ATTITUDE TOWARDS COUGH SYRUP ABUSE: A STUDY OF ADOLESCENTS IN SOUTHWEST NIGERIA.

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ABSTRACT

Background: *One area of substance abuse among adolescents that has not been fully understood in the Nigerian context is the attitude of adolescents towards cough syrup abuse, as most related studies were either focused on attitude towards general substance abuse or substances other than cough syrup.* ***Objective:*** *This research explored the attitudes of adolescents towards cough syrup abuse in Southwest Nigeria.* ***Methods:*** *By a stratified sampling method, 302 participants (152 males, 150 females; mean age = 13.61 years, SD = 2.09) were selected from secondary schools in Oyo state and Lagos state, Nigeria, and data were collected using standardized questionnaires. Guided by literature review, four hypotheses were stated and tested using t-test and correlation statistics.* ***Results:*** *Findings indicated that male and female adolescents did not significantly differ in their attitude towards cough syrup abuse ($t = -16.68$; $df = 300$; $P>.05$). Further results showed that, there was a significant positive relationship between adolescents' age and their attitude towards cough syrup abuse ($r = .21$; $df = 300$; $P< .01$). Another result showed that, adolescents from polygamous family reported significantly higher positive attitude towards cough syrup abuse than their counterparts from monogamous family ($t = -18.98$; $df = 300$; $P< .05$). The last finding showed that adolescents in Oyo state and Lagos state did not significantly differ in their attitude towards cough syrup abuse ($t = .03$; $df = 300$; $P>.05$).* ***Conclusion:*** *Adolescents' age and family marital structure are the variables found in this research that significantly accounts for their attitude 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.

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 codeine, 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 attitude of adolescents towards cough syrup abuse in Nigeria, meaning that the pattern of similarities or differences in the attitude of adolescents towards cough syrup abuse in the Nigerian context remains insufficiently explored, as most previous studies focused on the similarities or differences in the attitude of adolescents towards general substance abuse or substances other than cough syrup (e.g. Oshikoya & Alli, 2006; Aina, Oshodi, & Onajole, 2010; Adebowale, Oatona, Abiola, Oridota, Goodman & Onajole, 2013; Olumide, Robinson, Levy, Mashimbye, Brahmbhatt, Lian, Ojengbede, Sonenstein, & Blum, 2014; Akanbi, Godwin, Anyio, Muhammad & Ajiboye, 2015; Ani, 2015; Anyanwu, Ibekwe, & Ojinnaka, 2016; Johnson, Akpanekpo, Okonna, Adeboye & Udoh, 2017; Idowu, Aremu, Olumide, & Ogunlaja, 2018). These different studies have identified certain variables accounting for adolescents' similarities or differences in attitude towards general substance abuse or substances other than cough syrup, for instance Oshikoya and Alli, (2006) reported in a survey that knowledge about general drug abuse was poor among undergraduate students in Lagos Nigeria. Aina, Oshodi, and Onajole, (2010) found that males were more likely than females to report favorable attitudes towards general substance abuse. Also, Adebowale et al (2013) 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.

Furthermore, Idowu et al (2018) 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. Olumide, Robinson, Levy, Mashimbye, Brahmbhatt, Lian, Ojengbede, Sonenstein, and Blum, (2014) 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 (2015) 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. Anyanwu, Ibekwe, and Ojinnaka, 2016 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 (2017) 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, intra family relationship and family member substance abuse use. Furthermore, Johnson, et al (2017) recommended that an exploration of the impact of the identified contributing factors on attitude towards other substances is required for expanding literature on substance abuse among adolescents.

Apart from Nigeria, it may seem that cough syrup abuse is a problem among but not limited to the general black populace (e.g. Agnich, Stogner, Miller & Marcum, 2013). Further instances given as that, Shek (2012) reported from a Chinese sample that the perceptions that adolescents held about cough syrup propelled their abuse of cough syrup. In another observation, Bryner, Wang,

Hui, Bedodo, MacDougall, and Anderson, (2006) found in a study of adolescents that the abuse of cough syrup increased with age. Qingfeng, Jincong, Chengwu, Jiayan, Longyu, Hui, Shiwei, Jiang, Dong, Jiepin, Yanting, and Zengzhen (2016) found in a survey that, the nonmedical use of cough syrup was on the high rate, with urban living and parental monitoring as the major protective factors against the nonmedical use of cough syrup. Saxena, Saxena, Kishore, and Kumar, (2011) found in an Indian sample that male adolescents are highly involved in the use of substances compared to their female counterparts. Also, Foo, Tam and Lee (2012) identified that an 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 (Foo, et al. 2012).

Consequently, the observed shortage of Nigerian studies on the attitude of adolescents towards cough syrup abuse necessitated this present study. Hence, this study examined the attitudes of adolescents towards cough syrup abuse among adolescents in Southwest Nigeria. As a result of the few or no literature on the attitude of adolescents towards cough syrup abuse in the Nigerian context, there are implications that there will be a lack of empirical information for which policy making and public education around this area can rely on. Thus, as part of the relevance of the present research, empirical information required for policy making and substance abuse education on the focus of cough syrup abuse, can be accessed or available. With the intention to address the earlier mentioned research gaps, the following research questions were asked and answered in this research:

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

Research Hypotheses

As a result of the research questions asked in this research, the following hypotheses were stated and tested in this research:

1. Female adolescents will report significantly favorable attitude towards cough syrup abuse compared to their male counterparts.
2. There will be a significant positive relationship between adolescents' age and their attitude towards cough syrup abuse.
3. Adolescents from polygamous families will report significantly favorable attitude towards cough syrup abuse compared to their counterparts from monogamous families.
4. Adolescents in Lagos state will report significantly favorable attitude towards cough syrup abuse compared to their counterparts in Oyo state.

Methodology

Design

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.

Participants/Setting

A total of 310 participants were sampled (i.e. 155 each in Oyo state & Lagos state respectively) using stratified sampling method from selected secondary schools in two (2) states in Southwest Nigeria, specifically Oyo state, and Lagos state respectively. However, 302 participants had their questionnaire appropriately filled. The choice for selecting participants using the stratified sampling method lies in its ability to ensure equal representation of the sub-group 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 family (146, 48.3%) or polygamous family (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 (2004). 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 implies 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 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 treated with equal respects, they filled the questionnaire with an anonymous status, 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 in this research 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.

Hypotheses Testing

Hypothesis 1

Hypothesis 1 was stated that, female adolescents will report significantly favorable attitude towards cough syrup abuse compared to their male counterparts. This was statistically tested using t-test for independent samples and is presented below.

Table 1: Independent sample t- test summary table showing the difference on attitude towards cough syrup abuse between male and female adolescents

Groups	N	M	SD	Df	t	P
Male	152	1.86	0.89	300	-16.68	P>.05
Female	150	2.60	0.90			

Results from table 1 showed that there was no significant difference in attitude 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 positive relationship between adolescents' age and their attitude towards cough syrup abuse. This was statistically tested using pearson product moment correlation, and is presented below.

Table 2: Pearson product moment correlation summary table showing the relationship between age and attitude towards cough syrup abuse among adolescents

Variables	M	SD	Df	r	P
Age	13.61	2.09	300	0.21^{**}	P<.01
Attitude towards cough syrup abuse	2.72	1.25			

The correlation result from table 2 showed that, there is a significant positive relationship between age and attitude 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 attitude towards cough syrup abuse, while adolescents that score low on age will also score low on attitude towards cough syrup abuse. Further statistics was used to determine the coefficient of determination, i.e. r^2, and this was tested as $.21^2 = 0.0441$, converted to percentage (%) = 4.41%. The coefficient of determination showed that age is explaining 4.41% of attitude 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 from polygamous families will report significantly favorable attitude towards cough syrup abuse compared to their counterparts from monogamous families. This was statistically tested using t-test for independent samples, and the results are presented below.

Table 3: Independent sample t- test summary table showing the difference on attitude towards cough syrup abuse between adolescents from monogamous and polygamous family structures.

Groups	N	M	SD	Df	t	P
Monogamous	146	1.78	0.75	300	-18.98	P<.05
Polygamous	156	3.62	0.93			

Results from table 3 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< .05), with adolescents from polygamous family showing the higher mean score. Thus, the stated hypothesis three is accepted.

Due to the observed significance of result, an effect size of the observed significance was determined using the point biserial correlation (rpb), and the results showed that rpb = 0.74, converted to percentage (%) = 74%. Hence, 74% of the variance of attitude towards cough syrup abuse among adolescents depends on belonging to monogamous or polygamous family.

Hypothesis 4

Hypothesis 4, which stated that adolescents in Lagos state will report significantly favorable attitude towards cough syrup abuse compared to their counterparts in Oyo state was statistically tested using t-test for independent samples, and the results are presented below.

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

Groups	N	M	SD	Df	t	P
Oyo state	154	2.73	1.26	300	.03	P>.05
Lagos state	148	2.72	1.25			

Results from table 4 showed that there was no significant difference in attitude towards cough syrup abuse between adolescents in Oyo state and Lagos state (t = .03; df = 300; P>.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 rejected in this study.

Discussion And Recommendation

This study explored the attitudes of adolescents in Southwest Nigeria towards cough syrup abuse. Guided by literature review, four research questions which reflected the tested hypotheses have been asked and answered in this study. Therefore, the discussion of the results in this research are in accordance with the stated hypotheses in this research. The first hypothesis stated that, female adolescents will report significantly favorable attitude towards cough syrup abuse compared to their male counterparts. However, the results showed that both male and female adolescents were not different in their attitude towards cough syrup abuse. The findings from the first hypothesis contradicted previous research that have found a significant sex difference in adolescents' attitude towards general substance abuse or abuse of cough syrup (e.g. Aina, Oshodi, & Onajole, 2010; Johnson, et al 2017; Olumide, Robinson, Levy, et al. 2014; Anyanwu, Ibekwe, & Ojinnaka, 2016; Saxena, Saxena, Kishore, & Kumar, 2011).

The second hypothesis stated that there will be a significant positive relationship between adolescents' age and their attitude towards cough syrup abuse. Results from the second hypothesis were in accordance with the stated hypothesis two in this research. Meaning that the older adolescents were, the more positive their attitude towards cough syrup abuse is. Hence, this finding buttresses the importance of ensuring that as adolescents are getting older, they are rightly guided

against giving into substance abuse. This result was in consonance with findings from previous research that have found a significant influence of adolescents' age on their involvement in substance abuse (e.g. Johnson, et al 2017; Bryner, Wang, Hui, et al. 2006; Anyanwu, Ibekwe, & Ojinnaka, 2016).

The third hypothesis stated that, adolescents from polygamous families will report significantly favorable attitude towards cough syrup abuse compared to their counterparts from monogamous families. The results obtained confirmed the stated hypothesis four in this research. Meaning that adolescents from polygamous families reported higher mean scores on attitude 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. Thus, the strength of parental guidance 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 associated with substance abuse. The results from hypothesis four was consistent with previous research that have found that features of adolescents' family backgrounds influences their attitudes towards substance abuse and other forms of high-risk behaviors (e.g. Foo, Tam & Lee, 2012; Johnson et al 2017; Ani, 2015; Qingfeng, Jincong, Chengwu, Jiayan, Longyu, et al. 2016).

The fourth hypothesis stated that, adolescents in Lagos state will report significantly favorable attitude towards cough syrup abuse compared to their counterparts in Oyo state. However, results showed that adolescents in Lagos state and Oyo state were not different in their attitude towards cough syrup abuse. Hence, it is recommended that constant measures need to be in place for discouraging substance abuse among adolescents.

Limitation of Research

The method of data collection in this research was a self-report one, thus participants might be unwilling to disclose their sincere attitude towards cough syrup abuse for fear of their teachers. However, this was controlled for by ensuring that all questionnaires were filled with a status of anonymity.

Conclusion

This research has been able to explore the attitude towards cough syrup abuse among adolescents in parts of Nigeria, and this has a unique relevance to knowledge because most related studies were either focused on the attitude of adolescents towards general substance abuse or substances other than cough syrup abuse. As observed in the findings from this research that age and family marital structure were the major variables accounting for differences or similarities in the attitude 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.

Conflict of Interests

The researchers declared that there were no conflict of interests arising in the process of this research.

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