



Are Nigerian dentists willing to treat patients with HIV infection ?

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Abstract

Objective: HIV/AIDS is a modern day plague, which is a challenge to dentistry. The willingness of dentists to treat HIV positive patients is crucial in the provision of oral health care to this increasing population of patients. The purpose of this study was to assess the willingness of dentists and factors that influence willingness of Nigerian dentists to treat HIV infected patients.

Method: A descriptive study of two hundred and fifty dentists practicing in both private and public dental clinics in Southwest Nigeria was carried out.

Results: The majority of the dentists (63.6%) expressed willingness to treat HIV infected patients. Willingness of the dentists was significantly associated with gender ($p = 0.021$), awareness of known HIV patient attending the clinic ($p = 0.000$), having treated a known HIV patient ($p = 0.00$), not having fears about HIV ($p = 0.001$) and attendance at postgraduate courses ($p = 0.025$).

Conclusion: Willingness on the part of the dentists in this study is commendable and it is similar to other African countries. However there is room for more improvement, as any form of unwillingness constitutes a barrier to oral health care for the increasing population of HIV infected patients. There is need for continuing education for dentists to remove the fear of acquiring HIV/AIDS occupationally and improve cross - infection control.

Key words: HIV/AIDS, patients, Nigerian dentists

Introduction

HIV/AIDS is a modern day plague, which is evident from its regular mention in both the scientific and popular media. Globally, HIV infection has been reported to affect more than 40 million people, two thirds of who reside in Sub Saharan Africa⁽¹⁾. Nigeria has a low median prevalence, which has been estimated to be 3.9% at the end of 2005⁽¹²⁾. Although HIV prevalence rates are much lower in Nigeria than in other African countries such as South Africa and Zambia, the size of Nigeria's population (128 million)⁽³⁾ meant that by the end of 2005, there were an estimated 2,900,000 adults aged 15 to 49 years living with HIV/AIDS. This is the largest number in the world after South Africa and India⁽¹⁾. Oral manifestations of HIV/AIDS are known to occur in 70 to 90% of infected individuals during the course of the disease⁽⁴⁾ and many of these patients will require dental treatment at different times. Early recognition and management of these lesions will result in earlier therapeutic intervention, which can reduce morbidity, increase the quality of life and life expectancy of the patients. Secondly, such lesions can herald the deterioration of a patient's general health and their physician may be unable to identify subtle changes associated with the progression of the HIV infection. The willingness of dentists to treat HIV positive patients is crucial in the provision of oral health care to this increasing population of patients. This willingness will depend on the knowledge, behaviour and attitude of dentists. Lack of

willingness of dentists to treat HIV positive patients may constitute a major barrier to easy access to oral health care. Surveys have found an increasing number of dental practitioners stating that they were willing to treat these patients⁽⁵⁻¹⁶⁾. Studies in developed countries show a wide variation in the proportion of dentists willing to treat HIV positive patients. Data on Irish dentists indicated that only 41% of them were willing to treat HIV patients⁽⁶⁾. In England and Wales, 52% of dentists were willing to treat patients with a high risk of AIDS and hepatitis while 48% indicated an unwillingness⁽⁷⁾. In the United States the trend favours increased expressed willingness by dentists to treat HIV infected patients. Willingness of dentists was 21% in 1986 and 31% in 1988⁽⁸⁾, 68% in 1989⁽⁹⁾, 73% in 1990⁽¹⁰⁾, and 70% in 1994⁽¹¹⁾. In Canada 81% of surveyed dentists in 1999 were willing to treat HIV positive patients⁽¹²⁾ while in Italy over 65% of dentists were willing to treat HIV patients in a 1994 survey⁽¹³⁾.

Data on dentists in the developing countries also show a wide variation in the proportion of dentists willing to treat HIV positive patients. A 1998 study of Mexico City dentists reported that 74% of the dentists would be willing to treat HIV/AIDS patients⁽¹⁴⁾ while only 44% of Brazilian dentists indicated willingness to treat in 1994⁽¹⁵⁾. In Kenya, 70% of the dentists surveyed in 2001 indicated a willingness to treat HIV/AIDS patients⁽¹⁶⁾. While data on willingness of dentists in Nigeria is sparse, a study on the knowledge and attitude of Nigerian dentists to infectious diseases showed that 64.4% of the dentists were willing to



treat HIV infected patients⁽¹⁷⁾. Some factors have been documented as contributing or influencing dentists' willingness to treat HIV patients. These factors include:

- Knowledge regarding the risk of transmission in the dental setting⁽¹⁴⁾.
- Stage of disease and relationship of the patient to the practitioner. Some dentists are willing to treat asymptomatic HIV patients but not AIDS. Others are more willing to treat known old patients than new Patients⁽¹¹⁾.
- Compliance with infection control techniques^(7,11).
- Number of years since graduation⁽⁷⁾
- Dentists' gender with a significantly greater proportion of males indicating willingness to treat^(7,18)
- Age of the dentists with younger dentists being more willing than their older colleagues⁽¹¹⁾.
- Awareness of having HIV patients in the clinic. Dentists who were aware of HIV patients attending their practices were more willing to treat HIV patients^(9,11)
- Attendance of post graduate courses or seminars⁽⁷⁾.
- Lack of belief in ethical responsibility to treat HIV patients⁽¹²⁾
- Perceived stigma of treating HIV patients⁽¹⁸⁾
- Possible loss of non-HIV infected patients⁽¹⁹⁾ due to refusal to obtain treatment in clinics known to manage HIV positive patients.

The aim of this study was to assess the willingness of dentists in southwest Nigeria to treat HIV- infected patients and the factors that influenced their willingness.

Materials and Method

Participants in this study were practicing dentists in the Southwest geo political zone of Nigeria. The zone has three Dental Schools in Teaching Hospitals located in Lagos (Lagos State) Ibadan (Oyo State) and Ile-Ife (Osun State). These cities also have high concentration of practicing dentists in both public and private sectors.

About 75% of the dentists in Nigeria practice in this zone either in public or private practice. The sample comprised all dentists currently engaged in active clinical practice while those in purely administrative positions were excluded. A self-administered questionnaire which consisted of open and close ended questions covering demographics; willingness to treat HIV infected patients and fears or concerns regarding treating HIV positive patients was used for data collection. The questionnaire was pretested on 20 dentists who attended a revision course at the Lagos University Teaching Hospital and corrections were made before final distribution of the questionnaire.

The questionnaires were delivered personally by hand either by the first author or a colleague to ensure a good response rate.

The completed questionnaires were returned in sealed envelopes, which were provided to retain anonymity as a way of encouraging sincerity on the part of the dentists. The Ethics Committee of Lagos University Teaching Hospital gave approval for the conduct of the study.

Means, standard deviation and other measures of central tendency and dispersion were determined for quantitative variables while frequency distributions were generated for qualitative variables. The chi square test of association was used where appropriate. Difference was taken as significant

at the level of P<0.05. For the purpose of cross tabulation respondents who were not sure they would want to treat HIV patients were regarded as unwilling.

Result

Two hundred and fifty Nigerian dentists who were engaged in active clinical practice in both the public and private sectors in the Southwest geo-political zone took part in the study (response rate of 83.3%). The ages of the dentists ranged between 22 and 50 years, (mean 33.76± 5.93years). Respondents' years of practice ranged between 1 and 24 years. One hundred and seventyone dentists (68.4%) had been in practice for 1 - 10 years. Half of the respondents had attended postgraduate courses or seminars where HIV had been taught in the preceding year. The demographic characteristics of the respondents are shown on Table 1.

Majority of respondents (60.4%) were in favour of treating HIV patients in dedicated clinics, while 139 (55.6%) expressed fears regarding treating HIV- infected patients. Table 2 shows the expressed fears regarding the treatment of HIV patients. While some dentists had expressed more than one fear, majority 46.8% (n= 116) expressed fear of acquiring HIV occupationally.

Table 1. Demographic characteristics of the respondents.

Characteristics	Number	Percentage
Gender		
Male	132	52.8
Female	118	47.2
Age (years)		
20 - 30	83	33.2
31 - 40	131	52.4
41 - 50	36	14.4
Type of practice		
Teaching Hospital	128	51.2
General Hospital	72	28.8
Military Hospital	13	5.2
Private Hospital	37	14.8
Years of practice		
1 - 10	171	68.4
11 - 20	70	28.0
21 - 25	9	3.6
Total	250	100.0

Willingness to treat HIV infected patients Overall, 135 (54%) of the respondents were aware of HIV patients attending clinics where they worked but only (42%) had ever provided dental care for a known HIV patient. One hundred and fifty nine dentists (63.6%), were willing to treat HIV patients, 11.6% were not willing and (24.8%) were not sure they would want to treat them. There was no significant association between willingness of dentists to treat HIV infected patients and age ($X^2 = 2.24, p = 0.325$), years of experience ($X^2 = 0.87, p = 0.6461$) or type of practice ($X^2 = 3.36, p = 0.3393$).

There was a significant association between willingness of dentists to treat HIV patients and gender ($X^2 = 7.73, p = 0.021$). While 77.2% of the male dentists were willing to treat HIV patients, only 55.1% of the female dentists were



willing to treat them. A significant association ($X^2 = 4.99, p = 0.0254$) was found between attendance of courses where HIV had been taught and willingness, as a greater number (70.4%) of those who had attended in the previous year were willing to treat HIV infected patients compared with those who had not attended any course (56.8%). Attendance at courses was significantly associated with awareness of HIV positive patients attending the clinic ($X^2 = 4.65, p = 0.0309$). A greater proportion (56.3%) of dentists who were aware of HIV infected patients attending their clinic had attended courses in the last year compared with dentists who were not aware (42.6%). Table 3 shows attitudinal factors associated with willingness of dentists to treat HIV patients. While infection control practices associated with treating HIV infected patients are shown on Table 4.

Univariate analysis showed that being aware of known HIV patients attending the clinic, having treated a known HIV patient, favour of use of dedicated clinics for HIV patients and fear of treating HIV patients were statistically significant. Only 17 (6.8%) of the dentists had ever refused to treat an HIV infected patient. Figure 1 shows the reasons given by the dentists for refusing to treat HIV infected patients. The commonest reasons given in this study were discriminatory and included: patient was unkempt; patient would not pay extra charge, instruction from superiors and reluctance to use the cavitron for such patients.

Table 2. Fears and concerns expressed by dentists regarding the treatment of HIV patients. (n = 250)

Fears and concerns	Frequency	Percentage
Fear of contracting HIV	116	46.4
Inadequate infection control	43	17.2
Fear of patients avoiding clinic	2	0.8
Patients don't disclose status	1	0.4
Hazard allowance too small	1	0.4
Fear of complications	1	0.4
No fears	111	44.4

* Some dentists expressed more than one fear.

Discussion

HIV/AIDS represents one of the most significant challenges facing dentistry today. Dentists are direct oral health care givers and are expected to have a positive attitude towards the treatment of patients with infectious diseases. In the earliest studies of dentists, few dentists were willing to treat HIV infected patients⁽⁵⁻⁷⁾ but increasing numbers of dentists are being reported to express their willingness to treat them. The Nigerian situation is comparable to those reported from other parts of the world with majority of dentists expressing willingness to treat HIV infected patients. The proportion (63.6%) is similar to the findings in a previous study, which reported that 64.4% of the dentists were willing to treat HIV infected patients⁽²⁰⁾. In this study, 42% of the dentists had actually provided care for known HIV infected patients unlike a previous study on

Nigerian dentists carried out over a decade ago, which reported that none of the dentists admitted knowingly treating HIV infected patients⁽¹⁷⁾. With the increased prevalence and awareness of HIV/AIDS in Nigeria over the years the number of infected patients presenting at the dental clinics have increased and the likelihood of knowingly treating an infected patient is quite high.

Most of the significant barriers identified in this study were attitudinal in nature while infection control practices were not significantly associated with willingness to treat HIV infected patients. Dentists who have provided treatment for known/confirmed HIV patients were more willing to treat HIV infected patients. This could be attributed to desensitisations of phobia where the dentist is able to overcome whatever fears he had once he was able to treat his first HIV infected patient.

Attendance at courses was found to be statistically significant and may be due to increased knowledge gained from such courses. It could also be that those who attended courses were those open to new ideas or those who knew they had HIV patients attending their clinics and decided to gain the needed knowledge for better management of the patients.

Dentists who held the view that HIV infected patients should be treated in dedicated clinics were less willing to treat HIV infected patients. In the present study about 60% of the dentists preferred that HIV infected patients be treated in dedicated clinics. This is an improvement over the earlier study of Nigerian dentists in which 84.8% of dentists held this view⁽¹⁷⁾. While the proportion in this study is smaller than previous studies, it is nevertheless important, as only a minority of the infected patients in the population is known; special units for routine dental treatments may not be appropriate. Routine dental treatment for HIV infected patients are best done by the general dental practitioners in the primary care setting while complicated cases can be referred to specialists.

Table 3. Attitudinal factors associated with willingness of dentists to treat HIV infected patients

Factors	Willing n (%)	Not Willing n (%)	p Value
Awareness of HIV patients attending clinic			
Aware of HIV patients	106 (78.5%)	29 (21.5%)	0.0000*
Not aware of HIV patients	53 (46.1%)	62 (53.9%)	
Past treatment of HIV patients			
Have provided treatment	90 (85.7%)	15 (14.3%)	0.0000*
Never provided Treatment	69 (47.6%)	76 (52.4%)	
Use of dedicated clinics			
In favour of dedicated clinics	72 (47.7%)	79 (52.3%)	0.0000*
Not in favour of dedicated clinics	87 (87.9%)	12 (12.1%)	
Fears and concerns regarding treatment of HIV patients			
Had fears	76 (54.7%)	63 (45.3%)	0.0010*
Had no fears	83 (74.8%)	28 (5.2%)	
Rating of occupational vulnerability			
Low risk	28 (70.0%)	12 (30.0%)	
Moderate risk	61 (67.8%)	29 (32.2%)	
High risk	69 (58.5%)	49 (41.5%)	0.2556

* Significant p value

While the previous study reported that willingness to treat was associated with the age of the dentists this study did not find such an association⁽²⁰⁾. Female dentists were less willing to treat HIV patients than their male counterparts. While many reasons may be put forward to explain this, anxieties among female dentists or a more complacent approach among male counterparts may be implicated. It could also be because of concerns for infection control practices in the dental clinics as 78.8% of the female dentists compared to 68.9% of the male dentists rated the facilities for infection control in their centres as inadequate. The respondents did not seem to have their decision influenced by financial considerations as only 12.1% of the dentists who were unwilling initially indicated willingness to treat HIV patients at extra cost.

It is encouraging that only 6.8% of the dentists had actually refused to treat HIV infected patients in the past. Professional associations have denounced the unjustified refusal to care for HIV infected patients. This attitude could be counterproductive as patients might be forced to withhold information on their status when seeking for care as a strategy to obtain care. This attitude has also been reported among other health care professionals in Nigeria. Nine percent of the health care professionals in a study indicated that they had refused a patient with HIV/AIDS admission and 9% had also refused to care for a patient with HIV/AIDS⁽²¹⁾. The Nigerian Dental Association has not issued any formal guidelines regarding treatment of HIV positive patients or penalties for refusal to treat them.

treating HIV patients.

Willingness on the part of the dentists in this study is commendable although there is room for improvement as unwillingness can be a barrier to oral health care for the increasing population of HIV infected patients.

There is a need for continuing education for dentists to remove the fear of acquiring HIV/AIDS occupationally and to improve their willingness.

Figure 1. Reason given for refusal to treat HIV patients by the respondents.

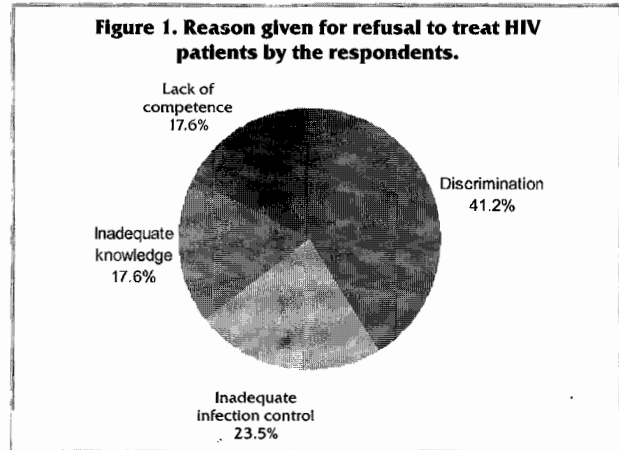


Table 4. Infection control practices associated with Willingness of dentists to treat HIV infected patients

Practices	Willing n (%)	Not Willing n (%)	p value
Use of autoclaves			
Use autoclaves	125 (63.1%)	73 (36.9%)	0.7637
Does not use autoclaves	34 (65.4%)	18 (34.6%)	
Use of dry heat oven			
Use dry heat oven	42 (65.6%)	22 (34.4%)	0.6962
Does not use dry heat oven	117 (62.9%)	69 (37.1%)	
Use of eye goggles			
Always	20 (69.0%)	9 (31.0%)	0.6787
Sometimes	79 (61.2%)	50 (38.8%)	
Never	60 (65.2%)	32 (34.8%)	
Use of gloves			
Use of gloves always	148 (63.5%)	85 (36.5%)	0.9218
Use of gloves sometimes	11 (64.7%)	6 (35.3%)	
Adequacy of infection control facilities			
Adequate	42 (63.6%)	24 (36.4%)	0.9942
Inadequate	117 (63.6%)	67 (36.4%)	

Conclusion

The willingness of dentists in Nigeria to treat HIV infected patients has been found to be significantly associated with gender, being aware of HIV patients attending clinic, having treated a known HIV patient and presence of fears in

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