# Effects of Psycho-Education on Substance Abuse-Literacy among Secondary School Students in Nigeria

Abstract

**Background:** The increasing rate of substance abuse and its adverse effects on physical and psychosocial health is a public health concern affecting adolescents. Psychoeducation has shown to be an effective treatment intervention in psychotherapy and patient education. This study aimed to assess the effects of psychoeducation on substance abuse-literacy among secondary school students in Nigeria.

**Methods:** A school-based cross sectional quasi-experimental design (pre and post test study) was adopted for this study and conducted in Ogbomoso North local government area. Four hundred (400) questionnaires were distributed for pre-test and post-test assessments of substance abuse literacy after psychoeducation program. Data obtained were subjected to statistical analysis and results were presented in frequency, percentage and charts, and hypotheses were tested using Chi-Square test and level of significance was at a P<0.05.

**Results:** The results showed that the prevalence of alcohol use was 38.5%, and 46.8% for other types of substances with tramadol being most abused. Peer and parental influences were the major causes of substance abuse. There was significant increase (P=0.000) in the substance abuse literacy as seen in the students’ post-test assessment mean percentage score (78.09%) after psychoeducation program when compared with pre-test assessment mean percentage score (50.78%). Chi-square test of hypotheses showed that psycho- education program had significant effect (P=0.000) on students’ substance abuse literacy.

**Conclusion:** There was significant effect of psychoeducation on substance abuse-literacy among secondary school students.

**Keywords:** Adolescent, Substance Abuse, Psychoeducation, Substance Abuse Literacy

# INTRODUCTION

It has been shown that about 15.3million people globally suffer from substance use disorder.1 Annually, millions of young people aged 10-24years die in the world because of preventable causes such as substance abuse.2 The increasing rate of substance abuse and its adverse effects on the physical and psychosocial health is a public health concern affecting adolescents in Nigeria. This is drastically affecting the youthful population in secondary schools, thereby, reducing their effectiveness, wasting their lives, and posing serious threats to the family and the society at the age which they are most needed.3

As reported by Singh *et al.4* it is appalling that the age of initiation of substance abuse is progressively falling at an alarming rate as this alters normal development, expose adolescents to the risk of physical, emotional and mental health problems, resulting in poor school performance, violence, juvenile justice system involvement, and increased risk of developing an addictive disorder in adulthood, thereby, turn many families apart, destroyed lives, corrupted societal values and prevented many youths from fulfilling their hopes and aspirations.5

Several evaluations of information-based drug awareness and prevention programmes incorporated into psychoeducation to assess the knowledge, perception and attitude as well as to enhance substance abuse literacy among secondary school students have been reported by different authors.3-7 In spite of all public awareness programmes, campaigns and education about the dangers of substance abuse, most of the secondary school students continue to engage in this dangerous practice. Hence, these potentially lifelong consequences make addressing substance abuse and enhancing substance abuse literacy through psychoeducation among adolescents, especially, secondary school students, an urgent matter.

However, the effects of psycho-education on substance abuse-literacy during adolescence remains seemingly unexplored. Hence, this study sought to assess the effects of psychoeducation on substance abuse, as both preventive and intervention strategy, among secondary school students in Nigeria.

# METHODOLOGY

## Research Design

This study employed a school-based cross sectional quasi-experimental design to assess the effects of psycho-education on substance abuse- literacy among secondary school students of some selected schools in Ogbomoso North Local Government Area of Oyo State Nigeria.

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## Sample Size Determination

The sample size of the study was determined using Fisher’s formula; the sample size for this study was 384 students from all the selected secondary schools. However, 400 students were eventually included in the study to make up for attrition and non- response rate.

## Sampling Technique

Convenience sampling technique was used for this study due to the nature of chosen subjects and to ensure their availability throughout the study period. This type of non-probability sampling technique permits the use of students that would be available for the research.

## Instrumentation

The data for this study was collected using self-structured questionnaires. The questionnaire elicits the aim and objectives of the study especially on questions on the students’ knowledge and perception about substance abuse and effect of psychoeducation on substance abuse-literacy, using Likert Scale. The questionnaire was structured as follows.

*Section I:* Socio-demographic Characteristics of respondents – this included age, gender, class, religion, ethnicity, family background, living status, educational level and occupations of parents, educational sponsorship, and history of substance abuse.

*Section II:* Prevalence of substance abuse – this section contained questions on type of substances abused, frequency, who introduced them to substance abuse, reasons and perceived problems arising from substance abuse.

*Section III*: Students' knowledge on substance abuse; definition, types, causes and reasons – this contained questions to assess students’ literacy on substance, types commonly abused, causes and reasons for substance abuse.

*Section IV:* Students' knowledge on signs and symptoms, health effects and other implications of substance abuse – this contained questions to assess students’ literacy on various implications and effects of substance abuse as well as signs and symptoms exhibited by substance abuse Section V: Students’ knowledge on cognitive restructuring and intervention strategies for substance abusers – this contained assessment on how to help substance abusers, cognitive and moral re-integration.

**Score Interpretation:** The total score was 30 marks. Each correct answer was awarded with one.

(1) score while incorrect answers were given zero (0) score. Knowledge score was graded as follows; 0**-**10marks (0-33%) – Inadequate Knowledge (Poor); 11-20marks (37%-67%) – Moderately Adequate Knowledge (Fair) and 21-30marks (70% and above) – Adequate Knowledge (Good).

## Data Collection

For this study, a questionnaire was constructed as both pre-test and post-test tool. With the help of some teachers assigned by school authorities for collection of data, pre-test questionnaires were distributed to the students to assess their knowledge on substance abuse prior to the commencement of the psychoeducation programmes on substance abuse literacy. The data collection took five (5) weeks for the schools used for the study. Each week for a school, two days was set apart for the collection of the data by the principals of the schools. A day was to distribute and collect data for Pretest while the second day was to give psychoeducation session and a post- test evaluation carried out with the same tool used in pre-test assessment, to assess the effectiveness of psychoeducation.

## Study Procedure

The procedure was structured into stages according to El Nagar and Hamed (2018) into the following:

* + - 1. Preparatory stage: The preliminary stage was done by utilizing the assessment tools after being revised and tested for general information about substance abuse.
      2. Planning stage: Based on the outcome acquired from the assessment phase, educational sessions with intervention tools was created after reviewing related literature. Needs, requirements and deficiencies in knowledge and negative attitude and wrong perception regarding addiction and abusers was detected and converted into aim and objectives of the health and psychoeducational sessions.
      3. Implementation stage: This stage was divided into two (2) sessions. The length of every session was distinctive according to students' response, time accessible, and the content of each session. The study spanned through a period of 4-6weeks for pre-test assessments, psychoeducational programmes and post-test evaluations. These included;

## *Session 1 (duration: 1hour): teaching outlines;*

* + - * + Health education about substance abuse, types, their actions, mode of use, side effects and complications, information about hazards of every substance, ways of addiction, difference between tolerance, addiction, habituation and dependence.

## *Session 2 (duration: 1 hour): teaching outlines;*

* + - * + Psychoeducation on implications of substance abuse on mental health, physical health, education/academics and social life.
        + Identification of signs and symptoms of substance abuse and addiction
        + Cognitive restructuring of false perception and negative attitudes through written emotional disclosure of students towards abusers such as, fear, guilt, sadness etc. and brainstorming about whether the abusers are victims (need help) or devils that need to be avoided.
        + Questions and answers on substance abuse
      1. Evaluation stage: Evaluation of the effect of health and psycho educational sessions was done quickly after their implementation by contrasting the change in students' level of knowledge, and attitudes and perception through administering questionnaires as post-test assessments.

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## Data Analysis

Data obtained was analyzed using Statistical Package for Social Sciences (SPSS version 23). The results were presented using frequency tables, graphs and charts, and the hypothesis was analyzed using Chi-Square test. Statistical significance was determined at P<0.05.

# RESULTS

Most of the study participants (204, 51.0%) were students between age 16-18years, with more female secondary school students (236, 59%) and 368 (92.0%) were in Senior classes (S.S.S.1-3). Also, 287 (71.8%) of the participants were from monogamous families while the living status of participants showed that 315 (78.8%) of the participants lived with both parents. Based on parents’ educational qualifications and occupations, most of the participants’ fathers (200, 50.0%) and mothers (194, 48.5%) had secondary education and were majorly business owners (187, 46.8%) and 293 (73.3%) respectively. Educational sponsorship of participants showed that 308 (77.0%) were sponsored by both parents.

Also, 212 (53%) of the participants had history of substance abuse in the family, while 188 (47.0%) had no history of substance abuse.

**Table 1: Socio-demographic Characteristics of Study Participants**

|  |  |  |  |
| --- | --- | --- | --- |
| Variables | Classifications | Frequency | Percent |
| Age | 10-12years | 7 | 1.8 |
|  | 13-15years | 150 | 37.5 |
|  | 16-18years | 204 | 51.0 |
|  | >18years | 39 | 9.8 |
| Gender | Male | 164 | 41.0 |
|  | Female | 236 | 59.0 |
| Class | J.S.S.1-3 | 32 | 8.0 |
|  | S.S.1-3 | 368 | 92.0 |
| Religion | Christianity | 215 | 53.8 |
|  | Islam | 179 | 44.8 |
|  | Traditional | 6 | 1.5 |
| Ethnicity | Yoruba | 371 | 92.8 |
|  | Igbo | 8 | 2.0 |
|  | Hausa | 18 | 4.5 |
|  | Others | 3 | 0.8 |
| Family Background | Monogamous | 287 | 71.8 |
|  | Polygamous | 113 | 28.3 |
| Parental Marital Status | Married | 353 | 88.3 |
|  | Separated/Divorced | 47 | 11.8 |
| Living Status | Both parents | 315 | 78.8 |
|  | Father only | 18 | 4.5 |
|  | Mother only | 48 | 12.0 |
|  | Siblings/Relatives | 17 | 4.3 |
|  | Staying alone/with friends | 2 | 0.5 |

Table 2 shows that 154 (38.5%) of the participants affirmed to taking alcohol/alcoholic drinks, 49 (12.3%) of the participants had used/abused caffeine, 71 (17.8%) had used/abused tramadol, 40 (10.0%) had used/abused codeine, 27 (6.8%) had used/abused marijuana or cigarette while 213 (53.3%) had never used/abused any substance.

## Table 2: Participants’ Response to Types of Substance Abused

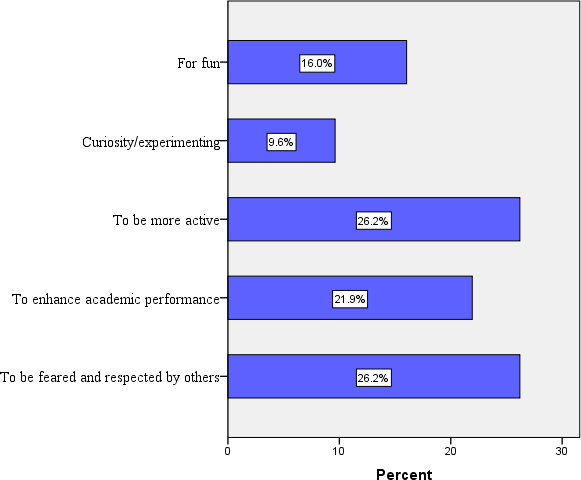
|  |  |  |
| --- | --- | --- |
| Substance | Frequency | Percent |
| Alcohol | 154 | 38.5 |
| Caffeine | 49 | 12.3 |
| Tramadol | 71 | 17.8 |
| Codeine | 40 | 10.0 |
| Marijuana/Cigarette | 27 | 6.8 |
| None | 213 | 53.3 |

Table 3 shows out of the participants that had used/abused substances, 48 (25.7%) were introduced to substance abuse due to parental influence, 105 (56.1%) by friends, 24 (12.8%) by siblings/relatives and 10 (5.3%) by nobody.

## Table 3: Participants’ Response to Who Introduced them to Substance Use/Abuse

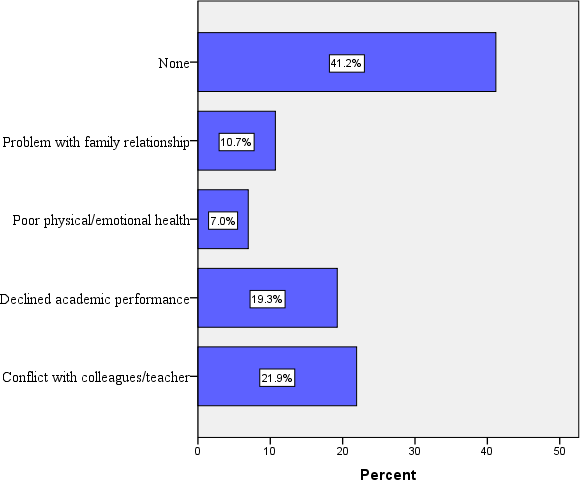
|  |  |  |
| --- | --- | --- |
|  | Frequency | Percent |
| Parental Influence | 48 | 25.7 |
| Friends | 105 | 56.1 |
| Siblings/Relatives | 24 | 12.8 |
| Nobody | 10 | 5.3 |

The perceived reasons for, and effects of substance abuse shows that 30 (16.0%) of the participants that abuse substance did it for fun, 18 (9.6%) due to curiosity/experimenting, 49 (26.2%) abuse substance to be more active, 41 (21.9%) abuse substance to enhance academic performance, and 49 (26.2%) abuse substance to be feared and respected by others. Figure 1.



## Figure 1: Bar Chart of Participants’ Response to Reasons for Substance Use/Abuse

## Figure 2 shows the perceived problems arising from substance abuse among participants that abuse substance. 77 (41.2%) had no problem with substance abuse, 20 (10.7%) had problem with family relationship, 13 (7.0%) had poor physical/emotional health, 36 (19.3%) had decline in academic performance while 41 (21.9%) had conflict with teachers/colleagues.



**Figure 2: Bar Chart of Participants’ Response Perceived Problem arising from Substance use.**

The mean pretest score of participants’ knowledge on substance abuse; definition, types, causes and reasons (Section III) was 7.68±2.11, knowledge on signs and symptoms, health effects and other implications (Section IV) was 3.24±1.62 and knowledge on cognitive restructuring and intervention strategies (Section V) was 4.32±1.03. The mean pre-test assessment score was 15.23±3.60 with percentage score of 50.78%±11.99%.

The mean post test score of participants’ knowledge on substance abuse; definition, types, causes and reasons (Section III) was 11.66±1.60, knowledge on signs and symptoms, health effects and other implications (Section IV) was 5.52±0.74 and knowledge on cognitive restructuring and intervention strategies (Section V) was 6.25±0.86. The mean post-test assessment score was 23.43±2.94 with percentage score of 78.09%±8.29%.

Table 4 showed the comparison between participants’ pre-test and post-test assessment mean scores in each section using paired t-test. There was significant increase in mean scores of all sections of the post-test assessment when compared with the pre-test assessment.

## Table 4: Comparison of Pre-test and Post-test Assessment Score

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | N | Pre-test Score | Post-test Score | Correlation | t | Df | Sig. (2 tailed) |
| Knowledge on Substance Abuse; Definition, Types,  Causes and Reasons | 400 | 7.68±2.11 | 11.66±1.60 | 0.794 | -61.97 | 399 | 0.000 |
| Knowledge on signs and symptoms, health effects and other  implications | 400 | 3.24±1.62 | 5.52±0.74 | 0.652 | -35.88 | 399 | 0.000 |
| Knowledge on cognitive restructuring and intervention  strategies | 400 | 4.32±1.03 | 6.25±0.86 | 0.440 | -38.17 | 399 | 0.000 |

**Discussion**

The prevalence of substance abuse among secondary school students in Ogbomoso North Local Government Area of Oyo State was assessed in this study. Findings showed that 38.5% of students had taken or take alcohol/alcoholic drinks while 46.8% had used/abused other types of substance, with tramadol being the most abused substance. This result is consistent with previous studies by Idowu *et al.2* who reported that quarter of the students under study had ever consumed alcohol or alcoholic drinks and most of the drug abusers used tramadol, hence, alcohol and tramadol has been considered as the most abused substances among Nigerian adolescents and youths in recent times. Furthermore, Aguocha and Nwefor8 attributed the prevalence of alcohol abuse to availability and acceptability in the society, as well as the euphoric feeling associated with tramadol use, hence, the reason why most of the students who abuser substances were ready to take if available.

Findings showed that most of the students that abused substances were introduced to it by friends and parental influence. This study corroborates previous Singh *et al.*4 findings, in which peer and familial influences were the most important factors that drive adolescents to substance abuse. According to Johnson *et al.9* peer influence precipitates substance abuse which is regarded as a criterion to belong and to be accepted by peers and which are also regarded critical instruments of socialization and establishment of standards of behaviour.1 Also, the powerful influence of family on shaping the values and behaviours of the adolescents might be corrupted when use of substance is common in the family (among parents or siblings), hence, the students might have likely imitated the habits and behaviours of their parents or siblings.

This study showed a worrisome result in that most of the students that abuse substances believe that they had no problem arising from substance abuse. This result agrees with other reported findings10-13 that most of the respondents did not believe any complication could arise from their substance use habit. Although, other students reported conflict with teachers and declined academic performance, hence, substance abuse has shown to lower commitment to education, declining grades, increased potential for dropout and high truancy rate and interrelationship breakdown.9

A pre-test assessment finding showed that the mean percentage score of the students was 50.78%, which showed that the students had moderately adequate knowledge about substance abuse, while the post-test assessment had a significant increase (P=0.000) in mean percentage score with 78.09%, which showed that the students had adequate knowledge. This result corroborates with previous studies7,14 who reported highly significant difference between pre- and post-test knowledge scores at p<0.001. This significant increase may be attributed to the effectiveness of the psychoeducation programme on substance abuse and its health consequences.

The study showed that there was a significant effect of psychoeducation on substance abuse literacy among secondary school students. This result is consistent with previous studies3,6 who reported statistically significant improvement in the level of knowledge after intervention, with p<0.001.

## Conclusion

Psychoeducation resulted in significant improvement in the substance abuse literacy of study participants as shown in the significant increase in post- intervention assessment scores when compared with pre-intervention assessment scores.

**Ethical Approval and Consent:**

Letter of introduction and ethical approval was obtained from the Department of Nursing Science, Ladoke Akintola University of Technology, Ogbomoso Nigeria. Informed consent was obtained from all participants and from the parents or legal guardians of minors.

**Disclaimer (Artificial intelligence)**

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc.) and text-to-image generators have been used during the writing or editing of this manuscript.

**References**

1. Alabi, A.D., Runsewe-Abiodun, T.I., & Ogunowo, K.K. (2020). Perception of Substance Abuse Amongst Adolescents and Young Adults in Ikenne Local Government, Ogun State, Nigeria. *International Quarterly of Community Health Education.* 0(0) 1–5.
2. Idowu, A., Aremu, A. O., Olumide, A., & Ogunlaja, A. O. (2018). Substance abuse among students in selected secondary schools of an urban community of Oyo state, South-West, Nigeria: Implication for policy action. *African Health Sciences*. 18(3):776–785.
3. Elkazh, E.A., & El Mahdy, N.H.F. (2017). Knowledge and attitude of the secondary school and college students about drug abuse and participation in prevention programs in Tanta city, Egypt. *International Journal of Nursing Didactics*. 7:11.
4. Singh, J., Mehta, S., & Mathur, R.G. (2018). Effectiveness Of An Educational Package On “Prevention Of Substance Abuse on Knowledge, Attitude And Practice Of Girls In Selected Colleges Of Delhi. *Indian Journal of Psychiatric Nursing.* 15(2).
5. Bivin, J.B., & Riaz, K.M. (2017). Assessment of Substance Abuse among Teenagers: Review of Instruments Commonly Used in Healthcare and Research. *AJNER.* 7(2): 2231-1149.
6. EL Nagar, S.A., and Warda El shahat Hamed (2018). Substance Abuse as Perceived by Adolescents: A Preventive Approach for Their Safety. *American Journal of Nursing Research*. 6(5): 299-308. doi: 10.12691/ajnr-6-5-12.
7. Salih, F.F., & Noori, A.K. (2021). Effectiveness of an Educational Program on Knowledge of High School Students about Substance Abuse in Kirkuk City. *Iraqi National Journal of Nursing Specialties.* 34 (1).
8. Aguocha, C.M., & Nwefoh, E. (2021). Prevalence and correlates of substance use among undergraduates in a developing country. *Afri Health Sci*. 21(2). 875-883. <https://dx.doi.org/10.4314/ahs.v21i2.49>.
9. Johnson, O.E., Akpanekpo, E.I., Okonna, E.M., Adeboye, S.E., & Udoh, A.J. (2017). The Prevalence and Factors affecting Psychoactive Substance Use among Undergraduate Students in University of Uyo, Nigeria. *Journal of Community Medicine and Primary Health Care*. 29(2):11-22.
10. Sarkingobir, Y., & Dikko, M. (2020). Substance Abuse among In-School and Out-Of-School Youth in Sokoto, Northwestern, Nigeria. *J. Appl. Sci. Environ. Manage*. 24(9):1545-1550.
11. Soremekun, R.O., Omole, O.E., Adeyemi, O.C., & Oshatimi, A.M. (2021). Assessment of use of psychoactive and other non-prescription drugs among students of selected tertiary institutions in Ekiti State South West Nigeria - A baseline study. *Heliyon* 7 (2021) e06232. [https://doi.org/10.1016/j.heliyon.2021.e06232.](https://doi.org/10.1016/j.heliyon.2021.e06232)
12. Adesina, B.O., Adebayo, M.A., & Iken, O.F. (2020). Factors Associated with Psychoactive Substance Use among In-School Adolescents in Zaria Local Government Area, Kaduna State, Nigeria: A Cross-Sectional Study. *Int. J. School. Health*. 7(1):14-22.
13. Anyanwu, O.U., Ibekwe, R.C., & Ojinnaka, N.C. (2017). Psychosocial dysfunction among adolescents who abuse substances in secondary schools in Abakaliki, Nigeria. *Niger J Clin Pract*. 20:665-9.
14. Hansadah, T., & Sonalika, S. (2018). Health Awareness Programme on Knowledge Regarding Substance Abuse and its Consequences among Adolescents. *International Journal of Nursing and Medical Investigation.* 3(4):116-119.