



Research Article

Attitudes towards Cough Syrup Abuse: Results from Adolescents in two Southwest States of Nigeria

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Abstract

One area of substance abuse among adolescents that is currently a problem, and has not been fully understood in the Nigerian context is the attitudes of adolescents towards cough syrup abuse. Thus, to inform policy actions for reducing cough syrup abuse among Nigerian adolescents, this study explored the attitudes of adolescents towards cough syrup abuse in two Southwest states of Nigeria, where substance abuse is rampant. By a stratified sampling method, 302 adolescents (152 males, 150 females; mean age = 13.61 years, SD = 2.09) were selected from secondary schools in Lagos and Oyo states, Nigeria, and data were collected using existing questionnaires with strong psychometric properties, and the response rate was 97.42%. Four (4) hypotheses were stated and tested using independent sample t-test and correlation statistics at $p < 0.05$. The findings from the study concluded that, adolescents' age and family marital structure were the variables found that significantly accounted for their attitudes towards cough syrup abuse, thus it is imperative enough that as adolescents are growing older, they are rightly guided against giving into substance abuse. Also, parents/caregivers of adolescents need to be actively involved in educating adolescents on the hazards associated with substance abuse.

Keywords

Adolescents; Cough Syrup Abuse; Lagos State; Oyo State; Southwest, Nigeria

Introduction

The abuse of substances has become among the major high-risk behaviors of adolescents across cultures in present day, with adolescents abusing substances such as cough syrup, cannabis, alcohol, etc. The willingness of adolescents to be involved in substance abuse is influenced by numerous variables as identified in literature. However, Nigerian literature on substance abuse among adolescents stresses the need for further studies on the attitudes of adolescents towards cough syrup abuse, because the pattern of similarities or differences in the attitudes of Nigerian adolescents towards cough syrup abuse remains insufficiently explored, despite increasing reports of cough syrup abuse by Nigerian adolescents and adults (United Nations Office on Drugs and Crime, 2019). Furthermore, Nigerian literature on substance abuse

among adolescents showed that most previous studies mirrored the similarities or differences in the attitudes of adolescents towards general substance abuse or substances other than cough syrup, consequently such studies are weak enough to inform intervention programs against the increasing practice of cough syrup abuse that is currently threatening the fabric of Nigeria's society [1-13].

These different studies have identified certain variables accounting for adolescents' similarities or differences in attitudes towards general substance abuse or substances other than cough syrup, for instance, Oshikoya et al. [1] determined in a survey that knowledge about general drug abuse was a major determinant of substance abuse behaviors among undergraduate students in Lagos, Nigeria. Aina et al. [2] found that gender was a predictor of substance abuse behaviors, with males being more likely than females to report favorable attitudes towards general substance abuse. Also, Adebowale et al. [3] found in a survey that, knowledge about general drug abuse and attitude towards general drug abuse contributes towards the likelihood that adolescents will give into drug abuse. Abdu-Raheem et al. [4] determined that adolescent's family background, peer influence, and family cohesion significantly explained attitudes towards general substance abuse among adolescents in Ekiti and Ondo state, Nigeria.

Furthermore, Idowu et al. [12] found in a survey carried out in Ogbomoso, Southwest Nigeria, that most adolescent participants were substance abusers, with tramadol as their major abused substance; in addition it was found that the perceived benefits associated with tramadol abuse contributed immensely towards the participants' attitude to tramadol abuse. Also, Adenugba et al. [13] reported in a study that Nigerian females have several high-risk behaviors in relation to general substance abuse. Olumide et al. [5] found in a sample of adolescents that cigarettes, alcohol and marijuana are the common substances abused, with males abusing higher compared to their female counterparts.

Also, Ani et al. [7] found in a research that, the attitude of adolescents towards general substance abuse was influenced by factors such as parents' educational levels and, household structure, meaning that adolescents in that study differed in their attitude towards substance abuse according to differences in their parents' educational levels and household structures. In a sample of adolescents in Kaduna state, Nigeria, it was found that adolescents from monogamous family structure abused substances more than adolescents from other family structures [11].

Furthermore, Nasiru et al. [8] reported in a sample of youths in Sokoto state that, marijuana and cocaine were the main abused drugs, and this abuse was strengthened by the physical and psychological effects of using these substances. Anyanwu et al. [9] found in a sample of adolescents in Ebonyi state, that males, older students, orphans and persons from divorced homes were amongst the most frequent substance abusers with alcohol as their most abused substance. In a different study, Johnson et al. [10] identified the contributing factors to adults and adolescents substance abuse behaviors as peer group influence, stress, curiosity, perceived benefits, gender (with females using substance than males), age, intrafamily relationship, and family member substance abuse use. Furthermore, Johnson et al. [10] recommended that an exploration of the impact of the identified contributing factors on attitudes towards other substances is required for expanding literature on substance abuse among adolescents.

Away from Nigeria, literature shows that cough syrup abuse is a problem among but not limited to the general black populace [14]. Further instances given as that, Shek [15] reported from a Chinese sample that the perceptions that adolescents held about cough syrup propelled their abuse of cough syrup. In another observation, Bryner, et al. [16] found in a study of adolescents that the abuse of cough syrup increased with age.

Qingfeng, et al. [17] found in a survey that, the nonmedical use of cough syrup was on the high rate among adolescents, with urban living and parental monitoring as the major protective factors against the nonmedical use of cough syrup. Similarly, Kingston, Rose, Cohen-Serrins, and Knight, [18] found in a study that poor parental/caregiver guidance encourages increased substance abuse among adolescents. Saxena et al., [19] found in an Indian sample that male adolescents are highly involved in the use of substances compared to their female counterparts.

Also, Foo et al. [20] identified that the interplay of psychological and social factors is what predicts attitude towards nonmedical use of cough syrup. Thus, further studies may consider expanding knowledge of these psychosocial factors' interplay [20]. In addition, Nicholson et al. [21] found that although abuse of substance was high in a sample of U.S. black adults, there was no significant gender difference in substance abuse behaviors. Also, Peters et al. [22] reported in a sample of African-Americans that substance abuse was largely determined by age, with adolescents of lower age abusing higher than older adolescents.

In addition, Zaman et al. [23] found in a study of 500 adolescents, that males reported higher than females on substance abuse. Also, Ishak et al. [24] reported in a research that, among the major drugs abused by adolescents were codeine, with the likelihood of drug abuse increasing among older adolescents, also it was found that both male and females did not differ in their knowledge about the harmful effects of drug abuse. Differently, in a sample of adolescents in Abu, Dhabi, it was found that factors such as parent-adolescent relationship, peer pressure, substance accessibility, and religiosity were among the factors explaining differences in attitudes towards substance abuse [25]. A similar result was reported by Somani et al. [26] in a study that age, gender, family structure, and relations were predisposing factors for substance abuse among adolescents.

Research Problem

Substance abuse remains on the increase among Nigerian, and non-Nigerian adolescents, with cannabis, and cough syrup as the most frequently abused substances. In Nigeria, the Southwest zone has been shown to be among the geopolitical zones in Nigeria with the highest prevalence of substance abuse. This is a clear indication that most of the current anti-substance abuse programs that are implemented in Nigeria are not effective, and this may probably be as a result of the fact that the attitudes towards cough syrup abuse is yet to be exhaustibly studied.

Research Purpose

The observed shortage of Nigerian studies on the attitudes of adolescents towards cough syrup abuse necessitated this present study. Thus, the current study examined the attitudes of adolescents towards cough syrup abuse among adolescents in selected Southwest states of Nigeria. The choice for selecting Southwest Nigeria as the study setting was supported by findings from previous studies that have reported

rampant substance abuse behaviors among adolescents in Southwest areas of Nigeria. In addition, a very recent survey result released by the United Nations Office on Drugs and Crime showed that geographically, Southern political zones (South-East, South-West, & South-South) reported highest prevalence of substance abuse (cannabis & cough syrup) in Nigeria, compared to other geopolitical zones in the past year.

Significance of Study

As a result of the few or no related studies on the attitudes of adolescents towards cough syrup abuse in the Nigerian context, there are implications that there will be a lack of empirical information upon which policy making and public education around this area can rely on. Thus, as part of the relevance of the present study, it is expected that findings from this study will provide empirical information required for policy making and substance abuse education with a focus on the abuse of cough syrup.

Research Questions

With the intention to address the earlier mentioned research gaps and problems identified in literature review, the following research questions were developed, and translated into research hypotheses:

- What are the differences in attitudes towards cough syrup abuse between male and female adolescents in selected states in Southwest Nigeria?
- What is the influence of age on attitudes towards cough syrup abuse among adolescents in in selected states in Southwest Nigeria?
- What is the influence of adolescents' family marital structure on their attitudes towards cough syrup abuse among adolescents in selected states in Southwest Nigeria?
- To what extent will adolescents in selected Southwest states differ on their attitudes towards cough syrup abuse?

Research Hypotheses

The following hypotheses were stated:

- Male and female adolescents will significantly differ in their attitudes towards cough syrup abuse.
- There will be a significant relationship between adolescents' age and their attitudes towards cough syrup abuse.
- Adolescents' family marital structure will have significant influence on their attitudes towards cough syrup abuse.
- Adolescents in Lagos and Oyo states will significantly differ in their attitudes towards cough syrup abuse.

Methods

Participants/Setting

A cross-sectional survey design was employed for the present research, as the focus of the present research is to understand the attitude of adolescents towards cough syrup abuse in Southwest Nigeria. A total of 310 participants were sampled (i.e. 155 each in Oyo state and Lagos state respectively) using stratified sampling technique from selected secondary schools in Oyo and Lagos states (selected Southwest states) Nigeria. However, only 302 participants had their questionnaires completed.

The choice for selecting participants using the stratified sampling method lies in its ability to ensure equal representation of the subgroup features of adolescents. Descriptive statistics showed that 152 (50.3%) are males, while 150 (49.7%) are females, and the mean age was 13.61 years (SD=2.09). Further descriptive statistics showed that 154 (51.0%) were sampled from Oyo state, while 148 (49.0%) were sampled from Lagos state. The family marital structure of participants showed that all participants reported to either be from monogamous families (146, 48.3%) or polygamous families (156, 51.7%).

Materials

A consent form and questionnaire with already established psychometric properties were the major materials in this research. The questionnaire had two (2) sections, i.e. section A which focused on obtaining the demographic information of participants, and section B which was the attitude towards cough syrup scale, adopted from the attitude towards general substance abuse scale developed by the European Monitoring Centre for Drugs and Drug Addiction [27].

The total score for each participant on the scale is obtained by adding the score of each item answered and dividing it by the total number of items answered. The interpretation of scores on the scale has it that, high scores imply a positive attitude towards cough syrup abuse, while low scores imply a negative attitude towards cough syrup abuse among participants. This scale was found to have been previously adopted and yielded very strong psychometric properties in both African and non- African samples. For the present research, a reliability coefficient of 0.88 was obtained using Cronbach's alpha.

Procedure

Ethical approval for this research was obtained from the Faculty of the Social Sciences, University of Ibadan ethics committee, and approval was also sought from the management of each selected secondary school in this research. The data were collected during school hours to enable the researchers to access a large sample size. Before the collection of data, the purpose of the research was explained to participants, and informed consent was sought from participants, those that consented were given a consent form to sign on and administered the questionnaires. The administration of questionnaire was achieved in collaboration with the school teachers who were pre-trained for data collection and during administration of questionnaires, all participants were assured of the confidentiality of their responses so that they could be more sincere with their responses, and they all had the rights to decline the research request at any time that they wished. The process of data collection from participants lasted for about two (2) months, and at the end of data collection in each research setting, the participants and school management were assured of feedbacks on the findings from this research.

Data analysis

Data collected were analyzed using statistical package for social sciences (v. 22.0). Specifically t-test for independent samples and correlation statistics were used to test the research hypotheses at $p < 0.05$, whereas descriptive statistics were used to summarize the demographic details of study participants.

Results

Descriptive statistics from Table I showed that of the total study participants, 152 (50.3%) are males, while 150 (49.7%) are females. Further descriptive statistics showed that 154 (51.0%) were sampled from Oyo state, while 148 (49.0%) were sampled from Lagos state. The family marital structure of participants showed that all participants reported to either be from monogamous family (146, 48.3%) or polygamous family (156, 51.7%).

	N	%
Gender		
Male	152	50.3
Female	150	49.7
Southwest States		
Oyo state	154	51
Lagos state	148	49
Family Marital Structure		
Monogamous	146	48.3
Polygamous	156	51.7

Table 1: Summary of the demographic information of study participants.

Hypotheses Testing

Hypothesis 1

Hypothesis 1 was stated that, male and female adolescents will significantly differ in their attitudes towards cough syrup abuse. This was statistically tested using t-test for independent samples and presented below.

Groups	N	M	SD	Df	t	p
Male	152	1.86	0.89	300	-16.68	$p > 0.05$
Female	150	2.6	0.9			

Table 2: Independent sample t-test summary table showing the difference in attitude towards cough syrup abuse between male and female adolescents.

Results from Table 2 showed that there was no significant difference in attitudes towards cough syrup abuse between male and female adolescents ($t = -16.68$; $df = 300$; $P > .05$). Observations of mean scores showed that female adolescents (Mean = 2.60; SD = 0.90) reported higher positive attitudes towards cough syrup abuse than their male counterparts (Mean = 1.86; SD = 0.89), although the differences did not attain statistically significant levels. Thus, the stated hypothesis one is rejected in this study.

Hypothesis 2

Hypothesis 2 was stated that, there will be a significant relationship between adolescents' age and their attitudes towards cough syrup

abuse. This was statistically tested using Pearson product moment correlation, and presented below.

Variables	M	SD	Df	r	p
Age	13.61	2.09	300	0.21	p<0.01
Attitude towards cough	2.72	1.25			

Table 3: Pearson product-moment correlation summary table showing the relationship between age and attitude towards cough syrup abuse among adolescents.

The correlation result from Table 3 showed that, there is a significant positive relationship between age and attitudes towards cough syrup abuse among adolescents [$r = .21$; $df = 300$; $P < .01$]. A positive relationship in this result means that adolescents that score high on age will also score high on attitudes towards cough syrup abuse, while adolescents that score low on age will also score low on attitudes towards cough syrup abuse. Further statistics was used to determine the coefficient of determination, i.e. r^2 , and this was tested as $.212 = 0.0441$, which translates to 4.41% in percentage (%). Consequently, age is explaining 4.41% of attitudes towards cough syrup abuse among adolescents in this research. Thus, the stated hypothesis two is accepted in this research.

Hypothesis 3

Hypothesis 3 was stated that adolescents' family marital structure will have significant influence on their attitudes towards cough syrup abuse. This was statistically tested using t-test for independent samples, and the result was presented below

Groups	N	M	SD	Df	t	p
Monogamous	146	1.78	0.75	300	-18.98	p<0.05
Polygamous	156	3.62	0.93			

Table 4: Independent sample t-test summary table showing the difference in attitude towards cough syrup abuse between adolescents from monogamous and polygamous family structures.

Results from Table 4 showed that there was a significant difference in attitude towards cough syrup abuse, between adolescents from monogamous and polygamous family structures ($t=-18.98$; $df= 300$; $p<0.05$), with adolescents from polygamous family showing the higher mean score. Thus, the stated hypothesis three is accepted.

Due to the observed significance of the result, an effect size of the observed significance was determined using the point biserial correlation (r_{pb}), and the results showed that $r_{pb}=0.74$, (i.e. 74% in percentage). Hence, 74% of the variance of attitude towards cough syrup abuse among adolescents in this study depends on belonging to monogamous or polygamous family marital structure.

Hypothesis 4

Hypothesis 4, which stated that adolescents in Lagos and Oyo states will significantly differ in their attitudes towards cough syrup abuse, was statistically tested using t-test for independent samples, and the result was presented below.

Groups	N	M	SD	Df	t	p
Oyo state	154	2.73	1.26	300	0.03	p>0.05
Lagos state	148	2.72	1.25			

Table 4: Independent sample t-test summary table showing the difference in attitude towards cough syrup abuse between adolescents in Oyo state and Lagos state.

Results from Table 5 showed that there was no significant difference in attitude towards cough syrup abuse between adolescents in Oyo state and Lagos state ($t=0.03$; $df=300$; $p>0.05$). Observation of mean scores showed that adolescents in Oyo state (Mean=2.73; SD=1.26) reported higher positive attitudes towards cough syrup abuse than their counterparts in Lagos state (Mean=2.72; SD=1.25), however, the differences did not attain statistically significant levels. Thus, the stated hypothesis four is not retained in this study.

Discussion and Recommendation

This study explored the attitudes of adolescents in Southwest Nigeria towards cough syrup abuse. With the influence of literature review, four hypotheses were stated and tested. The first hypothesis stated that, male and female adolescents will significantly differ in their attitudes towards cough syrup abuse. However, the results showed that both male and female adolescents were not different in their attitudes towards cough syrup abuse. The observed non-significance of gender differences in attitudes towards cough syrup abuse may be explained by the increased knowledge that both males and females are gaining regarding substance abuse in present times. Thus, it is recommended that programs that strengthen the awareness of the dangers of substance abuse needs to be encouraged among adolescent male and females. The findings from the first hypothesis contradicted previous research that have found a significant gender difference in adolescents' attitudes towards general substance abuse or abuse of cough syrup [2,5,9,10,19,23]. On the other hand, the results from the first hypothesis was in consonance with previous research that have found no significant gender difference in substance abuse behaviors among adolescents [21].

The second hypothesis stated that there will be a significant relationship between adolescents' age and their attitudes towards cough syrup abuse. Results from the second hypothesis were in accordance with the stated hypothesis two in this research, with results showing a positive relationship. Meaning that the older adolescents were, the more positive their attitudes towards cough syrup abuse is, and vice versa. Hence, this finding buttresses the importance of ensuring that as adolescents are getting older, they are rightly guided against giving into substance abuse. The findings also suggest that anti-substance abuse programs should be designed to meet the needs of both younger and older adolescents. Furthermore, the observed significant positive relationship between adolescents' age and attitudes towards cough syrup abuse may be justified by the observations that as adolescents grow older, they tend to experiment and engage in high-risk behaviors than they did when they were younger. As found in literature, this result was in consonance with findings from previous research that have found a significant positive relationship between adolescents' age and their involvement in substance abuse [9,10,16,24]. Differently, there was an inconsistency in findings between results from the second hypothesis and literature, where adolescents of lower

age were more likely to abuse substances compared to older adolescents [22].

The third hypothesis stated that, adolescents' family marital structure will have significant influence on their attitudes towards cough syrup abuse. The results obtained confirmed the stated hypothesis four in this research. It showed that adolescents from polygamous families reported higher mean scores on attitudes towards cough syrup abuse compared to their counterparts from monogamous families, and point bi serial test showed an effect size of 74% from this statistical significance. This significance may be explained by the expectation that adolescents from polygamous families are very likely to experience less parental guidance compared to their counterparts from monogamous families that have higher probability of experiencing greater parental guidance from their parents/caregivers. This is because polygamous family structure may limit children from having close relationships with their parents/caregivers because of the multiple partners or children in the family. Thus, the strength of parental guidance or parent/caregiver-to-child relationship in the family setting can predict the likelihood that parents/caregivers of adolescents will be involved in guiding adolescents against high-risk behaviors. Therefore, it is recommended that parents/caregivers of adolescents need to be actively involved in educating adolescents on the risks involved with the abuse of substance.

Furthermore, the findings from the third hypothesis supported the findings from previous research that showed that features of adolescents' family backgrounds, and parental/caregivers' guidance influences adolescents' attitudes towards substance abuse and other forms of high-risk behaviors [4,7,10,17,18,20,25,26]. However, a contradiction was found between finding from the third hypothesis and previous research which reported that adolescents from monogamous families gave into substance abuse more compared to adolescents from other family structures [11]. Thus, it is imperative enough that public education against substance abuse are strongly implemented at grassroots levels for adolescents.

The fourth hypothesis stated that, adolescents in Lagos and Oyo states will significantly differ in their attitudes towards cough syrup abuse. However, results showed that adolescents in Lagos state and Oyo state were not different in their attitudes towards cough syrup abuse. This non-significant difference in attitudes towards cough syrup abuse between adolescents in Lagos and Oyo state may be accounted for by the observation that these adolescents were exposed to almost the same forms of anti-substance abuse programs that were facilitated by the State Ministry of Health, in collaboration with non-governmental organizations (NGOs). Beyond the influence anti-substance programs in these states, some forms of environmental similarities might have possibly accounted for the non-significant differences in attitudes towards cough syrup abuse between adolescents in Lagos and Oyo state. Hence, it is recommended that constant measures need to be in place for discouraging substance abuse among adolescents.

Strength and Weakness of Study

This study specifically studied the attitudes of adolescents towards cough syrup abuse, and this is a strong point because it is an added knowledge to related studies that were often focused on attitudes towards general substance abuse or substances different from cough syrup. This study was carried out in two selected Southwest states of Nigeria, where rampant abuse of substance is often reported, and this

is another strength because of the interventions that can be drawn out from the findings of this study for application to these selected Southwest states. On the other hand, a weakness of this research was that, the method of data collection in this study was a self-report one, thus it was possible that participants were unwilling to disclose their sincere attitudes towards cough syrup abuse for fear of their teachers. However, this was controlled for by ensuring that all questionnaires were filled without providing any personally identifiable information.

Conclusion

This study has been able to explore the attitudes towards cough syrup abuse among adolescents in parts of Nigeria, and this is a unique expansion to the literature of substance abuse among adolescents, because most related studies were either focused on the attitudes of adolescents towards general substance abuse or substances other than cough syrup. As observed in the findings from this research that age and family marital structure were the major variables accounting for the attitudes of adolescents towards cough syrup abuse, professionals in the field of child and adolescent mental health are thus encouraged to consider these variables when designing anti-substance abuse programs for the adolescent population. Further studies are required to determine the predisposing factors for abusing other specific substances that are largely lacking in literature, for the purpose of informing further approaches towards anti-substance abuse programs among adolescents.

Conflict of Interests

The authors declared that there were no conflict of interests arising in the process of this study.

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