

Knowledge of Shisha-Aided Flavoured Tobacco Smoking, Health-Risk in Public Universities in Rivers State

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Abstract – The study investigated the knowledge of shisha-aided flavoured tobacco smoking, health-risk in public universities in Rivers State. It is a cross-sectional study carried out among undergraduate students in public universities in Rivers State with population of forty-seven thousand five hundred and seventeen (47,517), from the three (3) public universities in Rivers State, using a sample of one thousand undergraduate students drawn through a multi-stage sampling procedure. The instrument used for data collection were 30 items structured questionnaire titled “Knowledge of Shisha-aided Flavoured Tobacco Smoking (KSFTS) which has a reliability coefficient of 0.91 and focus group discussion. Data was analysed using frequency and percentage for the demographic characteristics, while mean and standard deviation were used to answer the research questions while chi-square and 2-way ANOVA was used to test the hypotheses at .05 alpha level of significance. The findings of the study revealed that the respondents have poor knowledge of shisha-aided flavoured tobacco smoking and its health-risks implication. Age had no significant influence on the respondents. The study concluded with the following recommendations that awareness should be created among students on the health-risks implications. On admission of students, during orientations, the universities authorities should marshal modalities to halt the use of shisha and all other forms of tobacco use.

Keywords – *Knowledge of health-risk of Shisha use, Demographic Variables, Public Universities in Rivers State.*

I. INTRODUCTION

Shisha-aided flavoured tobacco smoking has been recognized as a global public health problem, affecting all age group and is a global threat to life (Aslam, Saleem, German & Qureshi, 2014). Shisha is a device used in smoking flavoured tobacco and is still emerging with evidence that it poses health risks (Taylor-Hays, 2017). Another name for shisha is hookah. Shisha or hookah is a single or multi-stemmed instrument for vaporizing or smoking flavoured tobacco or sometimes cannabis or opium, whose vapor or smoke is passed through a water basin, often glass based before inhalation.

Shisha-aided flavoured tobacco smoking is a tobacco smoking method, which comprises of mix fruits or molasses sugar and it is put in a bowl and sucked through a hose with a mouth-piece attached to it (British Heart Foundation, 2016).

Globally, tobacco smoking is a preventable cause of morbidity and mortality across the world, but recently a new device popularly called shisha or hookah is used to smoke tobacco in various forms and is gradually gaining immense popularity (Kiran, Bhikhu & Nilesh, 2013). It is common in the Mediterranean area and gradually spreading to the western nations such as Australia, United Kingdom, Canada and United States of America and Southeast Asia, Malaysia because of the ubiquity, shisha-aided

flavoured tobacco smoking is a developing danger to general wellbeing and the reason is that there is a typical misinterpretation that shisha aided flavoured tobacco smoking poses lesser dangers than smoking tobacco cigarettes. Moreover, shisha users think that gurgling tobacco smoke through water makes it safer (Kandela, 2000).

Lately research demonstrated that filtering tobacco smoke through water does not make it more secure (Maziak, Eissenberg, Rastam, Hammal, Asfer, Bachir, Fovad & Ward, 2004). There is proof that shows that shisha-aided flavoured tobacco smoking is even more unsafe than tobacco cigarettes (Jukema, Bagnasco & Jukema, 2014). Shisha-aided flavoured tobacco smoking session last for sixty second equivalent to 100 – 200 sticks of cigarette mostly in a gathering and smokers breath in more smoke than tobacco cigarette smokers, besides, all individuals in the gathering will be presented with the danger of second-hand smoke. Shisha-aided flavoured tobacco and tobacco cigarette has been noted to be related with wide range of negative impacts like malignances, coronary illness, lung sickness and different type of diseases (Kadhum, Sweidan, Jaffery, Al-Saadi and Madden, 2013). Regular sharing of the water-pipe mouth-piece may likely result to transmission of transferable infections like; tuberculosis, hepatitis and numerous others.

Nigeria is not an exception, as the trend of shisha-aided flavoured tobacco smoking constitutes a big threat to life; it was on this note that the Minister of Health on the 5th June 2018 banned the use of shisha in public places at the 2018 World Tobacco Day because of its effect on human health. There are empirical evidences that for every one (1) dollar gain from tobacco export business; about three (3) dollar is expended on health cost (WHO, 2018). According to World Health Organisation (2018) Nigeria lost about 800 million dollars annually to stroke, heart diseases and 4.5 million young adult presently involved in shisha use.

Knowledge of shisha-aided flavoured tobacco smoking is seen as a social problem due to wrong perception that is not harmful and its just a social activity among young adults. Shisha use is very attractive due to its attractive flavours which depict ignorance and poor knowledge about its health-risks (Helmy, Farizah, Fatihad & Amer, 2015). There is evidence that nearly every organ in the body is affected by tobacco consumption (www.betterhealthchannel). Shisha users are unaware of its negative health implication and therefore continually indulge in the act amidst the threatening health risks it is associated with (WHO, 2008). It is against this background that the researcher sought to find out the knowledge of shisha-aided flavoured tobacco smoking health-risks in public universities in Rivers State.

II. STATEMENT OF THE PROBLEM

The increasing trend of shisha-aided flavoured tobacco smoking and its health-risk is an issue of concern. The users are unaware of the quantity of chemical compound in shisha-aided flavoured tobacco such as nicotine, carcinogen which triggers health challenges. Shisha-aided flavoured tobacco patronized in hotels, club houses, big restaurants and big shops, especially among youths in the universities who are ignorant of its deadly effects.

In Lagos, Abuja, Enugu and other big cities across the nation, shisha-aided flavoured tobacco is very much in vogue among youths and adults of different classes. In Port Harcourt, Rivers State this can be found in Five Star Hotels, Shops, Night Clubs and there is a pressure to free youths from this deadly shisha use. More worrisome the females are more attracted to this silent killer as it is believed it makes them sexy.

It is in view of this that the researcher investigated knowledge shisha-aided flavoured tobacco smoking health-risks in public universities in Rivers State.

Research Questions

To guide this study the following research questions were posed:

1. What is the knowledge of the health-risks associated with shisha-aided flavoured tobacco smoking among students in public universities in Rivers State based on Educational level?
2. What age group is more susceptible to shisha-aided flavoured tobacco smoking among students in public universities in Rivers State?

Hypotheses

The following null hypotheses were postulated to give guide to the study at .05 level of significance.

1. There is no significant difference in the knowledge of health risks associated with shisha-aided flavoured tobacco smoking among students in public universities in Rivers State based on educational level.
2. There is no significant difference in shisha-aided flavoured tobacco smoking among students in public universities in Rivers State based on age.

Methodology

A cross-sectional descriptive research survey design was adopted for the study. The population comprised all the undergraduates' students in the public universities in Rivers State consist of forty seven thousand, five hundred and seventeen (47,517), (Administrative Offices of the Institutions, 2018/2019). A multi-stage sampling procedure was used to obtain a sample size of one thousand (1,000) undergraduate students from the three public universities in Rivers State.

A self-structured questionnaire titled "Knowledge of Shisha-Aided Flavoured Tobacco Smoking (RSFTS) was used to collect data for the study. The questionnaire had two sections: Section A was used to collect the demographic data, while Section B was used to collect answers to the research variables. Instrument was validated by subjecting it to the scrutiny of five (5) experts in the Department of Human Kinetics and Health education, Faculty of Education, University of Port Harcourt for face and content validity. Their inputs ensured that the instrument was valid enough for the study. The test-retest method was used to determine the reliability of the instruments. It yielded an index of 0.91 using Pearson Product Moment Correlation Coefficient. Hypotheses were tested using chi-square and 2-way ANOVA at .05 level of significance.

III. RESULTS AND DISCUSSION

Presentation and Analysis of Data

Research Question: What is the knowledge of the health-risks associated with shisha-aided flavoured tobacco smoking among students in public universities in Rivers State based on educational level?

Table 1:1 Mean rating of the knowledge of the health-risks associated with shisha-aided flavoured tobacco smoking among students in public universities in Rivers State based on educational level?

knowledge	LEVEL 100		200 LEVEL		300 LEVEL		400 LEVEL		500 LEVEL	
	MEAN	SD	MEAN	SD	MEAN	SD	MEAN	SD	MEAN	SD
Shisha-aided flavoured tobacco smoking increases exposure of non-smoker to high concentration of smoke in the air.	0.83	0.38	0.79	0.41	0.79	0.41	0.79	0.41	0.78	0.42
Shisha-aided flavoured tobacco smoking increases the risk of lung cancer and mouth cancer.	0.88	0.33	0.75	0.44	0.83	0.38	0.85	0.36	0.59	0.50
Shisha-aided flavoured tobacco smoking can increase the risk of periodontal disease.	0.83	0.38	0.73	0.45	0.75	0.44	0.66	0.47	0.54	0.50
The charcoal used to heat up Shisha-aided flavoured tobacco smoking chamber emits dangerous chemical that affects health negatively.	0.83	0.38	0.75	0.44	0.79	0.41	0.86	0.35	0.59	0.50
Shisha-aided flavoured tobacco smoking can cause erectile dysfunction in males.	0.77	0.42	0.67	0.47	0.73	0.44	0.77	0.42	0.50	0.50

Shisha-aided flavoured tobacco smoking can result to low birth weight in females.	0.79	0.41	0.71	0.45	0.78	0.42	0.84	0.37	0.57	0.50
Use of Shisha-aided flavoured tobacco causes chronic bronchitis	0.80	0.40	0.69	0.46	0.72	0.45	0.69	0.46	0.59	0.50
Shisha-aided flavoured tobacco smoking can result to heart attack	0.80	0.40	0.70	0.46	0.78	0.42	0.82	0.39	0.59	0.50
Flavoured tobacco smoking is gaining popularity in Nigeria.	0.77	0.42	0.69	0.47	0.70	0.46	0.68	0.47	0.61	0.49
Shisha-aided flavoured tobacco smoking causes respiratory disease	0.85	0.36	0.72	0.45	0.76	0.43	0.84	0.37	0.61	0.49
Both smoking Shisha-aided flavoured tobacco smoking and being exposed to Shisha-aided flavoured tobacco smoking smoke causes short and long term health effect disease like brain damage	0.82	0.38	0.72	0.45	0.75	0.43	0.86	0.35	0.54	0.50
GRAND MEAN	0.82	0.25	0.72	0.28	0.76	0.27	0.79	0.25	0.59	0.27

The result on Table 1.1 shows the mean rating of the knowledge of Shisha-aided flavoured tobacco smoking-aided flavoured tobacco smoking among students in Public Universities in Rivers State based on Level. It shows that irrespective of the Level range of the students, the mean rating of the respondents over knowledge of Shisha-aided flavoured tobacco smoking-aided flavoured tobacco smoking in Public Universities in Rivers State was generally low. Specifically, those within the bracket of 100 Level had mean rating of 0.82, SD=0.25 whereas those fall with the Level 200 had mean rating of 0.72, SD=0.28, participants in Level 300 had mean rating of 0.76, SD=0.27 and also those that fall in with 400 Level had mean rating of 0.79, SD=0.25, and finally those that are in 500 Level had a mean rate of 0.59, 0.27

Research Question 2: What age group is most susceptible to Shisha-aided flavoured tobacco smoking among students in Public Universities in Rivers State?

Table 2:2 Mean rating of the knowledge of Shisha-aided flavoured tobacco smoking among students in Public Universities in Rivers State based on age

Knowledge	16-19 Years, n=246		20-23 Years, n=399		24-27 Years, n=207		28-31 Years n=118	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Shisha-aided flavoured tobacco smoking increases exposure of non-smoker to high concentration of smoke in the air.	0.83	0.38	0.80	0.40	0.80	0.40	0.78	0.42
Shisha-aided flavoured tobacco smoking increases the risk of lung cancer and mouth cancer.	0.83	0.39	0.82	0.38	0.83	0.38	0.77	0.42
Shisha-aided flavoured tobacco smoking can increase the risk of periodontal disease.	0.77	0.42	0.77	0.42	0.68	0.47	0.65	0.48
The charcoal used to heat up Shisha-aided flavoured tobacco smoking	0.79	0.41	0.80	0.40	0.81	0.39	0.75	0.43

chamber emits dangerous chemical that affects health negatively.								
Shisha-aided flavoured tobacco smoking can cause erectile dysfunction in males.	0.72	0.45	0.72	0.45	0.73	0.45	0.74	0.44
Shisha-aided flavoured tobacco smoking can result to low birth weight in females.	0.74	0.44	0.78	0.42	0.81	0.40	0.73	0.45
Use of Shisha-aided flavoured tobacco causes chronic bronchitis	0.72	0.45	0.75	0.43	0.71	0.46	0.66	0.48
Shisha-aided flavoured tobacco smoking can result to heart attack	0.72	0.45	0.79	0.41	0.77	0.42	0.75	0.43
Flavoured tobacco smoking is gaining popularity in Nigeria.	0.67	0.47	0.76	0.42	0.67	0.47	0.67	0.47
Shisha-aided flavoured tobacco smoking causes respiratory disease	0.74	0.44	0.80	0.40	0.80	0.40	0.80	0.40
Both smoking Shisha-aided flavoured tobacco smoking and being exposed to Shisha-aided flavoured tobacco smoking smoke causes short and long term health effect disease like brain damage	0.73	0.44	0.81	0.40	0.78	0.41	0.75	0.44
Grand mean	0.75	0.29	0.78	0.26	0.76	0.26	0.73	0.27

The result on Table 2.2 shows the mean rating of the knowledge of Shisha-aided flavoured tobacco smoking-aided flavoured tobacco smoking among students in Public Universities in Rivers State based on age. It shows that irrespective of the age range of the students, the mean rating of the respondents over knowledge of Shisha-aided flavoured tobacco smoking-aided flavoured tobacco smoking in Public Universities in Rivers State was generally low. Specifically, those within the age bracket of 16-19 years had mean rating of 0.75, SD=0.29 whereas those in the age bracket of 20-23 years had mean rating of 0.78, SD=0.26, participants in the age bracket of 24-27 years had mean rating of 0.76, SD=0.26 and students in the age bracket of 28-31 year had mean rating of 0.73, SD=0.27..

H₀₁: There is no significant difference in the knowledge of Shisha-aided flavoured tobacco smoking-aided flavoured tobacco smoking among students in Public Universities in Rivers state based on level.

Table 3:3 Summary of factorial design ANOVA on the difference in the knowledge of Shisha-aided flavoured tobacco smoking among students in Public Universities in Rivers state based on level

Demographics	Source	Sum of Squares	Df	Mean Square	F	Sig.	Decision
Level	Between Groups	2.879	4	.720	10.300	.000	Significant
	Within Groups	67.432	965	.070			
	Total	70.311	969				

The result on Table 3.3 shows the summary of one-Way ANOVA on the difference in the knowledge of Shisha-aided flavoured tobacco smoking-aided flavoured tobacco smoking among students in Public Universities in Rivers state based on level of study. It shows that level (F_{4, 969} = 10.3, p<.05) significant influence on the knowledge of Shisha-aided flavoured tobacco smoking-aided flavoured tobacco smoking among students in Public Universities in Rivers State, had no significant influence on it. The null hypothesis one was rejected at .05 level of significance

Table 3.3a. Sheffe's posthoc test of multiple comparisons on the difference in the knowledge of Shisha-aided flavoured tobacco smoking among students in Public Universities in Rivers state based on level

		95% Confidence Interval				
		Mean Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
(I) LEVEL						
100 LEVEL	200 LEVEL	.09561*	.02365	.003	.0226	.1686
	300 LEVEL	.05291	.02404	.304	-.0213	.1271
	400 LEVEL	.02661	.02435	.879	-.0485	.1018
	500 LEVEL	.22153*	.03919	.000	.1006	.3425
200 LEVEL	100 LEVEL	-.09561*	.02365	.003	-.1686	-.0226
	300 LEVEL	-.04269	.02557	.594	-.1216	.0362
	400 LEVEL	-.06899	.02586	.131	-.1488	.0108
	500 LEVEL	.12593*	.04015	.044	.0020	.2498
300 LEVEL	100 LEVEL	-.05291	.02404	.304	-.1271	.0213
	200 LEVEL	.04269	.02557	.594	-.0362	.1216
	400 LEVEL	-.02630	.02621	.909	-.1072	.0546
	500 LEVEL	.16862*	.04037	.002	.0440	.2932
400 LEVEL	100 LEVEL	-.02661	.02435	.879	-.1018	.0485
	200 LEVEL	.06899	.02586	.131	-.0108	.1488
	300 LEVEL	.02630	.02621	.909	-.0546	.1072
	500 LEVEL	.19492*	.04056	.000	.0697	.3201
500 LEVEL	100 LEVEL	-.22153*	.03919	.000	-.3425	-.1006
	200 LEVEL	-.12593*	.04015	.044	-.2498	-.0020
	300 LEVEL	-.16862*	.04037	.002	-.2932	-.0440
	400 LEVEL	-.19492*	.04056	.000	-.3201	-.0697

Based on observed means.

The error term is Mean Square (Error) = .766.

*. The mean difference is significant at the .05 level.

The result on Table 3.3a shows the Sheffe's post hoc test of multiple comparisons on the difference in the knowledge of Shisha-aided flavoured tobacco smoking among students in Public Universities in Rivers State based on level. It shows that the Mean Difference (MD) between 100 level and 200 level was significant in favour of 200 level (MD=09561, $p < .05$). The mean difference between 100 levels and 500 levels was significant and in favour of 500 levels (MD=22153, $p < .05$). The mean difference between 200 levels and 400 levels was significant and in favour of 400 levels (MD=12593, $p < .05$). The mean difference between 300 level and 500 level was significant and in favour of 500 level (MD=.16862, $p < .05$). The mean difference between 400 and 500 level was significant and in favour of 500 level (MD=.19492, $p < .05$).

H02: There is no significant difference in the knowledge of health risks associated with Shisha-aided flavoured tobacco smoking-aided flavoured tobacco smoking among students in Public Universities in Rivers State based on age.

Table 4.4: Summary of Chi-Square Statistic on the difference in the knowledge of Shisha-aided flavoured tobacco smoking among students in Public Universities in Rivers state based on age,

Demographics	Category	Knowledge				Total	X2	df	Sig
		False	%	True	%				
Age	16-19yrs	49	19.92	197	80.08	246	4.509	3	.212
	20-23yrs	55	13.78	344	86.22	399			
	24-27yrs	33	15.94	174	84.06	207			
	28-31yrs	17	14.41	101	85.59	118			

The result on Table 4.4 shows the summary of Chi-Square Statistic on the difference in the knowledge of Shisha-aided flavoured tobacco smoking among students in Public Universities in Rivers state based on age. There is no significant difference in the knowledge of health risks associated with Shisha-aided flavoured tobacco smoking-aided flavoured tobacco smoking among students in Public Universities in Rivers State based on age ($X^2=4.509$, $df=3$, $p > .05$).

Discussions

Knowledge of the health risks associated with Shisha-aided flavoured tobacco smoking among students in Public Universities in Rivers State

The findings of Table 1 established that the respondents have low knowledge, specifically those within the bracket of 100 level irrespective of the level range of the student. Those within the bracket of 100 level had mean rating of 0.82, $SD = 0.25$ whereas those who fall within level 200 had mean rating of 0.72, $SD = 0.28$, participant in level 300 had mean rating of 0.79, $SD = 0.25$ and finally those that are in 500 level had a mean rate 0.59, $SD = 0.27$. This finding is consistent with the earlier findings by Kanmodi, Mohammed, Nwafor, Fagbule, Adesina, Aliyu & Ogundipe (2019) which states that shisha users wrongly perceived shisha smoke to have little to no risk compared to cigarette smoking, therefore making shisha users to have wrong view of being spared from health problem associated with it, hence, there is need to explore the knowledge of the users of shisha of the health hazards.

The age group susceptible to shisha use among students in public universities in Rivers State based on age, shows that irrespective of the age range of the respondents, the mean rating of the respondents over knowledge of shisha use in public universities in Rivers State. The age bracket 20 – 23 years had mean rating of 0.78 are most affected, this implies that tendency to indulge in shisha use might be increasing with age of the student. This is highly supported by focus group discussion, carried out in the various comprises.

The result of the hypothesis showed that there is no significant difference in the knowledge of health risks associated with shisha flavoured tobacco smoking among students in public universities in Rivers state based on educational level and age respectively.

IV. CONCLUSION

Based on finding, knowledge of health-risks of shisha-aided flavoured tobacco is low as a result of its misconception that shisha use is safer than cigarette smoking. It was concluded that the student in public universities in Rivers State have poor knowledge of shisha use and there is need to sensitize the students. The result showed that students within the age 20-23 years are more susceptible to shisha use as is the active age.

V. RECOMMENDATIONS

Based on the finding of the study it can be recommended that:

1. Community health workers in health facilities should organize health awareness campaign/training where the students of both sexes would be trained on the health risks associated with Shisha-aided flavoured tobacco smoking in Public Universities in Rivers State.
2. The university authorities should swing into actions to marshal out modalities to halt the rising prevalence of Shisha-aided flavoured tobacco smoking among students in Public Universities in Rivers State.
3. The sale and smoking of tobacco substances should be prohibited in the University campuses. Counseling, helping and isolation centres should be provided for those who are ready to quit the act.
4. Since the study revealed that the prevalence of Shisha-aided flavoured tobacco smoking in Public Universities in Rivers State increases with rise in level of study, the university communities should counsel the new students during every orientation programme to eschew all forms of tobacco smoking.

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