.05
	Locus of control	.226	3.762	<.05				

RSB =Risky Sexual Behaviour

Table 2 presents results of the predictors of risky sexual behaviour among undergraduates of the University of Ibadan. The result revealed that substance use, self esteem, and locus of control jointly predicted risky sexual behaviour among the study population [$R^2 = .23$, $F(3, 405) = 9.616$, $p < .05$]. When combined, substance use, self esteem and locus of control accounted for about 23% variance in risky sexual behaviour of the undergraduates. However, only substance use ($\beta = .31$, $p < .05$) and locus of control ($\beta = .23$, $p < .05$) independently predicted risky sexual behaviour. This partially confirms the stated hypothesis.

Hypothesis 3: Male undergraduates will significantly report higher on risky sexual behaviour than their female counterparts. This was tested using t-test for independent samples and the result is presented in Table 3.

Table 3: T-test for Independent Samples Difference between Gender and Risky Sexual Behaviour

DV	Gender	N	M	SD	t	df	p
RSB	Male	225	28.72	9.6	8.931	407	<.05
	Female	184	24.83	10.3			

RSB =Risky Sexual Behaviour, DV = Dependent Variable

Table 3 presents results between gender difference and risky sexual behaviour among undergraduates of the University of Ibadan. The result indicated a significant gender difference in risky sexual behaviour [$t(407) = 8.931$, $p < .01$] such that male undergraduates ($M = 28.72$, $SD = 9.6$) were significantly higher in risky sexual behaviour than female undergraduates ($M = 24.83$, $SD = 10.3$). This supported the stated hypothesis.

Hypothesis 4: Older students will significantly report higher on risky sexual behaviour compared to younger students. This was tested using t-test for independent samples and the result is presented in Table 4.

Table 4: *T-test of Independent Samples between Age and Risky Sexual Behaviour*

DV	Gender	<i>N</i>	<i>M</i>	<i>SD</i>	<i>T</i>	<i>df</i>	<i>p</i>
RSB	Younger	236	25.29	9.3	3.714	407	<.05
	Older	173	27.16	9.5			

RSB = Risky Sexual Behaviour, DV = Dependent Variable

Table 4 presents results of differences between age and risky sexual behaviour among undergraduates of the University of Ibadan. The result depicted that there is a significant age difference in risky sexual behaviour [$t(407) = 3.714, p < .05$] such that older university students ($M = 27.16, SD = 9.5$) were significantly higher in risky sexual behaviour than younger university students ($M = 25.29, SD = 9.3$). This confirms the stated hypothesis, hence was accepted in this study.

Discussion

The study investigated influence of substance use, self-esteem, and locus of control on risky sexual behaviour among undergraduates of the University of Ibadan. The results show that risky sexual behaviour had a significant positive relationship with substance use and locus of control. This means that risky sexual behaviour among undergraduates of the University of Ibadan increases with increased in substance use and external locus of control of students. In other words, increase in students' substance use increases the tendency towards risky sexual behaviour. Also, the more the students perceived having external locus of control, the higher their likelihood of engaging in risky sexual behaviour. The result of this study supported previous findings (Leigh & Stall, 2018; Miller et al., 2020) that substance use correlated with risky sexual behaviour among adolescents in their study. Also, Idowu et al.'s (2018) finding lent credence to the present result that locus of control significantly correlated with risky sexual behaviour

among college students. Students with external locus of control reported higher on risky sexual behaviour than those with internal locus of control. However, there was no significant relationship between risky sexual behaviour and self-esteem.

The second hypothesis that substance use, self-esteem and locus of control will jointly and independently predict risky sexual behaviour among University of Ibadan students was confirmed. This means that participants engaging in substance use with high low self-esteem and external locus of control will engage more in risky sexual behaviour. This finding has been supported by previous studies that substance use (Murray-Harvery, 2010) found locus of control as a significant predictor of risky sexual behaviour among college students. Students with external locus of control reported higher on risky sexual behaviour than those with internal locus of control (Pharr et al., 2015; Nene, 2017), self-esteem (Spencer et al., 2019; Mann et al., 2017) and

locus of control (Mangeni et al., 2018; Pharr et al., 2015).

The hypothesis that male undergraduates will significantly report higher on risky sexual behaviour than their female counterparts was confirmed in this study. This finding corroborated previous findings (CDC, 2018; Solimani et al., 2006) that male undergraduates engaged more in risky sexual behaviour than their female undergraduates.

The hypothesis that older undergraduates will significantly report higher on risky sexual behaviour than younger undergraduates was confirmed. The result supported Geremew et al., 2022; Lejuez et al., 2017) that many youths think of experimenting with substance use as an acceptable part of transition into adulthood. Specifically, Mangeni et al., (2018) found that age of the undergraduates influenced their involvement in risky sexual behaviour. It is the age of experimentation which is highly influenced by peers and the newly found freedom of leaving and staying alone away from parents.

Conclusion Based on the findings of the present study, it is concluded that substance use, self-esteem, and locus of control were significant joint predictors of risky sexual behaviour with substance use and locus of control independently predicted risky sexual behaviour. Also, substance use, and locus of control significantly correlated with risky sexual behaviour among the study population. Finally, the age of the students positively influenced the engagement in risky sexual behaviour.

Recommendations Based on the findings of this study, it is recommended that more sensitization

programmes should be put in place in the University community to educate undergraduates on the effects of substance use to them as students and after graduation. Open sales of these dangerous substances should be discouraged in the University community. As locus of control was found to be a significant factor in risky sexual behaviour, students should be trained to accept responsibility of whatever decisions they take thus making them to be conscious of engaging in risky sexual behaviour.

Limitations and suggestions for further studies: The following limitations need to be noted. Because of the sensitive nature of the study, some participants would have likely introduced social desirability while responding to the questionnaires. Further studies should include focus group discussion as one of the preliminary tools for data collection. Doing the study during the COVID-19 pandemic was challenging as many students were not willing to answer the questionnaires in time. A follow-up of this study should be carried out to validate the present results.

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