

Pharmacist-led smoking cessation: The attitudes and practices of community pharmacists in Lagos state, Nigeria: A mixed methods survey

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ABSTRACT

INTRODUCTION Community pharmacists are well-positioned to support smoking cessation particularly in low and middle income countries. This study aims to assess the attitudes, barriers and pattern of pharmacist-led smoking cessation services and explore the factors associated with the willingness to offer smoking cessation services.

METHODS A cross-sectional descriptive study was carried out using qualitative and quantitative methods. Two hundred and forty two community pharmaceutical premises were randomly selected and interviewed. In addition, one Focus Group Discussion was carried out among nine members of the state branch of the Association of Community Pharmacists of Nigeria in Lagos State.

RESULTS Approximately 92% encountered smokers in the course of their work however only 49.6% had ever inquired about their smoking status and 49.1% of these, had offered some form of cessation support. Only 44% had NRT's available within their pharmaceutical premises. The majority (68.5%) were willing to offer smoking cessation services in their premises however only 44.6% had ever received any prior training on tobacco cessation. Those who believed that pharmacists had the required training to offer smoking cessation services were more willing to provide these services. Qualitative findings also revealed that the majority felt they had a unique role to play in providing tobacco cessation services.

CONCLUSIONS Community pharmacists were willing to provide smoking cessation services within their practice, however they may require specific training to do so effectively. In developing guidelines for community based smoking cessation, it is recommended that pharmacists be engaged and trained for the provision of smoking cessation services within the community.

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INTRODUCTION

Tobacco smoking is the leading risk factor for non-communicable diseases and the second leading cause of death globally¹. It is a major cause of preventable premature death and disease^{1, 2}. The tobacco epidemic is responsible for about six million deaths a year². More than five million of these deaths are the result of direct tobacco use while over 600,000 are from non-smokers' exposure to second-hand smoke².

Nearly 80% of the more than one billion smokers worldwide live in low and middle-income countries (LMIC), where the burden of tobacco-related illness and death is heaviest². Cigarette smoking harms nearly every organ of the body, causing many diseases and affecting the health of both smokers and non-smokers. Tobacco use increases the risk for many cancers. In addition, there is a direct link between cigarette smoking and coronary heart disease^{3, 4}.

In Nigeria, according to the 2012 Global Adult Tobacco Survey (GATS) report, 4.7 million adults (5.6%) aged 15 years or older used at least one form of tobacco. Of these, the majority, or 3.1 million (66.0%) smoked cigarettes, making cigarettes the most common form of tobacco used in Nigeria³. The majority of cigarette smokers in Nigeria (2.9 million individuals) smoke everyday⁵. Although the prevalence of smoking is relatively low in Nigeria, the establishment of the British American Tobacco plant in Ibadan, Nigeria necessitates concerted efforts to prevent smoking initiation and ensure smoking cessation among current smokers.

Many smokers are dependent on nicotine, an addictive agent that makes quitting difficult⁶. For current smokers, quitting smoking is the single most effective thing that they can do to enhance the quality and length of their lives and that of the people around them^{7, 8}. There is evidence that

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many smokers need help with quitting. In the USA, it is reported that, of daily smokers who try to quit unaided, the majority will relapse⁸. In Nigeria, the situation is not different; the GATS Nigeria country survey reported that about half (45.4%) of smokers had made an unsuccessful attempt to quit smoking within the past year⁵. Nigeria is a signatory to the World Health Organization Framework convention on tobacco control (WHO FCTC) however efforts to implement article 14 domestically have not been successful.

Smoking cessation counseling is widely recognized as an effective clinical practice⁹. Even a brief intervention by a health professional significantly increases the cessation rates⁹. A smoker's likelihood of quitting increases when he or she hears the message from a number of health care providers from a variety of disciplines¹⁰. Health professionals are in a unique position to be involved in smoking cessation activities. They have the trust of the population, they can help tobacco users overcome addiction and educate the population on the harms of tobacco use and exposure to second-hand smoke¹¹.

Community pharmacists are well positioned to support smoking cessation. In Nigeria and sub-Saharan Africa, a vast majority of low to middle income families receive care from owner-operated drug retail outlets¹². In Lagos State, pharmacists are in a position to counsel and prescribe medication for smokers who seek help with smoking cessation in their community pharmacies but there are no policies mandating them to do this and there is no monetary compensation paid for this service.¹² Community pharmacists are particularly unique, in that they work within the community and are easily accessible to the public. The community pharmacist has regular interactions with large numbers of people in the course of his/her normal daily functions^{12, 13}. He/she may be in a position to identify smokers, provide counseling and dispense pharmacological agents for the treatment of tobacco dependence. A meta-analysis of the effectiveness of smoking cessation interventions in community pharmacies concluded that pharmacist-led interventions can significantly affect abstinence rates in smokers.¹⁴ Research conducted in other countries like Sudan, Indonesia, Thailand, Poland, U.S.A and Canada report the important role pharmacists may play in smoking cessation¹⁵⁻²⁰. Studies assessing the role of health professionals in smoking cessation have been carried out among various categories of health care workers, however there is a paucity of data on the pharmacist-led smoking cessation services in Nigeria and other African countries. In addition, few studies in African settings have used both quantitative and qualitative techniques. This study uses both qualitative and quantitative approaches to assess the attitudes of community

pharmacists towards smoking cessation services and document their experiences regarding the provision of smoking cessation services within the community. The inclusion of a qualitative approach was to explore in greater detail the participants' beliefs and provide a greater understanding of pharmacist-led smoking cessation in the study setting²¹. These findings will provide useful information in the planning of effective programs for pharmacist-led smoking cessation services in this setting and other similar settings.

METHODS

Study Design and Sampling

This cross-sectional descriptive study was carried out in Lagos State, the commercial capital of Nigeria and one of its most populous states. There were 634 retailing pharmaceutical premises and over 3000 pharmacists registered with the Pharmacists Council of Nigeria, (PCN), the governing body for the licensing of pharmaceutical premises in Nigeria. The study used qualitative and quantitative techniques and was carried out among registered community pharmacists operating in retail pharmaceutical premises within Lagos. The minimum sample size was calculated for the study using the formula for descriptive studies and based on the relevant findings of a previous study²². Considering a confidence level of 95%, an alpha of 0.05 and a precision of 5% and an expected non-response rate of 30%, the final sample size for the study was 242.

A list of the 634 licensed retailing pharmaceutical premises in Lagos stratified by local government areas (LGA) was obtained from the Lagos office of the Pharmacists Council of Nigeria. We first sampled pharmaceutical premises randomly from this list by simple random sampling until the sample size was reached. Thereafter, in each selected pharmaceutical premise, we selected one eligible and consenting pharmacist. Eligible pharmacists had to be licensed with the Pharmacist Council of Nigeria with at least six months working experience. Interns were excluded from the study.

Quantitative data collection

Quantitative data were collected using self-administered questionnaires given to the selected pharmacists in each pharmacy outlet. The questionnaires were developed by the authors based on a review of existing literature^{19, 22-25} and a local knowledge of smoking cessation and pharmacy practice in Nigeria. The questionnaire was pre-tested and optimized. Reliability testing showed a Cronbach's alpha of 0.78. The 35-item questionnaire elicited information on respondents' socio-demographic details, awareness of approaches to smoking

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cessation, attitudes of the respondents about pharmacist-led smoking cessation services, availability of nicotine replacement therapies within pharmaceutical premises, and respondent experiences and practices regarding the provision of smoking cessation services for their clients. Questionnaires were administered in-person and in the English language. It took approximately 20 minutes to complete the questionnaire. Quantitative data collection was carried out over a period of six weeks (between the first week of September and the third week of October, 2013) and analysed using SPSS 17.0 statistical software.

Frequency tables were constructed for categorical variables and means and standard deviations for continuous variables. A bivariate analysis was conducted to determine factors associated with a willingness of the pharmacist to offer smoking cessation services as part of his or her regular duties using Chi-square tests for categorical variables and T-tests for continuous variables. Significant variables were modeled in the multivariate analysis after checking for multi-collinearity and homoscedasticity of the independent variables. Adjusted odds ratios and 95% confidence intervals were computed and reported. P values of ≤ 0.05 were considered statistically significant.

Qualitative Data collection

One focus group discussion (FGD) was carried out among nine members of the state branch of the Association of Community Pharmacists of Nigeria in Lagos, after receiving informed consent from the participants. The FGD was designed to further explore the opinions of the pharmacists regarding community pharmacy-led smoking cessation services. The FGD was carried out using a set of questions designed by the researchers based on a review of relevant literature, a local knowledge of pharmacy practice in Nigeria, and results of the quantitative survey findings (see below for the FGD discussion guide). Participants of the focus group were selected using convenience sampling. The FGD took place at a neutral location and was conducted in the English language. No incentives were offered. Participants initially answered a short demographic survey eliciting information on their age, gender and years of experience. An informed consent was obtained from participants prior to the discussion and they were guaranteed strict confidentiality. The FGD was moderated by the first author (OOO) and took approximately forty five minutes. Discussions were audio-taped and transcribed verbatim by two trained research assistants immediately following the FGD. Analysis was conducted manually. Two authors independently coded the transcripts. Based on the

interview guide and initial reading of the transcripts, thematic areas were identified and documented. Standard text analysis was employed. Ethical approval was obtained from the ethics and research committee of the Lagos University Teaching Hospital. Permission for this study was also obtained from the Pharmacist Council of Nigeria.

Focus group discussion guide

1. What do you think is the role of a community pharmacist in providing smoking cessation services within the community?
2. How effective do you think community pharmacists can be at asking, advising, referring and dispensing medication for smoking cessation?
3. What are your views on the current practices of community pharmacists in tobacco cessation in Lagos State?
4. How do you think community pharmacists could help in increasing the number of smokers who quit within their communities?
5. How do you as pharmacists obtain information to help your clients with smoking cessation?
6. Describe the factors that could hinder the willingness of community pharmacists to provide tobacco cessation?

RESULTS

Quantitative Findings

Socio-demographic details of the respondents: The majority of respondents (96.1%) were aged 50 years or less, were mostly male (60.3%) and had ten years or less of work experience (72.8%). Only 17.8% had ever smoked and 7.9% were current smokers (Table 2)

Awareness of the 5A's of smoking cessation and availability of NRT's: Awareness of the 5A's and the AAR brief intervention approaches to smoking cessation was calculated at 40% of the population. About two in three respondents were aware of medication for use in smoking cessation. Awareness of Varenicline, Bupropion and Nortriptyline was 35.5%, 29.3% and 27.7% respectively, while only 35.5% had any NRT's available within their pharmaceutical premises (Tables 3 and 4).

Respondents' attitudes and experiences regarding the provision of smoking cessation services for their clients: The majority of respondents (88.4%) believed that smoking cessation should be part of the duties of a community pharmacist, who have the required training to provide behavioral modification interventions (65.7%) and to prescribe smoking cessation medications (63.2%). The majority (72.7%) noted that they require additional training either as professionals (72.7%) or during their undergraduate training (68.6%). Finally, many

Table 1: Age, gender and years of work experience of the participants in the focus group discussion

Gender	Age	Years of work experience
Male	52	25
Female	52	26
Male	42	18
Male	59	30
Female	38	16
Male	34	9
Male	30	5
Male	45	18
Male	59	31

Table 2: Socio-demographic details of respondents Results are either mean±SD or n (%)

Variables	Result
Age (in years)	.3+4.0
<30	(41.2)
-40	(33.9)
-50	(16.5)
-60	(5.8)
>60	(3.3)
Sex	
Male	(60.3)
Female	(39.7)
Ethnicity	
Igbo	(39.7)
Yoruba	(51.2)
Hausa	(5.8)
Other*	(3.3)
Religion	
Christianity	(78.5)
Islam	(21.5)
Years of practice	.1+8.6
-5	(45.5)
-10	(27.3)
-15	(8.7)
-20	(9.1)
>20	(9.5)
Number of daily customers	2+18.1
-10	(19.4)
-20	(44.6)
-30	(17.4)
>30	(18.6)
Smoking status	
Current smoker	(7.9)
Ex-smoker	(9.9)
Never smoker	(78.5)

Table 3: Awareness of the 5A's of smoking cessation

Variable(s)	N (%)
Awareness of each specific component	
Ask	91 (37.6)
Advise	98 (40.5)
Assess	66 (27.3)
Assist	85(35.1)
Arrange	77 (32.0)
Arrange	77(31.8)
Awareness of each specific component	
Ask	91(37.6)
Advise	97(39.9)
Refer	85(35.1)
Awareness of any NRT's	163 (67.4)
Awareness of any Non-NRT's cessation	162 (66.9)

were willing to provide smoking cessation services (68.5%), receive training on pharmacotherapy (70.5%) and smoking cessation counselling (73.6%).

Specific training on smoking cessation was low (44.6%) and mostly received while in college (79.7%) and/or after graduation (51.9%). Many of the pharmacists encountered smokers however less than half (49.1%) offered some form of cessation support (Pharmacotherapy 31.8%, counselling 33.5%, or both 13.9%) with the majority (67.1% referring their clients to a physician, or psychologist (30.3%). The barriers to the provision of smoking cessation services included primarily lack of time (17.4%), training (16.1%), tools (13.6%), knowledge of pharmacotherapy (12.8%), their cost (16.1%) and the limited access to smoking cessation medication (16.1%).

Respondents' belief that pharmacists' as a group have the required training to serve as providers of smoking cessation services was the main factor associated with a willingness to provide such services. Surprisingly, there was no statistically significant association between pharmacists who had received training and a willingness to offer pharmacist-led smoking cessation services. (Table 5 and 6).

Qualitative Findings

Below is a summary of the qualitative findings. Table 9 shows the socio-demographic details of the FGD participants while Table 10 shows the themes, sub-themes and some of the comments of the participants.

The Role of Pharmacists in providing community-based smoking cessation: Many of the pharmacists were of the opinion that pharmacists had a major role to play in providing

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smoking cessation services within the community. They felt it was part of their duties as community pharmacists. In particular, they felt that pharmacists were in a position to identify smokers within the community, provide effective counselling sessions, dispense pharmacological agents for managing tobacco dependence and provide follow-up with the smokers. Their proximity to the patients in the community was also seen as an advantage. Their role as potential sources of referral to more specialized providers was also mentioned. However they seemed to refer patients for smoking related diseases rather than for smoking cessation. Other roles like involvement in the World No Tobacco Day was also mentioned by one of the participants.

Perceptions of the role of Pharmacists in providing community based smoking cessation

Smoking cessation as a duty of pharmacists

“It is our job to advise them and we can advise them!”-male pharmacist, 59 years, 30 years work experience.” “Smoking cessation is part of our duties as pharmacists and we are already doing it in our own way!”- male pharmacist, 59 years old, 31 years work experience.

Pharmacists can help in identifying smokers (ASK)

“I think when a pharmacist sees a person with a recurrent cough he should ask if the person smokes. This may be an opportunity to talk to them about quitting! You must ask if the person smokes!”- male pharmacist, 34 years old, 9 years work experience. “Also in my place, we check clients’ blood pressure (BP), once we see a person with high BP, we ask them if they smoke and counsel them”.- male 48 years old, 13 years work experience

Table 4: Frequency (%) of nicotine replacement therapies within pharmaceutical premises (n=24)

Nicotine replacement therapies	n(%)
Nicotine gum	67 (27.7)
Nicotine inhaler	56 (23.1)
Nicotine lozenge	37 (15.4)
Nicotine patch	31 (12.8)
Nicotine nasal spray	32 (13.3)

Table 5: Logistic regression analysis showing the factors associated with a willingness to provide smoking cessation services among the pharmacists

Variables	Odds ratio	95% CI	P value
Believes pharmacists have the required training to provide smoking cessation counselling	2.17	1.21-3.89	0.010
Believes pharmacist have the required training to prescribe smoking cessation medications	1.80	1.01-3.22	0.047
Willing to receive training on smoking cessation counselling	1.68	0.93-3.06	0.088

“If a patient is sick with something like a cough or ulcer, you can ask them if they smoke and tell them to stop smoking to improve their healing!”- male pharmacist, 34 years old, 9 years work experience.

Pharmacists can advise/counsel smokers (ADVISE)

“I think pharmacists should provide counselling on the dangers of smoking to clients who are smokers”- male pharmacist, 45 years old with 18 years work experience.

Initiating change talk and assessing readiness to quit (ASSESS and ASSIST)

“Pharmacists should help smokers to move from pre-contemplation to action, pharmacists can also help them to identify and avoid triggers for smoking”- female pharmacist, 52 years old, 26 years work experience.

“If a patient wants to stop you can give counsel, if a patient doesn’t want to stop, you need to be careful so as to prevent discord!” - male pharmacist, 52 years old, 25 years work experience.

Dispensing of pharmacological agents for smoking cessation

“We can dispense medication, we know of Nicorette®, Nicobloc®, and some patches.- female pharmacist, 52 years old, 26 years work experience.

Referral of patients (REFER)

“Pharmacists can also be effective as referral agents. We can refer them, if the person has come down with a smoking-related disease” - male pharmacist, 34 years old, 9 years work experience

Current ways in which pharmacists engage smokers in the community for smoking cessation: Even though the majority had not received any formal training on tobacco cessation, many of them claim to offer some form of tobacco cessation services within the community.

The uniqueness of pharmacists

Proximity as an advantage:

“Smoking cessation involves a long-term commitment from the provider. Pharmacists are closer to the people and are better

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able to follow up with smoking cessation” -female pharmacist 38 years old, 16 years work experience.

“We are in a position to provide one-on-one counselling because we are close to them in the community” -male pharmacist 42 years old, 18 years work experience.

Current ways in which pharmacists offer smoking cessation support

Printing of educational leaflets and marking the annual World

Table 6: Factors associated with a willingness to offer smoking cessation services as part of regular pharmaceutical duties

Variables	Willing to offer smoking cessation (n=16)	Not willing to offer smoking cessation (n=7)	P
Mean age	35.1±11.1	35.6±10.4	0.740
Sex			
Male	94(64.4)	52(35.6)	0.155
Female	71(74.0)	25(26.0)	
Ethnicity			
Igbo	57(59.4)	39(40.6)	0.082
Yoruba	90(72.6)	34(27.4)	
Hausa	12(85.7)	2(14.3)	
Other	6(75.0)	2(25.0)	
Religion			
Christianity	127(66.8)	63(33.2)	0.392
Islam	38(73.1)	14(26.9)	
Mean years of practice 9.2 ±8.9	8.9±7.8	0.800	
Average number of daily customers	24.2±18.6	21.1±16.8	0.215
Believes pharmacists have the required training to provide smoking cessation counselling			
Yes	120(75.5)	39(24.5)	0.001
No	45(54.2)	38(45.8)	
Believes pharmacist have the required training to prescribe smoking cessation medications			
Yes	114(74.5)	39(25.5)	0.006
No	51(57.3)	38(42.7)	
Ever received training on tobacco cessation			
Yes	75(69.4)	33(30.6)	0.705
No	90(67.2)	44(32.9)	
Willing to receive training on pharmacotherapy for smoking cessation			
Yes	123(72.4)	47(27.6)	0.032
No	42(58.3)	30(41.7)	
Willing to receive training on smoking cessation counselling			
Yes	127(71.3)	51(28.7)	0.078
No	38(59.4)	26(40.6)	
Pharmacists require additional training to serve as effective tobacco cessation providers			
Yes	118(67.0)	58(33.0)	0.535
No	47(71.2)	19(28.8)	
Believes smoking cessation should be included in the undergraduate pharmacy curriculum			
Yes	118(71.5)	48(28.9)	0.152
No	47(61.8)	29(38.2)	
Smoking status			
Current smoker	16(57.1)	12(42.9)	0.182
Non-smoker	149(69.9)	65(30.4)	

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No Tobacco Days:

“On our own, we do smoking cessation from time to time. Some of us even print educational material like fliers and leaflets to share”. “Pharmacists may also observe special anti-tobacco days like the World No Tobacco Days!” -female 38 years old, 16 years work experience.

“I am very interested in smoking cessation, in fact, I put a banner up in front of my premises that read ‘Help is available to kick out tobacco smoke’ and some people came!” -female pharmacist 52 years old, 26 years work experience.

Sales of over the counter pharmacological agents for smoking cessation:

“I sell mouth wash for smokers, so I tell my assistants to inform me when anyone comes in to buy it, then I invite the person to counsel him/her” -male pharmacist 48 years old, 13 years work experience.

Health education:

“Another way we help is by calling their attention to the possibility of drug-drug interactions, sometimes, I tell the smoker that smoking would affect the metabolism of their drug and this seems to help because I know a chimney-looking guy (colloquial term for obvious smoker) that has stopped smoking and now we are like family!” -female pharmacist 38 years old, 16 years work experience.

Pharmacists as role models:

One participant remarked “Most medical people are role models and pharmacists are included. It is better for them not to smoke!” Another participant said “if pharmacists decide to smoke, it gives the impression that smoking is okay so they should stop smoking!” Pharmacists’ awareness of the concept of the 5As and the AAR approaches to tobacco cessation: None of the participants in the FGD ever heard of the 5As (Ask, Advise, Assess, Assist, and Arrange) or the AAR (Assess, Assist and Refer) approaches to tobacco cessation. Similarly, none had received any formal training on tobacco cessation. However, a few referred to the 5As or the AAR approach in their conversations, but when asked if they were aware of places to refer clients to if they required specialized help with smoking cessation, almost all of them said that they were unaware of any centers for expert management.

Awareness of approaches to smoking cessation and sources of information

Awareness of the 5As and AAR approaches to smoking cessation:

None of the participants in the FGD ever heard of the 5As or the AAR approaches to tobacco cessation. Similarly none of them had received any formal training on tobacco cessation.

Awareness of places for referral:

“We are not aware of the existence of any places for expert management!” and many agreed. However one participant said “It depends, I can refer them to a physician or to an anti-smoking Non-government Organization”.

Current sources of information:

“I get most of the information from journals!” -male pharmacist 59 years old, 30 years work experience.

“I get my information from the internet.” -male pharmacist 52 years old, 25 years work experience.

Opinions on formal training

The need for formal training:

“We need formal training about it! There is so much information out there we need to keep updating our knowledge every minute! The training should be regular, at least twice a year” -male pharmacist 59 years old, 30 years work experience. “The training should be free! I don’t think we should pay for it.” -male pharmacist 59 years old, 31 years work experience.

The need to include smoking cessation in the pharmacy curriculum:

“It is important for smoking cessation to be included in the pharmacy undergraduate curriculum! We must make sure the undergraduates are trained so that by the time they come out they are already aware of what to do!” -male pharmacist 59 years old, 30 years work experience. “The Government should be made aware that community pharmacists are the best people to provide smoking cessation because doctors and nurses don’t have time like us! We stay with them in the community.” -male pharmacist 52 years old, 25 years work experience.

Strategies to improve involvement of pharmacists in tobacco cessation: When asked about their opinions on possible strategies to improve the involvement of community pharmacists in tobacco cessation, many felt that there is a need for improved awareness of the benefits of tobacco cessation among pharmacists and the need for formal training programs after pharmacy school. The challenges of identifying clients who are smokers was also mentioned.

Strategies to improve pharmacist-led smoking cessation

Increasing community awareness of pharmacist led smoking cessation:

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“Pharmacists need more awareness, there should be radio jingles telling people that smokers can reach us for assistance with smoking!” -female pharmacist 52 years old, 26 years work experience.

“We need banners to inform clients to patronize us!” -female pharmacist 38 years old, 16 years work experience.

The crucial role of the government and Non-Governmental Organizations:

“The Government should be at the forefront with radio jingles, and make it compulsory for cigarette manufacturers to inform people of the hazards of smoking and the ways to seek cessation” -male pharmacist 45 years old, 18 years work experience.

“There has to be a way to determine if a person smokes like there is for alcohol!” In Nigeria, the way we have a malaria control program, we should have a smoking cessation program and they (i.e. the government) should sponsor it. The Government and NGOs should tell the nation that pharmacists can help in smoking cessation. They can do this using banners or even special campaigns” -male pharmacist 42 years old, 18 years work experience.

Current sources of information and opinions on training: None of them had received any specific tobacco cessation training. Most of them obtain information from journals or the Internet. They mentioned the desire to attend training programs but the consensus was that the programs should be free of charge, as they do not appear to get any financial rewards for offering smoking cessation service.

Barriers to pharmacy-led smoking cessation counselling

When asked about the factors militating against pharmacy-led tobacco cessation, a lack of awareness and time seemed to be the priority. The fact that many do not receive any financial remuneration for services rendered was also mentioned to be a hindrance.

Lack of awareness:

“Personally, lack of awareness is the biggest issue, many smokers they don’t know that we pharmacists can offer these services. There is no awareness!” -male pharmacist 42 years old, 18 years work experience.

Difficulty in identifying smokers:

“We need the smokers themselves to reach out for our help! It is difficult to identify smokers. How do you ask everyone that comes into your premises about their smoking habits? If they

tell you that they are smokers and ask for help it is easier and better! I cannot help anyone who does not ask for my help!” -male pharmacist 30 years old, 5 years work experience.

Lack of incentives:

“Smoking cessation is an unpaid service! There are no financial incentives! And this doesn’t help! It will be better if the clients pay some form of consultation fee! This will serve as an incentive!” -male pharmacist 52 years old, 25 years work experience. “The joy that one derives from helping smokers quit is also an incentive! I am happy when I see patients quit smoking! This is my own incentive!” -female pharmacist 52 years old, 26 years work experience. “If you know your services or you are being appreciated, you will be encouraged, if the government and NGOs recognize and appreciate us and the work we do as pharmacists, it is an incentive.” -male pharmacist 59 years old, 30 years work experience.

Lack of time:

“Time is also another big issue! Smoking counselling takes time! But one way around this is to book appointments for the clients to fit into your schedule as a pharmacist,” - male pharmacist 34 years old, 9 years work experience.

DISCUSSION

This is one of the first studies to assess the attitudes of community pharmacists and their willingness to provide pharmacist-led smoking cessation services in this setting. We observed that the attitude towards pharmacist-led smoking cessation services was generally positive as the majority (68.5%) were willing to provide these services in their pharmaceutical practice even though their knowledge of specific tobacco cessation strategies and medication appeared to be somewhat limited, as suggested by the quantitative survey and supported by the FGD findings. This is consistent with findings reported among pharmacists in Cracow, Sudan, Australia and Indonesia, which also showed that community pharmacists were willing to provide smoking cessation services even though some of them had limited knowledge^{15, 16, 18, 26}.

One model that has been advocated internationally and also in Africa for use by all health care providers in the delivery of brief behavioral smoking cessation interventions is a five-step strategy commonly known as the 5A’s model (Ask, Advise, Assess, Assist and Arrange)¹⁹. We observed that less than half of the respondents in this study had ever heard of the 5A’s of tobacco cessation or the AAR (Ask, Advise, and Refer) approach towards tobacco cessation. This might be because many of them had not received any tobacco cessation specific training

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prior to the survey. Studies in Canada, Malaysia, and Indonesia show that training during and after undergraduate studies is significantly associated with higher levels of knowledge among pharmacists^{16, 20, 27}.

There is abounding evidence that pharmacy-led smoking cessation is useful, cost-effective and often the desired mode of smoking cessation for smokers^{28, 35}, particularly when the intervention is tailored³⁶. However, pharmacists need to be adequately trained in order to effectively offer smoking cessation services within the community. In our study, both the quantitative and qualitative findings highlighted the pharmacists' perceived need for training programs on smoking cessation. In Nigeria, smoking cessation is not a compulsory requirement in the pharmacy training curriculum and its inclusion is at the discretion of the school. We observed that, of those who had received formal tobacco cessation training, in many cases, the trainings took place while in pharmacy school suggesting that a considerable proportion of the pharmacy schools in Nigeria might teach smoking cessation at the undergraduate levels. It may also be worthwhile to consider the mandatory inclusion of smoking cessation in the pharmacy school curriculum as suggested in the FGD. Targeted intervention workshops for pharmacy students have been shown to be effective and may also be considered³⁷. Nicotine replacement therapies (NRTs) are commonly used over-the-counter treatments for smoking cessation^{38, 39}. A Cochrane review noted that NRTs can increase the chance of quitting by as much as 70%³⁸. Community pharmacists have a unique advantage because many NRTs can be used without a doctor's prescription³². While many of the pharmacists in this study were aware of NRTs as a form of smoking cessation therapy, almost one in three pharmacists were unaware. Many of them were also unaware of some of the non-NRTs effective for use in tobacco cessation. This lack of awareness of medications used for smoking cessation may limit the ability of community pharmacists to effectively discuss and provide treatment options to smokers. In addition, the availability of NRTs on pharmaceutical premises was very low. This might be because of the general lack of knowledge about NRTs, however other supply and demand factors may result in the low availability of NRTs as suggested in the FGD. In more developed countries, NRTs are widely available on pharmaceutical premises and are offered to clients who need them³⁹. Initiatives to increase awareness and availability of effective smoking cessation products in community pharmacies should be given priority.

To "Ask" is the first step in the 5 A's brief intervention model.⁹ Inquiry of a clients' tobacco use status is an important step in identifying smokers and offering effective cessation

services. We observed that only 49.6% of our respondents had ever inquired about a client's smoking status while less than half (49.1%) had ever provided some form of cessation support to their clients. Low levels of pharmacist involvement in tobacco cessation was reported in a similar study among pharmacists in Texas, USA⁴⁰. This indicates that a lot of missed opportunities for tobacco intervention may exist. A similar study among pharmacists in Montana, USA showed similar findings with low rates of inquiry of smoking status of clients.^[41] These findings however differ from those reported among pharmacists in Poland where the majority (86%) of the community pharmacists inquired about smoking status and provided both smoking cessation counseling and dispensing of NRT's to their clients⁴².

We observed that most pharmacists were willing to offer cessation-counseling services but many faced barriers, primarily the lack of time and the lack of knowledge, training, and counseling resources. The high cost of smoking cessation medication was reported as the main barrier to prescribing smoking cessation medication for clients. Even in developed countries, similar findings exist, including the study among pharmacists in Montana, USA⁴¹ that reported that the barriers to smoking cessation were primarily a lack of time and training. The lack of reimbursements was also cited as a main barrier, a finding not seen in the quantitative study but suggested in the FGD. Addressing these barriers might be helpful in ensuring that pharmacists provide tobacco cessation services within their communities.

The belief that counseling is the role of health professionals, perceived self-efficacy to engage in effective counseling, and the knowledge of community cessation resources is associated with the provision of smoking cessation services^{11, 24}. Many of the pharmacists (88%) felt it was their duty to provide cessation services, however less than 70% of the pharmacists believed that pharmacists' as a group had the required training to provide either smoking cessation counseling or pharmacotherapy. This is in contrast to findings in Poland where 79% felt they were fully qualified to provide smoking cessation services and provided community based cessation services⁴². Furthermore, an assessment of the factors associated with a willingness to provide smoking cessation services among the respondents was consistent with other studies,^{25, 43} Respondents who believed that pharmacists' had the required training to provide smoking cessation services were more willing to provide these services. This positive belief can be leveraged to engage pharmacists and provide opportunities for training. Only 44.6% of pharmacists had received any formal tobacco related training however many more believed that as a group,

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pharmacists have the required training to serve as effective tobacco cessation providers. This is certainly a surprising finding, as tobacco cessation is not taught mandatorily in Nigerian pharmacy schools but its inclusion in the mandatory continuing professional development (CPD) courses might be responsible for this finding. Another surprising and seemingly contradictory finding in our study was that pharmacists who had received training in the past were not more willing to offer smoking cessation services. This is contradictory to studies conducted in Qatar, New Mexico, Thailand and Indonesia^{16, 17, 30, 35}. It might have been worthwhile to consider the content of the training the pharmacists in our study had received, the human resource capacity, its duration and the length of the training, as these factors may influence the possible effect of the training on attitudes⁴⁴.

Our study has some limitations. First, it is possible that some of the responses were prone to recall bias, as with most studies that assess experiences that have occurred in the past. Secondly, the cross-sectional nature of the study does not allow for any causal inferences. Nevertheless, it does shed some light and provide some useful insights on the willingness and experiences of pharmacists regarding smoking cessation in this setting.

CONCLUSIONS

Awareness of brief intervention strategies is low among pharmacists in this setting. Awareness and availability of smoking cessation medication is also low. Many pharmacists in this setting are willing to provide smoking cessation services within their practice, however many of them have not been trained to do so and desire to receive such training. In developing guidelines for community based smoking cessation, it is recommended that these factors be taken into consideration when providing future training programs for effective pharmacist-led smoking cessation.

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CONFLICT OF INTEREST

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