

EFFECTS OF SOCIAL SKILLS TRAINING ON ABUSE OF CONTRACEPTIVES AND ABORTION AMONG IN-SCHOOL FEMALE ADOLESCENTS IN OWERRI NORTH, IMO STATE, NIGERIA

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ABSTRACT

This study investigated the effects of Social Skills Training (SST) on abuse of contraceptive and illegal abortion among in-school female adolescents in Owerri North, Imo State, Nigeria. The study specifically determined whether students assigned to experimental and control groups significantly differ in abuse of contraceptives and illegal abortion behaviours before and after exposure to SST. Adopting a pretest-posttest experimental control research design, the study used a true experimental research design. The population consisted of fifty-two Senior School two students in Owerri North Area's public secondary school identified as having high levels of sexual risk-taking activities. Forty-six in-school female teenagers were sampled using simple random sampling procedures and purposeful sampling (control group = 23 and experimental group = 23). The students signed the consent forms and participated in the study with the consent of the parents and the school authority. Sexual Risk- Taking Behaviour Screening Questionnaire (SRTBSQ, $r = 0.84$) and Female Adolescents Risk-Taking Behaviour Questionnaire (FARTBQ, $\alpha = 0.72$) were used for data collection. Both content and construct validity were established for the instrument. Both pre- and post-tests were administered to the participants in both groups. For eight weeks, the experimental group got SST in sixteen sessions, whereas the control group also received regular English language instruction for eight weeks. The t-test for independent samples was used to test the hypotheses, and descriptive statistics (mean and standard deviation) were employed to answer the study questions. The results indicated that the in-school adolescents in both the experimental and control groups had high level of abuse of contraceptives and illegal abortion at baseline, but improve for the experimental group after exposure to SST. There was a significant

difference between the experimental and control groups on posttest mean scores of abuses of contraceptives and illegal abortion behaviours at $p = 0.000$. The study inferred that SST significantly reduced abuse of contraceptives and illegal abortion behaviours. The study recommended for inclusion of SST into teaching strategies in the secondary school curriculum.

Keywords: Social Skills Training, Sexual Risk-taking Behaviours, Abuse, Contraceptives, Abortion, In-school Female Adolescents.

INTRODUCTION

Involvement in both sexual behaviour and sexual risk-taking behaviour are worldwide acts, but the rates vary across countries and stages of development. Sexual risk-taking behaviour tends to be more heightened among the adolescent students. It is the highest risk-taking behaviours which is associated with negative health consequences such as Sexually Transmitted Infections (STIs) like chlamydia, gonorrhoea, syphilis, Human Immunodeficiency Virus (HIV) and unintended pregnancies (Hirschfield, 2019). The World Health Organization (WHO, 2018), estimated that 70% of premature deaths among adolescents are largely due to risky sexual behaviour associated with premature sexual behaviour. Most of these sexual risk-taking behaviours among adolescents could be attributed to illicit dressing pattern, substance use, poverty, low socio-economic status, exposure to social media, peer pressure, and need to explore identity.

Several forms of sexual risk-taking behaviours are common among adolescents. Notable among these behaviours are unprotected sex, abuse of contraceptive, illegal abortion, passionate kissing, premarital sex, and multiple sex partners (Guttmacher Institute, 2018; Sylvester et al., 2020). Also prevailing, are oral to anal stimulations, hand to genital stimulation, and fondling. However, abuse of contraceptives and illegal abortion seem to be highly practiced in Nigeria and Africa at large. Adolescents are at high risk of abusing contraceptive and illegal abortion behaviours, which can lead to reproductive health problems and unsafe abortion (UNICEF, 2020). Most of the contraceptives are, either misused, overused or underused by adolescents. According to UNICEF (2020), more than half of the youths hardly use condom during sexual intercourse. The statistics further showed that 84% female compared to 57% male hardly use condom.

Abuse of contraceptives is the illegal use of contraceptives such as pills and other substances against the medical prescription. It is an unsafe sexual practice that could have both psychological and emotional implications on teenagers. Although, the use of contraceptives has positive outcomes on the individual, when abused, they can affect the female individual in the future when the need to give birth arises (Barlow, 2017). It has been observed that most of the problems associated with infertility come from indiscriminate use of contraceptives (Obiyan, Olaleye, Ijadunola & Folayan, 2025). Quite worrisome, abuse of contraceptives manifest among female adolescent students, hence some of them, take them outside wedlock without proper prescription for the purpose of preventing unwanted pregnancies. Such practices may lead to ill-health and eventually, school dropout among adolescents. Olayinka (2016) examined adolescents' knowledge, attitude and utilization of emergency contraceptive pills in Niger Delta Region, Nigeria. The result of the findings showed that majority of the

respondents had high level of knowledge and positive attitude towards emergency contraceptives pills and high level of utilization was observed.

Empirical evidences about the knowledge, abuse or use of contraceptives are reported. Barakat (2021) studied the knowledge and belief about the use and abuse of oral contraceptive pill among male using a mixed method explanatory sequential study in the community pharmacy setting of Jordan. The finding showed that abuse of body performance or appearance enhancing drugs by males has been increasing all over the world, which mostly affects organ and secretion of hormones. Asaolu, Kram, Ajala, Aquaisua, Asaolu, Kato-Lagumbay, and Ehiri (2021) observed that there exists limited contraceptive knowledge among university students. Whereas, insufficient use of contraceptives contributes to high adolescent pregnancy, abuse results to related complication and untimely death (Nebechukwu, Igwe, Nwokeoma, Ajuzie, Iwuamadi, Ezike, & Madukwe, 2022). Obiyan, Olaleye, Ijadunola and Folayan (2025) found that awareness and use of modern contraceptives varied among sexually active individuals. The use of condoms, oral pills, and emergency contraceptives were high, while knowledge of IUDs, female condoms, and injectables was limited. Sexual activity was often viewed as normal, for fun, affection, or survival.

Another risk-taking behaviour in which adolescents are involved include abortion. It is the termination of pregnancy that in most cases was unplanned for and normally carried out by people lacking the necessary medical skills or in an environment lacking minimal medical standards. This case has been observed in some female adolescent students. They engage in abortion because they got the pregnancy outside wedlock and would not want to keep it for fear of stigmatization and shame. Engaging in this behaviour can lead to drop out of school, shame, depression, suicidal tendency, and death of the in-school female adolescents (United Nations Educational, Scientific and Cultural Organizations - UNESCO, 2018). The incidence of safe abortion is prominent in countries with unrestrictive abortion laws. Guttmacher Institute 2018) reported that approximately 97% of unsafe abortions and nearly all abortion-related deaths occur in low-income and middle-income countries (LMICs) with Nigeria inclusive. In Africa, over three-quarters (75.6%) of the estimated annual 6.86 million abortions are being unsafe (Guttmacher Institute, 2018) and was found to be influenced by religious belief of students among other factors (Oyefabi, Nmadu & Yusuf, 2016). Annually, it was estimated that out of 19 million pregnancies that end with unsafe abortion globally, 5.7 million occurred in Low and middle-income countries. In Africa, 59 % of all unsafe abortions occur in women aged less than 25 years, and 90% live in countries with restrictive abortion laws (Kimbwereza, Nkya, Mboya, Njau, 2024).

Illegal abortion could be associated with serious health complication. Oyefabi, Nmadu and Yusuf (2016) in a descriptive cross-sectional design, examined the prevalence, perceptions, consequences, and determinants of induced abortion among students of Kaduna State University, Northwestern Nigeria. The result showed that the major post-aborted complication were vaginal bleeding and abdominal pain, inability to conceive and virginal discharge. Reasons for abortion have been explored by previous study. For example, Frederico, Michielsen, Arnaldo, and Decat (2018) examined the factors influencing abortion decision making among young women in Mozambique. Low degree of autonomy for women, limited availability of health facilities like abortion service, and lack of patient centeredness of health service triggered illegal abortion. Kimbwereza, Nkya, Mboya and Njau (2024)

discovered that more than half adolescents had unfavourable attitudes towards abortion and most of the abortion was from unplanned pregnancies. However, effective social intervention was reported promising on abortion (Godana, Garoma, Ayers & Abera, 2023; Jepsen, Healy, Bernard, Markert & Brzank, 2024)

Attempts are made to curtail sexual-risky behaviours among young individuals. Some of which include distribution of contraceptives such as condom among students in schools by the government and non-governmental organisations, introduction of sex education programmes and mass media awareness. Yet, sexual risk-taking behaviours like abuse of contraceptives and illegal abortion are on the increase among adolescents, particularly in Nigeria. Social Skill Training could help reduce the high rate of abuse of contraceptive and illegal abortion due to its effectiveness on other sexual risk-taking behaviours (Ezeogu, Anakwe & Bahago, 2024). Social Skills Training was developed by Del, Prette and Del Prette (2015) as an intervention procedure involving various structured activities aimed at improving learning and or developing social skills and, thus, maintain or improve the relationship between the person and their counterparts (family, friends, teachers and romantic partners). It is a wide range of interventions and instructional methods used to help an individual understand and improve social skills to avoid challenging behaviours. It is also an intervention designed for preventing sexual behaviour and pregnancy among teenagers (Houghton, 2019). SST provides declarative and procedural knowledge, motivation, ability to select among multiple behavioural response options, and at a most basic level, the ability to enact a particular social behaviour (Ayodele, 2018) that could reduce risks such as abuse of contraceptives and illegal abortion.

The efficacy of SST on psychological issues has been tested. Kopelowicz, Liberman, and Zarate (2018) reported that SST was effective in treating psychological problems as most other therapeutic techniques that are in vogue. Furthermore, SST was also developed to help reduce unwanted pregnancy and to reduce the spread of sexually transmitted diseases (Guadalupe, 2020). Kolb and Hanley-Maxwell (2020) found that SST enabled students to initiate and maintain positive social relationships with their peers, teachers, family, and other community member and help them to solve emotional and behavioural difficulties. The use of SST would improve teaching and solving dilemmas like sexual risk-taking behaviours and how to overcome pressure that pushed such behaviour. It will expose adolescents to decision-making techniques and connection between thoughts, feelings and behaviour to know how to react to circumstances and events associated with abuse of contraceptives and illegal abortion. When effectively carried out, it might help in-school female adolescents to think rationally about causes and potential outcome of illicit taking of contraceptives and dangers associated with illegal abortion. In addition, SST could provide training on cognitive skill, counselling and ability to deal with negative thoughts and beliefs about the abuse of contraceptive and illegal abortion (Ahmadi, 2020). Leite, Yates, Strigelli, Han, Chen-Charles, Rotaru and Toska (2025) reported that effective sexual programmes were often implemented in combined interventions, and included life skills, community conversations, mass media and digital programmes with Norm's components. Social skills if acquired through training would help in-school female adolescents to think rationally about causes and consequences of illegal abortion and abuse of contraceptives.

Evidently, Shakari, Afsanehsadat and Eskandari (2019) conducted a study on the effects of social skill training on self-efficacy assertiveness in Iran. The results revealed that there was a significant difference between the two groups based on assertive scores. Mesele, et al. (2023) investigated the level and determinants of knowledge, attitude, and practice of risky sexual behaviour among adolescents in Harar, Ethiopia. Result indicated that reasonable number of participants had good knowledge of risky sexual behaviour, had a positive attitude toward risky sexual behaviour, but had started sexual activity before they reached 18 years old. Kimbwereza, Nkya, Mboya and Njau (2024) found no significant difference in the level of knowledge on induced abortion among study participants. Whereas, the unfavourable attitude towards induced abortion observed is mostly influenced by cultural and religious factors. Two main reasons for induced abortion were fear of termination from school and fear of parents' reactions. Leite et al. (2025) in a scoping review reported effectiveness of sexual interventions on sexual risk behaviours, contraception and family planning among others, and that Norm's interventions can improve contraceptive use. Also, Barriuso-Ortega, Fernandez-Hawrylak and Heras-Sevilla (2024) found that social programmes improved negative attitudes towards sexuality and use of condoms. Whereas Esmaeilzadeh, Lagan and Inuwa (2025), results, suggest a statistically significant difference between the pre-test and post-test on sexual risky behaviours, pre and post-test scores for the pleasure associated with condom use, showed a non-statistically significant difference.

The review of studies above suggested gaps in the application of SST to reduce abuse of contraceptive and illegal abortion among in-school female adolescents. Addressing the gaps would be beneficial for both theory and policy development. Students and scholars would gain insight about the efficacy and application of SST on sexual risk-taking behaviours. Policy developers would be guided on integration of SST into secondary school curriculum as strategies for teaching sex education. Therefore, the present study was undertaken to address the lacuna and achieve the significance to stakeholders.

Aim and Objectives of the Study

The aim of this study is to investigate the effects of Social Skills Training on abuse of contraceptives and abortion among in-school female adolescents in Owerri North Area, Imo State, Nigeria. Specifically, the objectives of the study are to:

1. To ascertain the abuse of contraceptives' mean scores among in-school female adolescents in the experimental and control groups before and after Social Skill Training.
2. To ascertain the extent of illegal abortion behaviours mean scores among in-school female adolescents that are randomised into the experimental and control groups before and after Social Skill Training in Owerri North Area, Imo State Nigeria.

Research Questions

The following questions were posed and answered to guide the study.

1. What are the pre-test and post-test abuse of contraceptives mean scores of in-school female adolescents in the experimental and control groups?
2. What are the pre-test and post-test illegal abortion mean scores of in-school female adolescents in the experimental and control groups?

Hypotheses

The following hypotheses are formulated and tested at 0.05 level of significance

1. There is no significant difference between abuse of contraceptive post-test mean scores of in-school female adolescents in the experimental and control groups.
2. There is no significant difference between the illegal abortion post-test mean scores of in-school female adolescents in the experimental and control groups.

METHODS AND PROCEDURES

Research Design

The study employed true experimental design, particularly, pretest-posttest experimental control research design. McCombes (2021) posited that this design enables a researcher to draw causal inference and observe whether an independent variable lead to change in another variable known as dependent variable.

Population and Sample

In this study, 84 senior secondary two in-school female adolescents screened to have high sexual risk-taking behaviours in one public secondary school in Owerri North Area of Imo State, Nigeria. Purposive and simple random sampling techniques were used for selecting the sample. In selecting the sample, 74 in-school female adolescent (SS2) were drawn from one public government secondary schools in Owerri North. Students that were sampled included those who identified with high sexual risk-taking behaviours scores of 13 - 25 on the Sexual Risk-taking Behaviour Screening Questionnaire (SRTBSQ) and they consented to participate in the study their parents and school authority's consent.

Instruments and Data Collection

An adapted instrument from Sexual Behaviour questionnaire (Payne & Barnett, 2017) known as Sexual Risk-Taking Behaviour Screening Questionnaire (SRTBSQ, stability coefficient = 0.84) was use to screened the students eligible for the study. This had 25 items measuring general sexual risk-taking behaviours. Example, "I like watching pornography with opposite sex" The Female Adolescents Risk-Taking Behaviour Questionnaire (FARTBQ, $\alpha = 0.72$) which was meant to collect information on abuse of contraceptives and illegal abortion was divided into section "A" that consisted of bio data of the participants such as enrolment number for identification. Section "B" consisted of 12 items that focused on abuse of contraceptives (six items) and illegal abortion (six items also). Participants were expected to select the option based on five points rating scale as: Strongly Agree = 5; Agree = 4; Undecided = 3; Disagree = 2; Strongly Disagree = 1.

The Head of the Department of Educational Foundations at the University of Jos Faculty of Education provided the researchers with an introductory letter. Following that, the researchers employed the school's instructors as research assistants after training them. The in-school female adolescents were assessed for risk-taking behaviour with the help of research assistants. Students who met the eligibility requirements signed the consent form and were randomly assigned to experimental group ($n = 37$) and the control group ($n = 37$). FARTBQ was used for both the pretest and posttest. Each participant had forty minutes to finish the questionnaire and submit it to the researchers or one of the research assistants.

Administration of Treatment

The researchers and research assistants exclusively gave the Social Skills Training (SST) to the experimental group of female adolescents. The SST focused on teaching specific skills to decrease identified sexually harmful behaviours in women, including unprotected sex, multiple sex partners, premarital sex, illegal abortion, and contraception abuse. The sixteen sessions of the treatment, two per week, were finished in eight weeks. Each session had duration of forty minutes. The SST took the shape of dialogue and awareness. The first session was in week one and covered general introduction of the package while session two focused on information about adolescent sexuality. Session three and session four were in week two. While the third session addressed sexual risk behaviour and its repercussions, the fourth session concentrated on role-playing and conversation about certain sexual risk-taking behaviours. In Week 3, sessions five and six focused on teaching self-regulation. The topic of self-evaluation and self-concept was brought up. Week four was when the seventh and eighth sessions took place. Goal setting was the focus of session eight this week, whereas goal setting and program planning were covered in session seven. This session looked at goal-setting definitions, types, significance, and steps.

Additionally, awareness in week five concentrated on using goal-setting in real-world situations. Participants completed the worksheet from sessions nine and ten at this session. Week 6 included sessions eleven and twelve. The focus was on enhancing goal-setting abilities to decrease sexually risky behaviour. Session 13 and 14 of week seven, covered phase one decision-making. While session 14 discussed factors that influence decision making, session 13 concentrated on the definition of decision making. Furthermore, the decision-making orientation persisted into week eight. In session 15, the decision-making model was discussed, while in session 16, the conclusion and post-test administration were noted. The entire SST program was reviewed in this last session, and students who finished all of the sessions received rewards and amusement.

Placebo for the Control Group

Two of the study assistants implemented a planned English language educational program for the control group. The plan called for 40 minutes of English language instruction per session, overseen by the researcher. Session one of the first week was an introduction, and session two was register instruction. Week two's third and fourth sessions carried on with the writing and vocabulary lessons, respectively. Week three saw the continuation of the writing instruction in session five, while speech (oral discussion) was the main focus of session six. For sessions seven and eight, the fourth week's lessons focused on formal letters and understanding, respectively. In week five, session ten focused on comprehension with the theme "Reading for evaluation (coping with drought)" whereas session nine taught structure (determiners). In addition, during sessions eleven and twelve of week six, adverbial and prepositional phrases were taught. Session 13 of week seven taught the participants animal husbandry language, and session 14 covered suffixes. Writing and vocabulary instruction took place in week eight, session 15. In contrast, week eight's session 16 concentrated on the conclusion and post-test administration.

Data Analysis

The mean and standard deviation were used to answer the study questions. Additionally, a t-test for independent samples was used to assess the hypotheses at the 0.05 level of

significance. The experimental and control groups' mean scores were compared using the t-test, which was suitable for identifying any significant differences between the two groups regarding illegal abortion and contraceptive abuse.

RESULTS

Table 1: Mean and Standard Deviation Scores of Pre and Posttest Abuse of Contraceptive Behaviour of In-school Female Adolescents in the Experimental and Control Group

Group	Pretest				Posttest			
	N	$\bar{x}$	SD	Remark	$\bar{x}$	SD	$\bar{X}$ Difference	Remark
Experimental	37	19.24	2.10	High	8.59	1.64	-10.65	Low
Control	37	19.65	1.83	High	19.74	1.72	0.09	High

NB: n = 46. Decision benchmark, $\bar{X} \leq 15.0$ = low, and $\bar{X} > 15.0$ = High for 6 items using 5-point scale.

Data in Table 1 shows that the pretest mean scores of experimental and control groups are at high threshold (19.24 and 19.65 and standard deviations of 2.10 and 1.83 respectively), while the post-test score of the experimental is low ($\bar{x} = 8.59$, SD = 1.64) but still high for control group ($\bar{x} = 19.74$, SD = 1.72). The mean differences for pretest and posttest scores of students in the experimental and control groups are -10.65 and 0.09 respectively. This suggests that students had high abuse of contraceptive behaviour before SST but later reduced due to exposure to SST.

Table 2: t-test Analysis on Post-Test Abuse of Contraceptive Mean Scores of In-School Female Adolescents in the Experimental and Control Groups

Group	n	$\bar{x}$	SD	Mean Diff.	df	t	p	Remark
Experimental	37	8.59	1.64	-11.15	72	-27.36	.000	Rejected
Control	37	19.74	1.72					

Note: n = 46. P < .05

Finding in Table 2 shows that at 72 degree of freedom, the abuse of contraceptive behaviour posttest means scores of students assigned to the experimental group ($\bar{x} = 8.59$, SD = 1.64) is less than those in the control group ($\bar{x} = 19.74$, SD = 1.72). Therefore, the p-value of 0.000 is less than the level of significance ($p < .05$). Consequently, there is significant difference between the abuse of contraceptive behaviour posttest mean scores of students in the experimental and control groups, $t(72) = -27.36$, $p < 0.05$ (mean difference = -11.15). It suggests that SST significantly decreased abuse of contraceptive behaviour among in-school female adolescents.

Table 3: Mean and Standard Deviation Scores of Pre and Posttest Illegal Abortion Behaviour of In-school Female Adolescents in the Experimental and Control Group

Group	Pretest				Posttest			
	n	$\bar{x}$	SD	Remark	$\bar{x}$	SD	$\bar{X}$ Difference	Remark
Experimental	37	19.22	2.16	High	8.76	3.21	-10.46	Low
Control	37	19.30	1.70	High	19.40	1.65	0.1	High

NB: n = 74. Decision benchmark, $\bar{x} \leq 15.0$ = low, and $\bar{x} > 15.0$ = High for 6 items using 5-point scale.

Result in Table 3 reveals the pretest mean and standard deviation scores of experimental and control groups are high ($\bar{x}$ = 19.22, SD = 2.16 and $\bar{x}$ = 19.30, SD = 1.70). The posttest mean score is low for experimental group ($\bar{x}$ = 8.76, SD = 3.21) and remain high for control group $\bar{x}$ = 19.40, SD = 1.65), with mean loss of 10.46 and gain of 0.1 for experimental and control groups respectively. It signifies that student before the treatment; they had high illegal abortion behaviour but later lowered as a result of Social Skills Training.

Table 4: t-test Analysis on Post-Test Illegal Abortion Behaviour Mean Scores of In-School Female Adolescents in the Experimental and Control Groups

Group	n	$\bar{x}$	SD	Mean Diff.	df	t	P	Remark
Experimental	37	8.76	3.21	-10.64	72	-17.66	.000	Rejected
Control	37	19.40	1.70					

Note: n = 74. P < .05

Table 4 indicates that the illegal abortion behaviour posttest means scores of students in the experimental group ($\bar{x}$ = 8.76, SD = 3.21) is lower than those in the control groups ($\bar{x}$ = 19.40, SD = 1.70) at 72 degrees of freedom. The p-value of 0.000 is less than the level of significance (α < .05). As such, there is significant difference between the illegal abortion behaviour posttest mean scores of students in the experimental and control groups, $t(72) = -17.66$, $p < 0.05$ (mean difference = -10.64). This implies that SST significantly reduced illegal abortion behaviour of in-school female adolescents in Owerri North Area of Imo State, Nigeria.

DISCUSSION

This study investigated the effects of social skills training on abuse of contraceptives and illegal abortion among in-school female adolescents in Owerri North, Imo State, Nigeria. The findings revealed that in-school female adolescents had high abuse of contraceptive behaviour before SST, but later reduced due to SST exposure. Ajay (2018) showed that many students had sex without condom and took pills before having sex. Before the social skills training, the in-school female adolescent students used female condom, took pills most often to prevent pregnancy, and derive pleasure in the use of condoms during sex. Obiyan et al. (2025) found that the use of condoms, oral pills, and emergency contraceptives were high, among young female. When the students received SST, they no longer prefer any contraceptive packs, use of pills, or the use of injectable birth control method to prevent unwanted pregnancy.

In the test of hypothesis, the result also revealed significant difference between the abuse of contraceptive behaviour posttest mean scores of students in the experimental and control groups. That is, SST significantly decreased abuse of contraceptive behaviour of in-school female adolescents. Nebechukwu (2021) observed insufficient use of contraceptive among adolescent due to school-based sex education. In another corroborating study, Leite et al. (2025) reported effectiveness of sexual interventions on illicit contraceptive use. Adolescents who were trained in school-linked life skills, were confident to make safe and informed decisions, and had life skills to deal with Sexual Risk-taking Behaviour issues were significantly correlated with predicting the relevant life skills. In-school female adolescents who would make good decision and become assertive as a result of social skills training would decline their attitudes on the use of contraceptives.

Result also reveal that in-school female adolescent students before the treatment had high rates of abortion behaviour but later lowered as a result of SST. Kimbwereza et al. (2024) found no significant difference in the level of knowledge on induced abortion among study participants. Although the previous study focused on induced abortion, illegal abortion tendency was reduced through SST. After receiving SST, some of the in-school adolescent students reversed their decision to take alcohol, pills or other substances when they would realize they are pregnant. In addition, Adegboyega's (2016) findings also showed that religious belief of students significantly influenced the practice of induced abortion. Contrary to present finding, Kimbwereza et al. (2024) discovered that more than half adolescents examined had unfavourable attitudes towards abortion, but most of the abortion was from unplanned pregnancies. Such differential findings could be linked to research approach and choice of variables. The in-school female adolescent students admitted that, despite the implications on their studies, they would not terminate their pregnancies to avoid embarrassment and continue studies.

A hypothesis testing also indicated significant difference between the abortion behaviour posttest mean scores of students in the experimental and control groups. Social Skills Training significantly reduced illegal abortion behaviour among the in-school adolescent students. Similarly, Godana et al. (2023) discovered that the proportion of mean life skills score was significantly higher in the intervention clusters than controls. Social Skills Training significantly reduced illegal abortion behaviour of adolescent students. Additionally, Jepsen et al. (2024) assessed the efficacy of therapy on the patterns of sexual risk behaviours and sexuality-related risk factors and found that the therapy was effective in reducing risky patterns (including illegal abortion), and a higher numbers of sexual partners. Therefore, prevention and treatment of risk-taking behaviour is important to address sexuality-related feelings of shame or guilt and illegal abortion among in-school adolescents.

CONCLUSION

The study explored the effective of SST on abuse of contraceptives and illegal abortion among in-school female adolescents. It can be inferred from the findings that in-school female adolescents tend to engage in abuse of contraceptives and illegal abortion especially when they had no SST. When they are exposed to SST, the level of abuse of contraceptives and illegal abortion reduced. The decline in these sexual risky behaviours was significant among the female adolescents due to SST. Students who would be trained on social skills would likely avoid abuse of contraceptives and illicit abortion compared to those who would not be exposed to the SST.

RECOMMENDATIONS

Based on the findings of the study, the following recommendations are made:

1. In-school female adolescents should embrace and practice SST regarding their sexual life styles.
2. Teachers of secondary schools need to be updated with SST knowledge and integrate it with teaching strategies. This may help students perceive and avoid the consequential outcomes of sexual risk-taking behaviours.
3. Education policy makers should consider the inclusion of SST as a strategy for awareness against sexual risk-taking behaviours among in-school female adolescents.

4. Secondary schools should be supported through adequate funds by government of Nigeria, where schools can use the funds for personnel training (such as workshop, seminar, and conference) on the use of SST to curtail or discourage unprotected and premarital sexual behaviours.

REFERENCES

- Ahmadi, M. S. (2020). The effect of communicating skills with the religious approach on student's self-esteem and mental health. *Scientific Journal of Zanjan University of Medical Sciences*, 22(90), 13-22.
- Asaolu, I., Kram, N., Ajala, C., Aquaisua, E., Asaolu, A., Kato-Lagumbay, K., Abuh, A., Bernand, M. & Ehiri, J. (2021). Antibiotics can work as a contraceptive:" Contraceptive knowledge and use among university students in Calabar, Nigeria. *Frontiers in Reproductive Health*. 3. 665653. 10.3389/frph.2021.665653
- Barakat, M., Akour, A., Al-Qudah, R., Abu-Asal, M., Thiab, S., & Dallal Bashi Y. H., (2021). Knowledge and beliefs about the use/abuse of oral contraceptive pills among males: A mixed-method explanatory sequential study in community pharmacy settings. *PLOS ONE* 16 (5), 45-67
- Barlow, D. H. (2017). Assessment of sexual behaviour. In A. R. Ciminero, K. S. Calhoun and H. E. Adams (Eds.). *Handbook of behavioural assessment* (pp. 461–508). New York: Wiley.
- Barriuso-Ortega, S., Fernandez-Hawrylak, M., & Heras-Sevilla, D. (2024). Sex education in adolescence: A systematic review of programmes and meta-analysis. *Children and Youth Services Review*, 166 (2024), 107926
- Del Prette, A., & Del Prette, Z. A. P. (2015). *Inventário de habilidades sociais para adolescentes (IHSADelPrette): Manual de aplicação, apuração e interpretação*. São Paulo: Casa do Psicólogo
- Esmailzadeh S, Lagan LL, & Inuwa A. (2025). The effect of sexual health education on men's attitudes towards condom use among youth group in Jos, Nigeria. *Cyprus Journal of Medical Science*, 10(2), 136-142
- Ezeogu, C.C., Anakwe, A.A., & Bahago, B.A. (2024). Effects of social skills training on unprotected and premarital risk-taking sexual behaviour among in-school female adolescents in Owerri municipal education zone, Imo state, Nigeria. *European Journal of Science, Innovation and Technology*, 4(5), 73-84
- Frederico M. Michielsen K., Arnaldo C. & Decat P. (2018). Factors influencing abortion decision-making processes among young women. *Int J Environ Res Public Health*, 15(2), 329-324. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC 5858 398/#>
- Godana, G., Garoma, S., Ayers, N. & Abera, M. (2023). Effect of a school-linked life skills intervention on adolescents' sexual and reproductive health skills in Guji zone, Ethiopia (CRT) - A generalized linear model. *Front. Public Health*, 11, 1203376. doi: 10.3389/fpubh. 2023.1203376
- Guadalupe, F. (2020). *Social skills training for autistic children: A comparison study between inclusion and mainstreaming education*. California Lutheran University. *Social Work and Social Sciences Review*, 1(9), 16 –18.
- Guttmacher Institute (2018). *Adding it up: investing in contraception and maternal and newborn health, 2017*. Guttmacher Institute. Retrieved February 15th, 2022, from <https://www.guttmacher.org/sites/default/files/factsheet/adding-it-up-contraception-mnh-2017.pdf>

- Hirschfeild, M. (2019). *Human sexual behaviour*. *Archives for sexology*. Retrieved 6th may 2020 from mhtml : file:// G:\ Human sexual behaviour.
- Houghton, M. (2019). *The American heritage dictionary of the English language*. Houghton: Mifflin Company
- Jepsen, D., Healy, K.V., Bernard, M., Markert, J., & Brzank, P.J. (2024). Patterns of sexual risk behaviors and sexuality-related risk factors among young adults in Germany: Implications for prevention and therapy. *Archives of Sexual Behavior*, 53, 2671–2688 <https://doi.org/10.1007/s10508-024-02877-7>
- Kimbwereza, F.A., Nkya, J.S., Mboya, A.L., Njau, B. (2024). Knowledge, attitudes, and practice of abortion among adolescent female students in selected secondary schools in Moshi municipality, Kilimanjaro region. *Tanzania Journal of Health Research*, 25(1), 555-530 <https://dx.doi.org/10.4314/thrb.v25i1.5>
- Kolb, S. M., & Hanley-Maxwell, C. (2020). Critical social skills for adolescents with high incidence disabilities: Parental perspective. *Exceptional Children*, 69(2), 20 – 33.
- Kopelowicz, A., Liberman, R. P., & Zarate, R. (2018). Recent advances in social skills training for schizophrenia. *Schizophrenia Bulletin*, 3(2), 12 – 23.
- Leite, L., Yates, R., Strigelli, G.C., Han, J.Y.C., Chen-Charles, J., Rotaru, M., & Toska, E. (2025). Scoping review of social norms interventions to reduce violence and improve SRHR outcomes among adolescents and young people in sub-Saharan Africa. *Frontier Reproductive Health*, 7, 1592696. doi: 10.3389/frph. 2025.1592696
- McCombes, S. (2021). *Research design. A step-by-step guide with examples*. Retrieved 6/7/2023 from <https://www.scribbr.com/methodology/research-design/>
- Mesele, J., Alemayehu, A., Demisse, A., Yusuf, M., Abubeker, F., Ahmed, M. & Jemal, A. (2023). Level and determinants of knowledge, attitude, and practice of risky sexual behavior among adolescents in Harar, Ethiopia. *SAGE Open Medicine*, 11, 1–9 DOI: 10.1177/ 20503121221145539
- Obiyan, M.O., Olaleye, A.O., Ijadunola, M.Y.. & Folayan, M.O. (2025). The body cannot be cheated: Sexual practices and modern contraceptive use among street-involved young people in two South West States in Nigeria. *African Academy of Sciences (AAS) Open Research*, 4, 41 <https://doi.org/10.12688/aasopenres.13241.2>
- Olayinka, A.O. (2016). Adolescents' Knowledge's Attitude and Utilization of Emergency Contraceptive Pills in Nigeria's Niger Delta Region. *International journal of maternal child health and AIDs*, 5(1), 53 – 60.
- Oyefabi, A.O., Nmadu, A.G., & Yusuf, M.S. (2016). Prevalence, perceptions, consequences, and determinants of induced abortion among students of the Kaduna State University, Northwestern Nigeria. *Journal of Medicine in the Tropics*, 18(2), 86-92. DOI: 10.4103/2276-7096.192230
- Shakeri, M. L., Afsanehsadat, M., & Eskandari, M. (2019). The effectiveness and social skills training on self-assertiveness and academic self-efficacy of dyslexic students. *International Journal of Academic Research in Psychology*, 2(1). Retrieved January 1st, 2020 from www.ccsenet.org/ass.
- Sylvester E, U., Adewuyi, H.O., Falaye, A.O., Adegoke, S.A. & Akorede, R.N. (2020). Sexual promiscuity among students in tertiary institutions: Interrogating the roles of peer influence, parenting processes, social economic status and social media. *World Journal of Advanced Research and Reviews*, 20(02), 132–143.
- UNESCO. (2018). *International technical guidance on sexuality education*. In UNESCO (2nd ed.). Retrieved on 4th May 2019 from: <https://doi.org/10.1523/JNEUROSCI.0529>.

- UNICEF. (2020). *Adolescent demographics*. Retrieved from <https://data.unicef.org/topic/adolescents/demographics>.
- WHO (2018). *Adolescents: health risks and solutions*. Retrieved 15th April, 2022 from <https://www.who.int/news-room/fact-sheets/detail/adolescents-health-risks-and-solutions>