Original Article

Doctors' Knowledge of Shisha and Attitudes Toward Clinical Counseling of Shisha Smokers: Nigerian Study

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ABSTRACT

Introduction: The knowledge and attitude of a doctor towards shisha and tobacco cessation counseling goes a long way in achieving a successful quit for smokers. This study was conducted with the aim of assessing the knowledge of doctors in Nigeria, using Kebbi State as a case study, on shisha and also exploring their attitudes and willingness towards clinical tobacco cessation counseling of shisha smokers.

Methods: This study was a questionnaire-based survey of 78 doctors in Kebbi State, Nigeria. The collected data was analyzed using SPSS version 20 software.

Results: Only 63 (80.8%) of the respondents were aware of shisha. Among these 63 respondents that were aware of shisha, 4.8% of them were shisha smokers, 46.0% knew that shisha smoking can lead to periodontal disorder, 65.1% agreed that shisha smoking is a gateway to the use of other tobacco products, and 53.2% had had an encounter with a shisha smoker, of which only 63.6% of them (i.e. those 33 respondents who had the encounter) engaged themselves in a discussion on smoking cessation with the encountered shisha smokers. The majority of the surveyed doctors, irrespective of their age, gender, specialization, departmental affiliation, years of practice and shisha smoking history, were positively disposed towards clinical counseling of shisha smokers on tobacco cessation.

Discussion: This study shows that the surveyed doctors are positively disposed towards counseling their shisha-smoking patients on the importance of tobacco cessation; despite their inadequate knowledge on shisha.

Conclusion: Clinical counseling on tobacco cessation among shisha smokers should be encouraged in Nigeria.

INTRODUCTION

Shisha smoking is an issue of global health importance[1]. In Nigeria, shisha smoking is becoming a very huge problem of concern as more and more people are getting initiated into shisha smoking habit[2-6]. To make it worse, the Nigeria tobacco ban law is weak and not universally enforced[7]. Within the last decade, more and more public shisha smoking places had been erected in the major cities in Nigeria [3,5].

Shisha smoking, according to the British Heart Foundation, is a way of smoking tobacco, sometimes mixed with fruit or molasses sugar, through a bowl and hose or tube[8]. A 45-minute session of shisha smoking has been found to be equivalent to smoking of 10 sticks of cigarette[9]. In fact, the harms associated with shisha smoking

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outweigh that of cigarette smoking[10-14]; unfortunately, the lay public generally has erroneous conceptions that shisha smoking is safer than cigarette smoking[15-19]. Toxicological analysis of shisha smokes has shown that shisha smoke heavily contains nicotine, polycyclic aromatic hydrocarbons, carcinogenic compounds, carbon monoxides, and other toxins [10-14].

Furthermore, research has identified that some shisha smokers in Nigeria are willing to quit shisha smoking habits[2]. However, quitting an addictive behavior like shisha smoking often requires external support from health personnel as shisha smokers often suffer from tobacco dependence[20,21]. Doctors are very important stakeholders when it comes to managing the problem of tobacco cessation problems among smokers [21].

In the developed countries, there are well structured programs that are established for the doctors' management of tobacco dependence and usage; some of these programs include clinical counseling programs[22,23]. Contrariwise, in a country like Nigeria, it is difficult to say that such structured programs exist. With all that have been said above, it becomes imperative for the establishment of such programs in Nigeria, especially at the national level. However, before such is done, an interim action such as patient counseling on the importance of tobacco cessation must be done on regular basis. With the heavy workloads of an average doctor in Nigeria, it will be difficult to ascertain if an average Nigerian doctor does counsel their patients on the benefits of tobacco cessation. Hence, it becomes imperative to conduct a scientific study to assess Nigeria doctors' knowledge of shisha as well as their attitude and willingness towards patient counseling shisha smoking. Hence, this study was conducted with the aim of assessing the knowledge of doctors in Nigeria, using Kebbi State as a case study, on shisha and also exploring their attitudes and willingness towards clinical tobacco cessation counseling of shisha smokers.

METHODS

This study was a descriptive cross-sectional study conducted among doctors (physicians, dentists, and surgeons) in Kebbi State, Nigeria. The study tool was an anonymous 18-item questionnaire adapted from a scientific literature on e-cigarette (24). The questionnaire obtained information about the participants' socio-demographic characteristics, knowledge of shisha, and attitudes and willingness towards counseling of patients on shisha usage and tobacco cessation.

All the participating doctors were recruited in one of the 2019 Ordinary General Meetings conducted by the Nigeria Medical Association, Kebbi State Chapter, Kebbi State, Nigeria. Approval to conduct the study was obtained from the Nigeria Medical Association of Kebbi State Chapter. A total of 103 doctors who were physically present in the hall of meeting were approached for the study; they were informed about the aims and objectives of the study and that their participation is voluntary and strictly confidential. Only 78 doctors gave verbal informed consent to participate in the study. Each consenting participant was given a self-administered questionnaire to fill. All issued questionnaires were returned to the primary investigator. All collected questionnaires were checked for fitness for analysis or possible discarding; however, no questionnaire was discarded because all were properly filled. The cleaned data was computed into SPSS Version 20 software for analysis.

RESULTS

The response rate for the study was 75.7%. The mean (±SD) age of the respondents was 35.65 (±8.375) years, 78.2% were males, 24.4% had postgraduate specialization, 15.4% had >10 years professional practice experience, and 44.9% were in surgical departments (Table 1).

Table 1. Socio-demographic characteristics of respondents

Characteristics	Frequency/Value	%
Age in years		
Mean	35.65	N/A
SD	8.375	N/A
< 40 years	52	66.7
≥ 40 years	17	21.8
No response	9	11.5
Gender		
Male	61	78.2
Female	16	20.5
No response	1	1.3
Postgraduate specialization		
Yes	19	24.4
No	59	75.6
Years of practice		
≤ 10 years	66	84.6
> 10 years	12	15.4
Department		
Surgical	35	44.9
Non-surgical	43	55.1

"N/A" – Not applicable, "SD" – Standard deviation

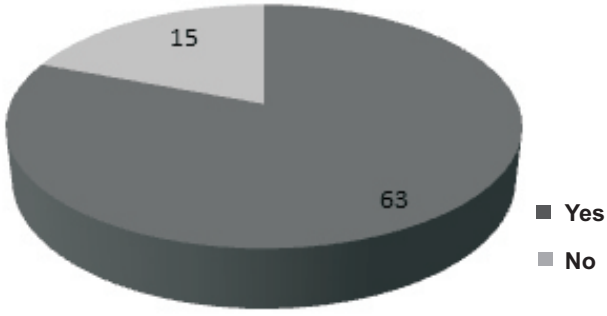

Figure 1. Distribution of response of respondents to the question: "Do you know what shisha is?"

Only 63 (80.8%) of the respondents were aware of shisha (Figure 1). Among these 63 respondents, 4.8% of them were shisha smokers, 47.6% mentioned that shisha is sold at specialized shops dealing in tobacco products, 36.5% knew that shisha delivers more nicotine to the body than cigarette, 47.6% knew that a typical shisha smoking session is longer than a typical cigarette smoking session, 17.5% erroneously believed that exposure to second hand smoke from shisha is less harmful than exposure to cigarette smoke, 46.0% knew that shisha smoking can lead to periodontal disorder, 65.1% agreed that shisha smoking is a gateway to the use of other tobacco products, and 93.7% were of the opinion that shisha smoking should be addressed in schools. However, among those 63 respondents who were aware of shisha, only 53.2% (33/63) had had an encounter with a shisha smoker, of which only 63.6% of them (i.e. those 33 respondents who had the encounter) engaged themselves in a discussion on smoking cessation with the encountered shisha smokers. Importantly, the majority (88.9%) of those respondents who were aware of shisha recommended that smoking cessation counseling should be included in consultations with shisha smokers (see Table 2 on page 19).

Interestingly, the bivariate analysis comparing the distribution of those respondents (n=63) that supported the inclusion of smoking cessation counseling during consultations with shisha smokers yielded noteworthy results. The majority of the respondents in each category of tabulated socio-demographic characteristics supported the inclusion; and statistically significant relationship exists between the respondents' support for the inclusion and shisha smoking status (p-value=0.009) (see Table 3 on page 20).

DISCUSSION

Despite several public education programs on mass media on issues pertaining to health promotion and disease prevention strategies in Nigeria, only very little attention had been paid to educating the public on the health and social hazards associated with shisha smoking. The lack of adequate effort on public education on the health hazards of shisha use may be accountable for the rising prevalence of shisha use in Nigeria. Furthermore, based on the aforesaid, it can be concluded that many shisha smokers are largely left with other sources of information to utilize on health information

Table 2. Prevalence of shisha smoking: knowledge of shisha: attitudes towards clinical counseling of shisha smokers

Variables	Frequency (%)
Do you smoke shisha? (n=63)	
Yes	3 (4.8)
No	60 (95.2)
Where do you think shisha pipe and molasses are sold? (tick as many as possible) (n=63)	
Kiosks	7 (11.1)
Shops	18 (28.6)
Specialized shops dealing in tobacco products	30 (47.6)
Online shops	10 (15.9)
Open market	16 (20.5)
Has NAFDAC approved the use of shisha? (n=63)	
Yes	0 (0.0)
No	25 (39.7)
No idea	38 (60.3)
Compared to normal cigarettes, what amount of nicotine does shisha deliver? (n=63)	
Less	8 (12.7)
Similar	4 (6.3)
More	23 (36.5)
No idea	28 (44.4)
Compared to cigarette, a typical shisha smoking session is? (n=63)	
Same as tobacco cigarette	7 (11.1)
Shorter than tobacco cigarette	5 (7.9)
Longer than tobacco cigarette	30 (47.6)
No idea	21 (33.3)
Exposure to second hand smoke from shisha is? (n=63)	
Less harmful than tobacco cigarette	11 (17.5)
As harmful as tobacco cigarette	16 (25.4)
More harmful than tobacco cigarette	12 (19.0)
No idea	24 (38.1)
Compared to cigarette, the amount of carcinogens contained in in shisha is? (n=63)	
Less	10 (15.9)
Similar	7 (11.1)
More	18 (28.6)
No idea	28 (44.4)
Shisha smoking can lead to which o f the following disorders? (tick as many as possible) (n=63)	
Cardiovascular disorder	37 (58.7)
Respiratory disorder	53 (85.5)
Periodontal disorder	29 (46.0)
Mental disorder	39 (61.9)
Cancers	42 (66.7)
Connective tissue disorder	20 (31.7)
Endocrine disorder	19 (30.2)
Immunologic disorder	22 (34.9)
Neurological disorder	33 (52.4)
Have you encountered a patient who smokes shisha? (n=63)	
Yes	33 (53.2)
No	29 (46.8)
If yes (to above), did you discuss smoking cessation with them? (n=33)	
Yes	21 (63.6)
No	10 (30.3)
No idea	2 (6.1)
Is shisha smoking is a gateway to the use of other tobacco products? (n=63)	
Yes	41 (65.1)

Table 3. Comparison between opinion of respondents on smoking cessation counseling and socio-demographic variables

Variables*,#	Should smoking cessation counseling be included in consultation with shisha smokers?			Total	p-value (df)
	Yes	No	No idea		
Age in years					
< 40 years	38 (86.4)	2 (4.5)	4 (9.1)	44 (100.0)	0.464 (2)
≥40 years	10 (100.0)	0 (0.0)	0 (0.0)	10 (100.0)	
Total	48 (88.9)	2 (3.7)	4 (7.4)	54 (100.0)	
Gender					
Male	45 (91.8)	2 (4.1)	2 (4.1)	49 (100.0)	0.068 (2)
Female	10 (76.9)	0 (0.0)	3 (23.1)	13 (100.0)	
Total	55 (88.7)	2 (3.2)	5 (8.1)	62 (100.0)	
Postgraduate specialization					
Yes	12 (80.0)	0 (0.0)	3 (20.0)	15 (100.0)	0.110 (2)
No	44 (91.7)	2 (4.2)	2 (4.2)	48 (100.0)	
Total	56 (88.9)	2 (3.2)	5 (7.9)	63 (100.0)	
Department					
Surgical	23 (92.0)	1 (4.0)	1 (4.0)	25 (100.0)	0.624 (2)
Non-surgical	33 (86.8)	1 (2.6)	4 (10.5)	38 (100.0)	
Total	56 (88.9)	2 (3.2)	5 (7.9)	63 (100.0)	
Years of practice					
≤ 10 years	50 (87.7)	2 (3.5)	5 (8.8)	57 (100.0)	0.661 (2)
> 10 years	6 (100.0)	0 (0.0)	0 (0.0)	6 (100.0)	
Total	56 (88.9)	2 (3.2)	5 (7.9)	63 (100.0)	
Smokes shisha					
Yes	2 (66.7)	1 (33.3)	0 (0.0)	3 (100.0)	0.009 (2)
No	54 (90.0)	1 (1.7)	5 (8.3)	60 (100.0)	
Total	56 (88.9)	2 (3.2)	5 (7.9)	63 (100.0)	
Ever had an encounter with a SS					
Yes	31 (93.9)	1 (3.0)	1 (3.0)	33 (100.0)	0.295 (2)
No	24 (82.8)	1 (3.4)	4 (13.8)	29 (100.0)	
Total	55 (88.7)	2 (3.2)	5 (8.1)	62 (100.0)	

*Only the data of those respondents that were aware of shisha and who also responded to the cross-tabulated variables were computed in this analysis; #Percentages were calculated based on the total number of respondents per row category e.g. "x / y × 100%", where "x" represents total number of eligible "yes" among those in category "y" while "y" denotes age, gender, smoking status, etc. of respondents that responded to the cross-tabulated variables; "SS" – Shisha smoker; "df" – Degree of freedom

pertaining to shisha use; these sources may include internet, social media, health workers, friends, and more. More importantly, not all the sources of health information on shisha are reliable; however a very reliable source of information on this area is "doctor". A doctor, be it a dentist, a physician, or a surgeon, is a clinical expert who is well trained on the etiology/risk factors, epidemiology, pathogenesis, clinical manifestations, and management of tobacco-induced diseases. Therefore, it is becomes imperative for doctors to know about common smoking behaviors that have negative implications on human health and society.

In this present study, we found that the majority of the surveyed doctors were aware of shisha. However, among those of them that were aware of shisha, only few of them smoke it; this may suggest that the prevalence of shisha smoking is generally low among doctors in Nigeria. Furthermore, our study data suggests that specialized shops dealing in tobacco products are the commonly utilized sources of shisha in the study area (Kebbi State).

Furthermore, it was commonly asserted by the respondents of this study (i.e. the surveyed doctors) that the flavor content in shisha is a major factor contributing to the use of shisha among people. This assertion, as made by our study respondents, strengthens a similar report in an existing literature[25].

It is also noteworthy that many of the study respondents noted that shisha smoking is a gateway to the use of other tobacco products, and this note is scientifically true[26]. Tobacco is an addictive and harmful product[20,21]; hence, the National Agency for Food and Drug Administration and Control (NAFDAC) is yet to grant approval for shisha smoking in Nigeria; this is most probably the reason why the respondents indicated that shisha is not a product approved by NAFDAC. Also, to the best of the authors' knowledge, there exists no specific national tobacco policy concerning shisha usage in Nigeria; the available policies were mainly focused on cigarette. Hence, this is a very strong reason that can be used to support why virtually of the respondents were not aware of any health policy on shisha use.

Furthermore, many of the respondents were not aware that shisha smoking is more dangerous than cigarette smoking. Research has shown that a typical shisha smoking session is more than a cigarette smoking session, delivering more doses of nicotine and carcinogenic products into the human body[27,28)]. Pertinently, shisha is responsible for myriads of oral and systemic illnesses, some of which include gingivitis, periodontitis, hypertension, cancer, and more [27,28]; however, we found that many of our respondents were also not aware of some of the health problems associated with shisha smoking.

Importantly, we found that roughly half of the respondents had a positive history of encounter with a shisha smoker. This shows that doctors generally have contacts with shisha smokers; hence they occupy a very influential position on educating and counseling shisha smokers on tobacco cessation. However, doctors have also been found to play negative influential roles when it comes to shisha smoking habit initiation and practice. In a recent study conducted in the United Kingdom, it was reported that some shisha smokers were indirectly influenced to continue shisha smoking just because they saw doctors – custodians of medical and health knowledge – smoking shisha[29]. Hence, this implies that a doctor can influence a shisha smoker either positively or negatively. However, in this study, we found that the majority of the surveyed doctors having encounter with shisha smokers positively influenced shisha smokers through counseling on tobacco cessation.

Furthermore, an organized and well-structured strategy and program that is targeted at tobacco cessation among tobacco users is yet to come to stay in Nigeria, unlike in other developed countries like USA[22,23]. Hence, there is a need for the development,

operation and maintenance of such strategies and programs, starting from the national level. However, prior to the time when such program will be nationally established, there is a need for an intervention on such and a very good example of such intervention is tobacco cessation counseling for tobacco smokers. In a factual sense, this intervention is very important for shisha smokers because it is widely believed among laymen that shisha smoking has little or no harm[15-19]. In this study, we found that the majority of the surveyed doctors, irrespective of their age, gender, specialization, departmental affiliation, years of practice and shisha smoking history, were positively disposed towards clinical counseling of shisha smokers on tobacco cessation. This evidently suggests that many Nigerian doctors would be willing to counsel their patients on the benefits associated with quitting shisha use.

Overall, it can be said that there exists some inadequate knowledge on shisha and its associated health risks among the surveyed doctors in Kebbi State. Hence, there is a need for the inclusion of "shisha education" into continuous professional education (CPE) programs for doctors in Kebbi State, Nigeria, and even into school health programs- this is also a suggestion by the respondents.

However, this study has its limitation. This study was delimited to Kebbi State; hence it will be difficult to make unguided generalizations based on the study data.

CONCLUSION

This study shows that the majority of doctors in Kebbi State, Nigeria, are aware of shisha; although their deep knowledge of it is inadequate. However, this study shows that they are positively disposed towards counseling their shisha-smoking patients on the importance of tobacco cessation.

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CONFLICT OF INTEREST

Authors of this study have none to declare.

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