Smoking Cessation Counseling in Dentistry: Attitudes of Nigerian Dentists and Dental Students

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Abstract: The study was aimed at assessing the awareness, attitude, practices, willingness, and perceived barriers of dental students and dentists in Lagos University Teaching Hospital, Lagos, Nigeria, in relation to smoking cessation in the dental care setting. An anonymous self-administered questionnaire that contained questions relating to attitudes, views, and perceived barriers to smoking cessation activities in the dental clinic was hand-delivered to all dentists and clinical dental students in 2007. One hundred and thirty-six respondents took part in the study (response rate=81.9 percent). Although 95 percent of the respondents believed that smoking affects the dental management of the patient, only 65 percent always ask their patients about their smoking habits, and only 30 percent have heard about smoking cessation programs. A significantly higher proportion of students always ask patients about their smoking habits compared with dentists (p=0.0017). Also, a significantly higher proportion of dentists (97 percent) advised their patients against tobacco use compared with 77 percent of students (p=0.0000). Only 2 percent and 3 percent agreed that it is their professional responsibility to educate or encourage patients to quit smoking, respectively. Also, 98 percent strongly disagreed that it is within the scope of dental practice to ask about tobacco use, and 86 percent disagreed that tobacco counseling can be effective in helping patients quit tobacco use. Perceived barriers reported were lack of time (88 percent), lack of necessary materials (81 percent), and lack of knowledge of smoking cessation (74 percent). However, 81 percent of the respondents said they are willing to undergo training in tobacco use cessation. Since most of the dentists and dental students had poor attitudes and negative perceptions of smoking cessation activities, possibly due to lack of training and resources to carry it out in the clinics, there is need to include smoking cessation training in the dental curriculum in Nigeria.

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The deleterious effects of tobacco use on oral and overall health are well known.1 It has been projected that if the current trend in the use of tobacco is left unabated, it will cause about 450 million deaths worldwide in the next fifty years.2 Tobacco use is associated with serious oral health problems such as oral cancer, oral cancer recurrence, adult periodontal diseases, and congenital defects such as cleft lips and palate in children.3-5

Nigeria is a populous country with an estimated population of 140 million.6 Studies on tobacco use put the overall prevalence of regular smoking among adults at 22.6 percent7 among the general population in 1990 and 17.1 percent among Nigerian secondary school students in 2009.8 Another study reported current and ever used smoking prevalence as 5.7 percent and 23.2 percent, respectively.9 While smoking prevalence in the general Nigerian population in 1998 was 15 percent among males and 2 percent among females,10 smoking prevalence among secondary school girls was found to be 7.7 percent in 2003 and smoking was started at the mean age of 12.6±3.8 years.11 Many of these studies also reported that smokers had a higher incidence of health problems. The increase in the prevalence of smoking among adolescents and young girls is quite worrisome as many adults start their smoking habits as adolescents. Most smokers worldwide begin the habit as a result of peer pressure, juvenile delinquency, perception of status symbol, or emulation of smoker relatives and close associates.12,13 In the face of such data there has been an increasing interest in strategies that might lead to avoidance, reduction, or cessation of tobacco use in Nigeria.

One of the strategies to reduce morbidity and the number of smoking-related deaths is to encourage the involvement of health professionals in tobacco use prevention and cessation counseling. Tobacco use cessation in dentistry is critical to reducing the effect of a major risk factor for both oral and systematic dis-
While taxation and prohibition of advertising have been effective, nonlegislative and cost-effective approaches to cessation should be utilized as well. Randomized clinical trials have found that even brief dental office-based interventions can be effective in motivating and assisting tobacco users to quit. Dentists play an important role in educating patients about health risks of tobacco use and tobacco cessation because of the regular contact many patients have with their dentists.

A 2009 study of the attitudes of Nigerian dental students towards tobacco cessation counseling services reported that only 47.4 percent counseled patients on how to quit smoking, while 61.5 percent of physicians in another study gave brief advice to their patients. A study among pharmacy students reported that 85.9 percent of the students were willing to help smokers to quit. While these few studies have been conducted on smoking cessation activities among health care workers in Nigeria, none of them has reported on the attitudes, practices, and willingness of dentists to provide smoking cessation services in the clinic. Data on dental health care workers’ attitudes, practices, and training would be useful for planning smoking cessation education and services in Nigeria. Therefore, the aim of this study was to assess the attitudes and practices of dental students and dentists in Nigeria in relation to providing smoking cessation in the dental care setting. It also assessed the willingness of dental students and dentists to provide cessation services, the differences between dentists and students, and the likely barriers to the provision of smoking cessation services.

**Methods**

The study area was the dental clinic of the Lagos University Teaching Hospital, Iyi Araba, Lagos, Nigeria. The study group for the study was comprised of the clinical dental students (500 level and 600 level) and dentists practicing at the Lagos University Teaching Hospital. The total clinical dental student population was eighty-five, but only seventy-three of them participated in the study. While the total dentist population was eighty-one, sixty-three of them participated in the study.

A cross-sectional survey that included a convenience sample of students and the dentists working in the hospital was done. A well-structured, pretested, self-administered questionnaire was adapted from Victoroff et al.’s survey. Additional items were developed to determine the practices, barriers, training needs, and willingness to provide smoking cessation services. The questionnaire included sections on demographic data and questions on attitudes, awareness of smoking cessation, willingness to provide cessation services, and barriers to smoking cessation advice in the dental setting. Statements on attitudes focused on three aspects: professional responsibility towards smoking cessation; extent to which smoking cessation falls within the scope of dental practice, using the 5As of smoking cessation; and effectiveness of smoking cessation in the dental setting. Respondents were asked to indicate their level of agreement with statements addressing the three areas. Each statement had a five-point Likert scale response ranging from strongly agree to strongly disagree. The same questionnaires were used for collecting data from the students and the dentists. The questionnaire was pretested on a group of ten clinical students for clarity, and appropriate modifications were made.

The questionnaires were distributed to students during lecture periods and retrieved immediately, while the dentists filled out the questionnaires during clinic hours. All the dentists and students who were present in the hospital over a period of two weeks in 2007 completed the questionnaires. The collected data were analyzed using Epi Info statistical software 2005 version. Descriptive statistics were conducted for all questions and frequency tables generated. Chi-square tests of association were used to assess differences between the students and dentists in all variables. Differences were considered statistically significant at the level of p<0.05.

The study was approved by the Research Ethics Committee of the Lagos University Teaching Hospital. All participants gave verbal informed consent.

**Results**

One hundred and thirty-six respondents took part in the study, giving a response rate of 81.9 percent. The respondents were 53.7 percent students and 46.3 percent dentists, 52.2 percent males and 47.8 percent females. Table 1 shows the demographic details of the respondents.

**Awareness of Smoking Cessation Counseling and Attitudes**

Only forty-one (30.6 percent) of the respondents reported having heard about smoking cessation.
A higher proportion of the dentists (58.5 percent) than students (41.5 percent) had heard about smoking cessation although this was not statistically significant (p=0.058). Smoking cessation was described as counseling and nicotine replacement therapy by 13.3 percent, while 66.7 percent said it was counseling and 6.7 percent described it as group therapy. A high proportion (77 percent) believed that smoking cessation could be carried out in the dental clinic. A significantly higher proportion of the students (86.1 percent) than the dentists (66.7 percent) believed that cessation services can be given in the clinic (p=0.007).

Combined dental students’ and dentists’ responses to questions on attitudes are shown in Table 2. On professional responsibility, none of the respondents strongly agreed and only 2.2 percent agreed that it is the dental professional’s responsibility to educate patients about the oral health risk of tobacco use. Only 2.9 percent of the respondents also agreed that it is the profession’s responsibility to encourage patients to quit tobacco use. On scope of dental practice, most of the respondents strongly disagreed (70.6 percent) or disagreed (27.2 percent) that it is within the scope of dental practice to ask patients about tobacco use. Most respondents (86.1 percent) also either disagreed or strongly disagreed that tobacco counseling in the dental clinic can be effective in helping patients quit tobacco use. There were no statistically significant differences between the responses of the dentists and the students on all the attitudinal questions.

Practice, Perceived Barriers, and Training

Most respondents (94.9 percent) believed that smoking does affect the dental management of the patient, but only 65.4 percent reported always asking about the patients’ smoking habits while 30.1 percent}
percent sometimes ask and 4.4 percent never ask. A significantly higher proportion of students always ask patients about their smoking habits compared with dentists (p=0.0017) as seen in Figure 1. More than three-quarters of the respondents claimed they had advised at least one patient against smoking. A significantly higher proportion of dentists (96.8 percent) than students (76.7 percent) had advised a patient against smoking (p=0.0001).

When asked what factors the respondents thought constituted barriers to providing smoking cessation activities in the dental clinic, the majority of the respondents (88.2 percent) cited lack of time, while 80.9 percent cited lack of necessary materials and 74.1 percent claimed lack of knowledge of smoking cessation. There was no significant difference between the barriers perceived by the dentists and students. A comparison of perceived barriers among the dental students and dentists is shown in Table 3.

Only 3.0 percent of the respondents reported having ever received any formal training on smoking cessation, but 80.9 percent were willing to undergo training. More than a quarter of the respondents (37.5 percent) were very willing or moderately (35.3 percent) willing to provide smoking cessation services while 27.2 percent were not interested. There was no statistical difference between the dentists’ and students’ willingness in providing cessation services (p=0.745).

Discussion

A few limitations of this study should be borne in mind in interpreting its findings. The study population made up of dental students and dentists from Lagos University Teaching Hospital represents a relatively small sample compared to the total population of Nigerian dentists and dental students. Secondly, this study did not evaluate the smoking status of the respondents.

Research from the developed world has found that dentists are in an ideal position to assist patients to reduce or stop smoking altogether. This is because of the regular contact many patients have with their dentists. In the United States, the American Dental Association has promoted tobacco use prevention activities and the Centers for Disease Control and Prevention has highlighted tobacco control activities as a critical element in the effort to reduce oral and pharyngeal cancers, but smoking cessation programs are uncommon in Nigerian dental clinics and as such
have not been incorporated as a routine component of dental care. This is reflected in the low awareness of smoking cessation counseling and its components among both students and dentists. While attitudes of Nigerian pharmacy and dental students towards tobacco cessation have been reported,\textsuperscript{10,17} to our knowledge this is the first study to report the attitudes of dentists to tobacco use cessation in Nigeria. The results of the study have revealed important information about dentists’ and dental students’ attitudes on tobacco cessation activities and gaps in smoking cessation training.

While nearly all the respondents in our study believed that smoking can affect patients’ tobacco use, their attitudes were poor based on all parameters used in assessing attitudes. Most of them did not agree that it is part of the dental professional’s role to ask patients if they use tobacco, advise tobacco users to quit, or discuss the benefits of stopping. At the same time only 4.4 percent of the respondents claimed they never ask about tobacco use during history taking. This is at variance with the findings of Aina et al.,\textsuperscript{10} who reported that 94 percent of pharmacy students agreed that it is their duty as future health care providers to be involved in smoking cessation programs. Most dentists and students routinely ask about smoking during history taking but do not go beyond that. This seems to reflect the fact that most of them do not view cessation activities as a professional obligation or duty. Since students are required to ask about the smoking status of all patients during history taking, this may explain why a higher proportion of students than dentists claimed they always ask about patients’ smoking habits.

It also seems the respondents had doubts about the extent or scope of their professional involvement in cessation activities as a majority of them either strongly disagreed or disagreed that the 5As of smoking cessation fall within the scope of dental practice. The study also revealed the respondents’ doubts about the effectiveness of cessation activities in the dental clinic. Nearly 90 percent of them do not think that tobacco cessation activities in the dental clinic can have an impact on patients’ stopping tobacco use. Moreover, more than 80 percent of the respondents felt their time could be better utilized on other things. This could be a reflection of the low level of oral health human resources in Nigeria, which has been estimated at a dentist to patient ratio of 1:41,000.\textsuperscript{20} As a result of this, dentists (especially in a government-funded hospital where the study was carried out) have to provide care for a large number of patients, most of whom are attending the clinic for emergency oral care and relief of pain. Therefore, spending an additional three minutes to counsel a smoker to quit could be seen as a waste of time, especially in a busy clinic.

About 87 percent of the respondents also agreed or strongly agreed with the statement “It is not worth discussing tobacco use with patients since most people already know they should quit.” These responses suggest that Nigerian dentists and dental students have a negative perception of tobacco cessation activities and their effectiveness. These attitudes are at variance with reports from Aina et al.\textsuperscript{10} who reported the highly favorable attitudes of pharmacy students in the same institution. It is also at variance with studies in developed countries, where dentists report generally believing it is part of their responsibility to help their patients in smoking cessation and/or to prevent tobacco use among their patients.\textsuperscript{21,22} It is worth noting that there was no significant difference between the students’ and dentists’ responses to all attitudinal questions in this study. The reason for this could be because smoking cessation had just been incorporated into the dental curriculum at the time of the study and while didactic lectures had been incorporated, the clinical aspect was yet to be established. Secondly, the dentists who had graduated earlier had not received any form of training in this regard. This is also reflected in the higher proportion of students who believed that cessation could be done in the dental clinic. Therefore, the negative attitude

<table>
<thead>
<tr>
<th>Barriers</th>
<th>Dentists Yes</th>
<th>Dentists No</th>
<th>Students Yes</th>
<th>Students No</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time</td>
<td>56 (88.9%)</td>
<td>7 (11.1%)</td>
<td>64 (87.7%)</td>
<td>9 (12.3%)</td>
<td>0.826</td>
</tr>
<tr>
<td>Knowledge</td>
<td>50 (79.4%)</td>
<td>13 (20.6%)</td>
<td>50 (69.4%)</td>
<td>22 (30.6%)</td>
<td>0.189</td>
</tr>
<tr>
<td>Lack of materials</td>
<td>48 (76.2%)</td>
<td>15 (23.8%)</td>
<td>62 (84.9%)</td>
<td>11 (15.1%)</td>
<td>0.196</td>
</tr>
</tbody>
</table>
toward tobacco use cessation activities among Nigerian dentists could be a result of inadequate training for such counseling in the dental school curriculum.

Ehizele et al. reported lack of training as a barrier to providing cessation services among dental students. The results of our study are similar and indicate a lack of training opportunities in smoking cessation and prevention as a barrier to providing cessation services. Inclusion of cessation in the dental school curriculum and availability of continuing education in tobacco intervention are very important and should be encouraged among oral health care practitioners to enable them have up-to-date information and equip them to play their role effectively in the overall smoking cessation and prevention drive. There is, therefore, a need to provide such training as the respondents are willing to undergo it. The training will need to be didactic, practical, and relevant within the context of the dentist’s day-to-day running of the practice. It has to be aimed at legitimizing dentists’ role in smoking cessation and provide strategies that dentists in Nigeria can use in practice interventions as part of their work.

Several perceived barriers that may limit the involvement of dentists and students in smoking cessation activities have been reported. These include fatalistic and negative concepts of prevention, perceived lack of relevance of smoking cessation to dentistry, patient hostility, and organizational factors within the practice setting. Others are lack of time, fear that such interventions would alienate the patient, perception that smoking cessation is not a legitimate role for a dentist, and lack of training. In our study, lack of time, lack of materials, and lack of necessary knowledge were perceived barriers. There was no significant difference between the barriers reported by the students and the dentists. Lack of time need not be a barrier because simply giving information on the harmful effects of smoking and recommending the 5As of cessation should not take more than three to four minutes. Nicotine replacement therapy is not readily available in Nigeria and may constitute a barrier because its use greatly increases the success rates in quitting, but evidence-based literature has revealed that a brief three minutes of counseling is effective in helping smokers quit and should therefore be included in the dental curriculum in Nigeria. Future actions to encourage the provision of smoking cessation in dental practices need to address the barriers that limit involvement in this necessary area of clinical practice.

Conclusion

Smoking cessation programs are uncommon in dental practice in Nigeria. Our study found that the attitudes of dentists and students are poor towards smoking cessation, including a pessimistic attitude about the effectiveness of smoking cessation counseling to help smokers quit. This poor attitude could be a result of lack of training, but the respondents appeared to be interested in providing this service if trained to do so. We believe that training dental practitioners would improve their knowledge and stimulate dentists to provide smoking cessation services that would positively affect the outcomes of all the dental treatments they provide their patients.

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