



Nigerian family physicians' Knowledge of oral diseases and their attitude to oral health care- a pilot study

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Abstract

Objective: Access to oral health care in most developing countries is poor and physicians may be in a better position to facilitate early detection and prompt referrals for oral diseases in such populations. The objective of this study was to assess the oral health knowledge of family physicians in Lagos, Nigeria and to determine their attitudes to oral health care.

Method: The study was a cross-sectional, self administered questionnaire survey of family health practitioners in fifty randomly selected private hospitals in Lagos metropolis. The questionnaire assessed knowledge on the aetiology and prevention of dental caries and periodontal diseases as well as oral health related behaviour of the physicians.

Result: Eighty-one questionnaires were returned properly filled. Forty-two (51.9%) respondents had ever experienced dental treatments. Nearly all (95.1%) respondents had been consulted by their patients for dental problems. Oral health knowledge was not satisfactory with 54% and 45.7% of them being able to give a correct description of dental caries and periodontal diseases respectively. Physicians who had practiced for ten years or less had better knowledge than those who had practiced for over fifteen years. This was however not statistically significant. Findings also revealed misconceptions about the aetiology of these diseases.

Conclusion: Oral health should be included in update courses for medical doctors especially those designated as primary health care providers. Training curriculum of family medicine practitioners should be expanded to include oral health education

Key words: Oral health, knowledge, behaviour, family physicians

Introduction

The importance of oral health to the general health and well being of the population was recently re-emphasized with the first ever Surgeon General's report on oral health⁽¹⁾. Previously, oral health had been discussed out of context of the general health. Oral health has limited integration into medical education and little time is provided in formal medical education and residency programs related to oral health⁽²⁾. Therefore, many physicians have inadequate knowledge about oral diseases and their prevention. It has however been reported that primary health care providers who care for children have seven times the opportunity that a dentist has to provide oral health screening for children under three years⁽³⁾. Also, older persons are said to be more likely to visit their physicians each year than to see a dentist⁽⁴⁾. Specifically, in most developing countries, oral health services are mostly offered at the regional or central hospitals of urban centres and in Africa, dentist: population ratio is approximately 1:150,000⁽⁵⁾. As a result of this, access to dental care for majority of the population is poor. Physicians are thus in a position to facilitate early detection

and prompt referrals for oral diseases and are probably the first port of call for a patient with oral complaints. This has also been buttressed by the structure of the newly introduced National Health Insurance Scheme (NHIS) in Nigeria, which made physicians the primary providers for dental problems. They are thus saddled with the responsibility to make diagnosis and necessary referrals. This however presumes that these physicians are adequately trained in normal and pathologic conditions of the oral cavity. Physicians may also be a major source of referrals for oral health care in patients who have conditions that have been associated with oral manifestations such as HIV infection and who would therefore benefit from preventive oral health care. It is necessary therefore for physicians to have some basic knowledge of oral diseases and prevention and also to exhibit satisfactory attitude to oral health care.

The objectives of this study were to assess the oral health knowledge of a sample of family physicians in Lagos Metropolis and to determine their attitudes to oral health care

**Methods:**

Study was cross-sectional in nature and was carried out during medical students' family health care postings to private hospitals in Lagos.

It was carried out using an anonymous, self-administered questionnaire hand delivered to family health practitioners in about 50 hospitals in the Lagos metropolis. A total of one hundred and ten (110) questionnaires were distributed.

The questionnaire consisted of two parts; part one had 15 questions on demographic characteristics, dental history of the physicians and any present dental problems and related behavior as well as management of patients' oral complaints. The second part assessed their knowledge of the factors important in the aetiology and prevention of dental caries and periodontal disease. Respondents who claimed to know about dental plaque, dental caries and periodontal disease were requested to respond with their own words to the questions- "What is dental plaque?", "What is dental caries?" and "What periodontal disease is?". Data were analysed with the Epi-info version 6 software and the Chi square test of association was used in testing differences in responses between gender, age group and years of practice. Differences were said to be significant if p was less than 0.05.

Results:

Eighty-one (81) questionnaires were returned properly filled, a response rate of 73.6%. Respondents were aged between 25 and 75 years with a mean age of 36.2 (\pm 9.55). Sixty-six (81.5%) of them were males. Fifty (61.7%) of them had a history of previous dental visits while 42 (51.9%) had experienced any dental treatment. Of the 50 respondents who had dental experience, 20 (40%) had their last dental visit more than five years ago while only 10 had visited the dentist in the last 12 months. A higher percentage of females 41 (73.35) compared with 39 (59.1%) of the males had visited the dentist though this was not significant.

Ten respondents admitted that they had an oral health complaint at the time of the study; 3 of them had pain, 2 had cavities, 1 had bleeding gums while 4 of them felt they needed scaling and polishing. However, when asked of their plans to address the complaints, only 5 of them had plans to see the dentist, 3 of them had taken a form of medication and felt that there was no need for any dental treatment while 2 did no plan to do anything as "it is not serious"

Management of patients' oral complaints:

Of the 81 respondents, 77 (95.1%) claimed to have been consulted at least once by their patients on dental problems. Of these, 40 (51.9%) claimed they referred the patients to the dental clinic, 9 referred to the dentist within their practice and the remaining 28 treated the patients with medications

Oral health knowledge

While 62 (76.5%) claimed to know what plaque was, only 15 (18.5%) could actually give a correct answer. Also 47 (58%) claimed to know what dental caries was and 44 (54%) gave a correct answer and 50 (61.7%) claimed to know what periodontal disease was and 37 (45.7%) gave a correct answer. Oral health knowledge was very poor in

Table 1: Reasons for dental visits and treatments carried out

Reasons	Freq (%) N =81
Pain	16(19.8%)
Cavity/caries	13(16.1%)
Dental Prophylaxis	15(18.5%)
Routine Check	5(6.2%)
Other reasons	7(8.6%)
Treatments received	
Prophylaxis	18(22.2%)
Extraction	16(19.8%)
Fillings	14(17.3%)
Other Rx	6(7.4%)

physicians who had practiced for over 15 years with only one able to give a correct definition of dental plaque. They equally performed poorly in definition of dental caries and periodontal disease compared with physicians who had practiced for between one to fifteen years (**Table 2**).

Tables 3-5 show the factors identified by the physicians as important in the aetiology and prevention of dental caries and periodontal disease.

Dental caries: "not brushing one's teeth" was the most frequently ticked factor by 61 (84%) followed by plaque by 51 (63%) and lack of calcium in the diet, 41 (50.6%). For periodontal disease, the most important factor 'plaque' was identified by less than half of them 39 (48.2%). Other associated factors such as pregnancy, were identified by a very low proportion of respondents.

Attitude towards routine dental visits

Seventy (86.4%) agreed that routine dental visits (in the absence of symptoms) were necessary. On frequency of dental visits, 32 (39.5%) felt twice a year is advisable, 30 (37%) would advise once a year while 7 (8.6%) of them would advise dental visit only when there is a dental problem. Others were not sure.

Table 2. Oral health knowledge according to years of practice

Knowledge	5 year and under	6-15year	16 year and over
Plaque			
Correct	5(13.5%)	9(56.3%)	1(8.3%)
Incorrect	33(86.8%)	7(43.8%)	11(91.7%)
p-value	0.001*	χ^2 -13.64	
Dental caries			
Correct	26(53.1%)	14(77.38%)	4(33.3%)
Incorrect	23(46.9%)	4(22.2%)	8(66.7%)
p-value	0.04*	χ^2 -6.13	
Periodontal disease			
Correct	20(62.5%)	10(90.9%)	7(58.3%)
Incorrect	12(37.5%)	1(9.1%)	5(41.7%)
p-value	0.16	χ^2 -3.56	

NB: Values exclude non responders *Significant



Table 3. Which of These Factors Are Important In Causing Dental Caries?

Possible factors	Frequency (%)
Freq of sugar consumption per day*	29(35.8)
Not brushing one's teeth	68(84)
Amount of sugar consumed per day	23(28.4)
Consistency of sugar consumed*	32(39.5)
Plaque*	51(63)
Being born with weak teeth	12(14.8)
Lack of calcium in diet	41(50.6%)
Lack of vitamin D	27(33.3)

*important factors

Table 4. Which of the following factors are important in causing periodontal disease?

Possible factors	Frequency (%)
Frequency of sugar consumption per day	15(18.5)
Not brushing one's teeth*	44(54.3)
Consistency of sugar consumed	17(21)
Plaque*	39(48.2)
Pregnancy*	13(16)
Being born with weak teeth	18(22.2)
Lack of calcium in diet	30(37)
Hormonal imbalance*	23(28.4)
Do not know	16(19.6)

*important factors

Discussion:

This study supports the claim that Nigerians regardless of education and social class are poor dental attenders. In this group of physicians, 61.7% had ever been to the dentist and only 10(12.3%) had a dental visit in the last 12 months. Less than a quarter of them -18(22.2%) had ever had oral prophylaxis done. This implies a poor attitude to oral health care. In developing countries such as Nigeria, with low oral manpower, family physicians are important means of oral health advice and education because of their access to families from birth to adulthood. It is important thus that perception of oral health need to change from a curative, symptom based service to a prevention oriented system and this should start with their personal oral health care. Although 86.4% of our respondents agreed that routine dental visits are necessary, this does not reflect in their practices and their answer appears to be that which they felt would be socially acceptable. This has been identified as a limitation of questionnaire based studies.

Table 5. Which of the following factors help to prevent dental caries?

Brushing with a fluoride toothpaste*	76(93.8)
Brushing with non fluoride toothpaste	3(3.7)
Avoiding sugary foods*	45(55.6)
Eating fibrous foods	27(33.3)
Going to the dentist*	60(74.1)
Taking calcium tablets	29(35.8)
Use of chewing stick	24(29.6)
Not sure	2(2.5)

* Correct

This study reveals a very poor knowledge of aetiological factors associated with dental caries and periodontal diseases, which may be described as the two most common oral diseases. The respondents tended to have purely idealistic views on the aetiology rather than display real knowledge, for instance more of them chose "not cleaning one's teeth" as important in causing dental caries and very few could identify frequency of sugar consumption and consistency of sugar consumed as important factors. These factors form the basis of dietary advice given to patients to prevent dental caries⁽⁶⁾. There is thus an identified gap in knowledge that needs to be addressed. There are also glaring misconceptions concerning the role of dietary calcium in the development of dental caries. Anecdotally, patients have been prescribed calcium tablets in Nigeria for caries treatment and prevention and findings in this study somewhat give a credence to such anecdote. Knowledge of periodontal disease was worse as only 39(48.2%) identified plaque as an important cause. It has been proved that plaque is the primary aetiological factor for periodontal diseases. Also notably, pregnancy which has been associated with poor gingival health⁽⁷⁾ was only identified by 13(16%) of them. The poor knowledge found in this study is in agreement with a previous study which found that less than 25% of Nigerian doctors sampled could mention three oral manifestations of HIV infection⁽⁸⁾.

The potential for physicians to contribute to the improvement of access for oral health care is confirmed by the finding that nearly all respondents agreed to have been consulted on one oral complaint or the other at least once previously in their practice.

It has been said that the integration of oral health into the primary health care is one way of achieving economically feasible action for oral health⁽⁹⁾. This is especially true in developing countries. This would however be possible only with a change in perception of professional colleagues, policy makers and the public. Physicians had always tended to regard oral health as not in their domain⁽¹⁰⁾ and while they may want to be more involved, traditionally their medical training in oral health is inadequate. However, the finding that doctors who were trained more recently exhibited better oral health knowledge could indicate that physicians are becoming better informed about oral health and diseases. It could also indicate more formal training on oral



health in the medical curriculum compared with what obtained in earlier years.

At the College of Medicine in Lagos, Nigeria, medical students are exposed to about 8-10 hours of oral health training in their final year as part of Principles and Practice of Primary Health care course. It is not adequate enough for them to make the right diagnosis especially since it has no practical/clinical component. It is necessary for physicians to be exposed to better training in oral health care if they are to play a useful role in ensuring oral health care for the population. An example of such innovation is the oral health training programme designed for family medicine residents in Kentucky, in the USA in which residents are trained in oral health screening and risk assessment as well as recognition and management of common oral conditions for children under 5 years⁽¹¹⁾. On a short term basis however, oral health should be included in update courses for Nigerian medical doctors especially those designated as primary health care providers who have been saddled with the responsibility of diagnosing and referring patients with oral health complaints to the dentists under the National health insurance scheme.

Conclusions

Oral health knowledge of Nigerian physicians is unsatisfactory. Their attitude to oral health care is also unsatisfactory and this indirectly would affect the dental referral rate which is needed to improve awareness and utilization of oral health care services in Nigeria. We recommend that oral health should be included in update courses for medical doctors especially those designated as primary health care providers and also advocate for an expansion of the training curriculum of family medicine practitioners in oral health care.

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