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ADOLESCENTS' RISKY SEXUAL BEHAVIOUR AND EFFICACY OF PSYCHO-EDUCATION INTERVENTION PROGRAMME AMONG SECONDARY SCHOOL STUDENTS IN OYO STATE

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ABSTRACT

The study examined adolescents' attitude to risky sexual behaviour and the efficacy of psycho-education intervention programme among 150 Secondary School Students. 100 students were used for the experimental study while 50 were used as the control. Specifically it is aimed at finding out the effectiveness of the psycho-education preventive intervention programme on adolescents' attitude to sexual risk behaviour among adolescents. Four hypotheses were postulated while analysis of variance and t-test for independent samples were used to analyse the data collected. Findings indicate that adolescents who were exposed to the psycho-education preventive intervention programme scored lower in risky sexual behaviour measures than those who were not exposed to psycho-education. Students with low and high quality of life did not differ significantly in their attitude towards risky sexual behaviour. One of the implications of the findings is that irrespective of social status, the adolescents engaged in risky sexual behaviour. It is therefore recommended that preventive intervention programmes should target adolescents at the various socioeconomic levels of the society.

INTRODUCTION

In an effort to reduce its high teenage maternal and infant mortality and high rates of sexually transmitted infections and dropout from school, Nigeria developed a national reproductive health policy in 2000 that focuses on preventing risky sexual behaviours during adolescence, (World Health Organization., WHO, 2001). The programme has been hampered, however, by outdated and incomplete information on the sexual knowledge, attitudes, and behaviours of adolescents in Nigeria. Risk factors are those variables that increase the likelihood that a certain negative outcome, in this case, adolescent sexual risky behavior, will occur. Examples of adolescent risky sexual behaviour are early premarital sexual intercourse, kissing, not using condom, having multiple sexual partners, patronizing commercial sex

workers, unintended or casual sexual intercourse and sexual coercion. The logical concerns arising from adolescent risky sexual behavior are pregnancy, teenage parenthood, infection with sexually transmitted disease, and exposure to the human immunodeficiency virus (HIV). Individuals who begin having sex at earlier ages are exposed to risk for a greater length of time, are less likely to use contraception, have more sexual partners, and are involved in high risk sexual behavior, such as substance use before intercourse (Moore, Miller, Sugland, Morrison, Gleit, and Blumenthal, (1995). Moore, et al also reported that another possible concern about early sexual behavior is that first sexual experiences are often coercive. An astonishing majority of first sexual experiences that occurred before age 15 among females were not voluntary. Coercion is damaging in itself, but it is also associated with improper or no use of contraception.

Much of the research examining adolescent risky sexual behavior is centered on the factors that predict or co-vary with its occurrence. A decrease in the age of onset of sexual activity, as well as, an increase in the range of risky sexual behaviors among teens, contributes to this concern. These factors combined with the trend toward marrying at a later age account for a larger window of time for high-risk behavior and may be one reason for the increase in the number of cases of sexually transmitted infections (STIs) among adolescents. In Nigeria, the association between early age of coital activity and greater numbers of both recent and lifetime sex partners represents a connection to a higher incidence rate of Sexually Transmitted Diseases (STDs), over 85% of all STDs occur among persons aged 15-29 years (Centres for Disease Control, 1990). Also according to National Centre for Health Statistics (1991), male and females who have multiple partners over several months are at an increased risk for gonorrhoea, syphilis, Chlamydia and Chancroids. Increased number of sex partners over a lifetime is also associated with a greater cumulative risk for acquiring viral infections such as hepatitis B, genital herpes and the human immunodeficiency virus (HIV), Aral and Homes (1990); Cates and Stone, (1992).

Studies have further demonstrated that, among both genders sexual contact often occurs after drinking, and that sexual activity and frequency, as well as sexual risk-taking, is often associated with adolescent substance use. In line with this Muscari, (1996) found that most of the morbidity among young people is related to

behaviours that result in risky sexual behaviour. Furthermore, researchers have documented that a high prevalence of risky sexual behaviour is associated with substance misuse, conduct disorders, depression, anxiety and HIV infection, Stanton, Leukefeld, Logan, Zimmerman, Lynam and Mitich, (1999). Bardone, Moffitt, Caspi, Dickson, Stanton, Silva (1998). In Nigeria, the increase in AIDS cases (by June, 1997) is about 59,983 while an estimated 2.2 million persons are HIV infected, Williams, Milligan and Odemwingie, (1997) which may imply a significant level of risky sexual behaviour.

Quality of life may be measured in terms of family disadvantage, poverty, low educational aspiration and limited economic opportunities. However, poverty level is on the increase as Nigeria was ranked the 13th poorest country out of 127 countries in 1998 (NISER). World Health Organization (WHO), (2000) also reports that adolescents sometimes have negative or positive sexual behaviour depending on the peers, environments and social influence. This implies that the environment to which the adolescent is exposed and the social influence may have impact on adolescent's quality of life. It is therefore important to find out the influence of quality of life on adolescent's risky sexual behaviour. There is general consensus in the United States that the proportion of teenagers who engage in behaviours that put them at risky of pregnancy and of HIV and other Sexually Transmitted Infections (STIs) remains too high. Each year, approximately one million young women aged 15-19 or one-fifth of all sexually active females in this age group—become pregnant; the vast majority of these pregnancies are unplanned, Alan Guttmacher Institute (AGI), (1997); Henshaw, (1998). The trend may be associated with environment and social influence which together may likely contribute to the quality of life of the adolescents.

Thompson (1996) posits that personal effectiveness depends to a large degree on the extent to which we assert ourselves. While recognizing the right for oneself, assertiveness allows us to recognize the right of others and respect them. Earlier studies have shown that those who can talk openly with their sexual partners engage in sex more responsibly Darling & Hicks 1982; Lelyva & Furth, (1986). Along the same line, Baumeister, Flores, & Marin (1995) found that adolescents who talk openly with their parents are not likely to begin their sexual experiences early or to engage in high-risk sexual behaviour once

they have started. This study therefore attempted to examine the impact of a preventive intervention psycho-education programme on adolescents' risky sexual behaviour. Specifically, the primary objective of this study is to identify the influence of exposure to psycho-education programme on adolescents' risky sexual behaviour; identify the influence of psychosocial factors such as assertiveness, adolescents' quality of life and age on adolescents' risky sexual behaviour. The following hypotheses were proposed for the study:

Adolescents who have been exposed to psycho-education programme will significantly score lower on risky sexual behaviour than those who have not been exposed to psycho-education programme. It is also expected that there would be a main and interaction effect of sex and exposure to sex education on adolescents' risky sexual behaviour.

Adolescents who have high quality of life will be different from those who have low quality of life on attitude towards risky sexual behaviour. There would be a main and interaction effect of sex and assertiveness on adolescents' risky sexual behaviour.

METHOD

This study is a quasi-experimental research. The dependent variable is adolescents' risky sexual behaviour and was measured by adolescent risky sexual scale while the independent variables are quality of life, assertiveness, and psycho-educational program. The research design employed in the study is Pre-test Post-test control group design (3 group form) The experimental group was exposed to an informative video documentary designed to help adolescents with life planning and making safe responsible decisions about sexual activity. The control group was not exposed to any video documentary.

The participants in the research study were students of International School Ibadan, Ibadan Grammar School and Methodist Grammar School Bodija, Ibadan. This is because they were all mixed schools. The age range used was between 13 and 19 years (mean = 15.29, SD = 1.05). The total number of 151 respondents was randomly selected for the study of which 75 (50%) were males and 76 (50%) were females, 121 (80.7%) were Christians and 29 (25.3%) were Muslims. 35 (23.3%) said yes to ever had sex: 115 (76.7%) said No to ever had sex.

MEASURES

The instrument used on the study consist of three standardized scales which measures sexual attitude, assertiveness and quality of life as well as an informative video documentary on adolescents' sex-education developed by Family care International and the Family Planning Association of Kenya. The demographic variables of the participants such as sex, age, religion, parental information such as income, occupation and ethnic group.

Quality of life was measured using the adapted form of the Quality of life scale by Flanagan (1979). The 26- item questionnaire was standardized and used basically to measure how satisfied the participants were with their lives. The original scale has Cronbach alpha of 0.89 and 0.86 while the split-half reliability coefficient is 0.41. For this study, the instrument was revalidated and Cronbach alpha was found to be 0.87 and Guttman split-half of 0.78, six items (1, 2, 3, 4, 5 and 6) were removed from the scale leaving a total of twenty items because of low inter-item correlation value.

Adolescents' risky sexual scale contain items that were designed by the researchers. It has 27 items and was scored using the Likert format. For the pilot study, original scale has a coefficient Alpha of 0.78 and Guttman Split-half of 0.64. For this study, the scale was revalidated and the Cronbach alpha was found to be 0.80 and the Guttman split-half of 0.64, fourteen items (1, 8, 11, 12, 13, 14, 17, 18, 19, 20, 21, 2, 26 and 27) were removed from the scale leaving a total of thirteen items because of low inter-item correlation value. Abridged form of Albeti and Emmons (1974), scale consisting of 10 items were used to measure assertiveness of the respondents in making decisions. The scale has a response format of Yes or No and was scored 2 and 1 respectively. Items 2, 6 and 10 were negative items to the construct. The original scale has a coefficient alpha of 0.64 and 0.7. For this study, coefficient alpha was found to be 0.24, 7 items were deleted from the scale leaving a total of three items because of the low inter-item correlation value.

PROCEDURE

Schools to be used were randomly selected from the list of all the secondary schools within Bodija, University of Ibadan campus and Molete. Three different secondary schools chosen for the study include, Methodist Grammar School Bodija, International School Ibadan and Ibadan Grammar School. Among

the three selected secondary schools, *International School Ibadan* and *Ibadan Grammar* were randomly selected as experimental groups 1 and 2 respectively while *Methodist Grammar School Bodija Ibadan* was used as the control group and the students were not exposed to the video documentary on Adolescents psycho-education. The students only completed the self-reported questionnaires. A total of 150 senior secondary school students were randomly selected from the three arms of the senior secondary class of each school, which comprise 25 males and 25 females. This means that 50 students were selected from each school. Students from *International School, Ibadan* and *Ibadan Grammar School* were given questionnaires to fill at first (Pre test), they were given time to complete the filling of the questionnaire. The completed questionnaires were collected from the students after which they were exposed to the video documentary on adolescent sex education. This lasted for about one hour after which the respondents were given another questionnaire to fill (another copy of the same questionnaire that was administered at first), (post-test).

STATISTICAL ANALYSIS

The statistical analysis tool used in the study were T-test for repeated samples, One-way Analysis of Variance (ANOVA) in which a Post-hoc test was conducted to compare the mean difference of the variables and Regression analysis was also used along with Univariate analysis of variance to determine the joint and individual contribution of the independent variables to the dependent variables.

RESULTS

Adolescents who have been exposed to sex-education programmes were found to significantly score low on negative sexually risk behaviour than those who have not been exposed to sex education. One-way analysis of variance was used for the analysis as shown in table 1 below:

TABLE 1: ZERO-ORDER CORRELATIONS OF THE VARIABLES IN THE STUDY

		Age	Quality	Behaviour	Section D	B - After	C - After	D - After	N	Mean	SD
Age	Pearson Sig. N	1							150	15.29	1.05
Quality of life B (before)	Pearson Sig.	.150	1						150	72.02	10.95
Risky sexual behaviour attitude C (before)	Pearson Sig.	-0.76 .177	.143 0.41	1					150	45.1	6.02
Assertiveness (before) D	Pearson Sig.		-.015 .428	-.188 .011	1				160	4.28	1.39
Quality of life B (after)	Pearson Sig.		.692 .000	-.010 .459	.082 .208	1			100	73.58	11.20
Risky sexual behaviour attitude C (after)	Pearson Sig.		.224 .012	.262 .004	-.124 .109	.212 .017			100	45.70	5.46
Assertiveness D (after)	Pearson Sig.		.159 .057	-.047 .323	.300 .001	.173 .043	-.014 .444	1	100	4.10	1.43

** p <.01; * p <.05

From the table, assertiveness negatively correlated with risky sexual behaviour ($r = -.188, P <.01$) in the pre-test, while quality of life correlated with risky sexual behaviour ($r = .224, P <.01$) in the post-test. Age was also found to correlated with risky sexual behaviour of the adolescents in the pre-test ($r = -.221, p <.01$) and in the post test ($r = -.186, p <.05$).

Adolescents who were exposed to psycho-education programme were found to significantly score low on risky sexual behaviour than those who have not been exposed to psycho-education

programme. On-way analysis of variance was used for the analysis as shown in table 2 below:

Table 2: One-way analysis of variance showing effect of sex-education program on adolescent sexual risky behaviour among experimental and control groups

Source	Sum of Squares	df	Mean Squares	F	P<.05
Between groups	1894.01	2	947.01	25.43	0.00
Within groups	5474.58	147	37.24		
Total	7368.59	149			

The results in table 2 revealed that the hypothesis is confirmed $F(2, 147) = 25.43, P < .05$. This means that the experimental group scored lower on negative risky sexual behaviour scale than the control group. The results shows that adolescents who have been exposed to psycho-education programme scored lower on risky sexual behaviour than ; than those who were not exposed to psycho-education programme.

Post hoc test was carried out to compare the means and show the direction of the differences.

Table 3: showing the least significant mean difference (post hoc) between the experimental and control groups on adolescent risky sexual behaviour

Groups	No.	Mean	Experiment 1	Experiment 2
Control	50	53.22	7.22*	7.82*
Experiment 1	50	46.00		
Experiment 2	50	45.40		

* The mean difference is significant at .05 level.

Table 3 shows that the control group comprising students from Methodist Grammar School had a mean score of 53.22 on sexual behaviour scale while the experimental group 1 comprising students from International School Ibadan (ISI) had a mean score of 46.00 while the experimental group 2 comprising students from Ibadan Grammar School had a mean score of 45.40. The results in the post hoc test (LSD) revealed that the hypothesis is confirmed by using the mean difference to compare the results.

Control and Experiment 1: mean = 7.22 $P < .05, N = 50$

Control and Experiment 2: mean = 7.82 $P < .05, N = 50$

The hypothesis which states that, there will be a main and interactive effect of sex and exposure to psycho-education on

adolescents' risky sexual behaviour was tested using univariate analysis of variance analysis. The result is presented in table 4.

Table 4: showing main and interactive effect of sex and exposure to sex education program on adolescent risky sexual behaviour

Source	Type III Sum of Square	Df	Mean Square	F	P<.05
Sex	289.00		289.00	10.64	0.00
Groups (exposed to sex education)	9.00		9.00	0.33	0.57
Sex x groups exposed	54.80		54.80	2.02	0.16
Error	2608.24		27.17		
Corrected Total	2961.00				

Table 4 results revealed that the hypothesis is partially confirmed with main effect of sex = $F(1,96) = 10.64, P < .05$. This means that sex has a main effect on attitude to adolescent risky sexual behaviour. There was no main effect of exposure to psycho-education programme on risky sexual behaviour $F(1,96) = 0.33, P > .05$ and there is no interactive effect of sex and exposure to sex – education on sexual behaviour $F(1,96) = 2.02, P > .05$. Therefore the hypothesis stated is partially confirmed.

T-test was used to test the hypothesis that adolescents who have low quality of life would score higher on attitude towards risky sexual behaviour than those who have high quality of life. The result is as shown in table 5, 6 and 7 below:

tables 5, 6 and 7 showing t-test between adolescents who have low quality of life and those who have high quality of life on their attitude towards risky sexual behaviour

TABLE 5 (Control group-Methodist)

Sexual behaviour	Quality of life	N	Mean	Df	T	P<.05
	low	31	52.23	48	-1.26	0.21
	High	19	54.84			

Table 5 indicate that the hypothesis is not confirmed, $F(48) = -1.26, P > .05$.

Table 6 (Experimental group 1 – International School)

Sexual behaviour	Quality of life	N	Mean	Df	T	P<.05
	low	16	45.81	48	-1.17	0.86
	High	34	46.09			

Table 6 shows that the hypothesis is not confirmed. $F(48) = -0.17, P > .05$.

Table 7: Experimental group 2- Ibadan Grammar School

Sexual behaviour	Quality of life	N	Mean	Df	T	P<.05
	low	33	44.55	48	-1.48	0.15
	High	17	47.10			

Table 7 indicate that the hypothesis is not confirmed. $F(48) = -1.48, P > .05$.

This means that adolescents who have low quality of life did not score higher on attitude towards risky sexual behaviour than those who have high quality of life. Hence the hypothesis was not confirmed.

Univariate analysis of variance was used to test the hypothesis that there will be a main and interactive effect of sex and assertiveness on adolescent's risky sexual behaviour as shown in table 8 below:

Table 8: showing main and interaction effect of sex and assertiveness on adolescents' attitude towards risky sexual behaviour

Sexual behaviour	Source	Type III Sum of Square	df	Mean Squares	F	P<.05
	Sex	341.38	1	341.38	11.31	0.00
	Assertiveness	1.12	1	1.12	0.04	0.85
	Sex* Assertiveness	4.30	1	4.30	0.14	0.17
	Error	2898.72	96	30.20		
	Corrected Total	3401.00	99			

Table 8 results revealed that the hypothesis is partially confirmed. Only sex had significant main effect on adolescents' sexual risky behaviour, $F(1,96) = 11.31, P < .05$ the main effect of assertiveness, $F(1,96) = 0.04, P > .05$ and interaction effect of sex and assertiveness, $F(1,96) = 0.14, P > .05$ were not significant.

Table 9 Post hoc showing mean differences.

Sexual behaviour	Sex	Assertiveness	Mean	N	MFLA	MFHA
	Male	Low	43.30	24	3.60	5.10
		High	43.20	26		
	Female	Low	46.90	19		
		High	48.30	31		

MFLA – denotes male and female that are low on assertiveness, on attitude towards risky sexual behaviour.

MFHA – denotes male and female that are high on assertiveness, on attitude towards risky sexual behaviour.

Table 9 shows the main effect of sex and assertiveness on adolescent's attitude towards sexual behaviour. Using the mean difference to compare whether a male adolescent will be more assertive than female adolescents, the results show that females

low in assertiveness in this study have a higher means (46.90) than males (43.30). Also females who are high in assertiveness had higher means (48.30) than the males (43.20). In both cases, the results indicate that the females are more assertive than the males and are least likely to engage in risky sexual behaviour.

DISCUSSION

From the results, adolescents who have been exposed to psycho-education programme significantly scored low on risky sexual behaviour than those who have not been exposed to any psycho education programme. This is supported by Social Judgment theory by Sherif and Hovland (1961) who holds that the effect of persuasive message is a consequence of variation in people's ego with critical issue. In other words, ego involvement has to do with the degree to which a person finds an issue personally relevant.

Sex had a main effect on adolescent adolescents' risky sexual behaviour but no interaction effect of sex and exposure to psycho-education was indicated from the results. Thus the hypothesis was partially confirmed. This may be due to the cultural setting in which the study was conducted which is in agreement with the findings of Georgas (2003) that culture play a significant role in the adjustment of adolescents. Females are generally more restricted on sexual issues than males. This implies that gender should be taken into consideration when preventive intervention programmes are being designed.

Adolescents who have high quality of life were not found to score lower on risky sexual behaviour than those who have low quality of life. The result contradicts the study of Johnson, Wadsworth, Wellings and Field (1994) who found that adolescent with high quality of life were more positive towards risky sexual behaviour and indulge in indiscriminate sex than adolescents with low quality of life. They also found out that adolescents with high quality of life were more likely not to indulge in prostitution and are likely more able to control themselves from unprotected sex than adolescents with low quality of life. In contrast to this view however studies by WHO (2000) from the World health programme on AIDS, agreed with the results from this study that both high and low quality of life have positive effect on adolescents' risky sexual behaviour depending on the peers, environment and social influence. The result is also supported by social judgment theory, Sherif and Hovland (1961) that the

effectiveness of persuasive message is a consequence of variation in people's ego with critical issue. In other words, the ability of the adolescent to think critically and store or retain in memory convincing information about risky sexual behaviour is determined by external forces such as the source, expertise, communication and setting. There was no significant interaction effect of sex and assertiveness on adolescent risky sexual behaviour. But sex was found to have a main effect. Specifically females were found to exhibit higher resistance to risky sexual behaviour than males. This result is in agrees with the findings of Georgas (2003) on cultural differences in child-rearing patterns. Female are reared in such a way that makes them conscious of the implication of their behaviour on their families. Awareness of not bringing shame to the family by being involved in risky sexual behaviour may result in more assertiveness for the female. . In Nigeria,1 parents seem to place more restraints on the girls than boys on sexual issues. But Gambro and Richery (1975) found that situational variables influence individual's assertive behaviour. This means that other variables such as peer group and the acceptance of multiple sexual partners in the Nigerian culture for males should be taken into consideration in preventive intervention efforts on the reduction of risky sexual behaviour among adolescents.

CONCLUSION

Adolescents exposed to psycho-education programme showed a significant lower risky sexual behaviour than those who were not exposed to sex-education programme. This implies that those who were exposed to psycho-education programme showed more positive sexual behaviour than those who were not exposed to the programme. This gives an indication that the psycho-education programme is effective.

There was no significant difference between adolescents with high quality of life and those with low quality of life on attitude towards risky sexual behaviour. This indicates that all adolescents irrespective of the quality of life engage in risky sexual behaviour. Moreover, the presence of other variables such as socio-economic status, peer pressure, exposure and environment may have a strong influence on adolescents' sexual risky behaviour. The study also showed that female adolescents are more assertive than male adolescents on sexual risky behaviour. The result implies that intervention efforts in Nigeria on risky sexual behaviour such as having multiple sexual partners

should target males (who need to be more assertive to resist risky sexual behaviour) while at the same time considering the influence of other variables such as the environment and peer group.

The study has implications for intensified efforts from interested organizations concerned with reducing adolescents' risk sexual behaviour and HIV/AIDS infection using behavioural techniques. With the finding of this study the following recommendations can be made: it is essential that education policy should include a more formalized sex education programme in Nigerian schools. This implies that policy formulation body should consider the inclusion of sexual-education curricular in school system urgently.

Parents should create an avenue for friendship and effective sex communication with their children. Programmes including a high degree of parent participation such as parent-adolescent communication on sex issues have become very important if the rate at which adolescents are dying of AIDS were to be reduced. There is the need for a close interaction between school and psychologists who can utilize various behavioural techniques in preventive intervention including sex education to adolescents especially males in schools. Also teachers should be involved in sex education in schools. However, interventions should not only be focused on females but males as well because when puberty sets in the parents concentrate more on the females forgetting the fact that male adolescents are also at the risk of contracting HIV/AIDS infection by engaging in casual sex without protection.

Finally the role of parent in the life of adolescents is a very sensitive one. Parents should be prepared and be able to provide adequate information on sexual matters to their children. There should be an improvement in the social welfare services to families such as the poverty alleviation programme by the Government, in order to empower parents to meet the needs of their children thus preventing undue exposure to sex for more.

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