Preparedness of dental undergraduates for provision of care to individuals with special health care needs in Nigeria

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Abstract

Objectives: To determine the preparedness of dental undergraduates in Nigeria to provide care to individuals with Special Health Care Needs (SHCN), to identify the area of need concerning their education and to provide recommendations for improvement of the curriculum in the areas of deficiency.

Design: Three survey questionnaires were used: Deans of the four dental schools in Nigeria, lecturers teaching the course and final year dental students. Information requested include name and year of establishment of the Dental School, average number of students in the final year, the department responsible for teaching ‘Dental care of patients with special health care needs’, course content, method of teaching and rating of preparedness of the students. The students were asked if they were willing to treat such patients in their future practices, the rating of their course and their preparedness to treat such patients.

Result: 100% response. Teaching is provided by different departments in the four schools; Child Dental Health, Preventive Dentistry and jointly with Oral and Maxillofacial Surgery in one school. The course contents were dissimilar with a variation in hours of lectures. One school did not give the students any hands-on training. Only one Dean and two lecturers felt their students were adequately prepared to provide care to patients with SHCN. One hundred (76.9%) of the students were willing to treat the patients in their future practices while 55 (42.3%) felt they were adequately prepared to treat such patients.

Conclusion: Few dental undergraduates in Nigeria are adequately prepared to provide care for individuals with SHCN. Improvement and harmonisation of the curriculum is suggested to increase student interest.

Key words: Preparedness, undergraduates, special care

Introduction

Individuals with special health care needs (SHCN) are those who have a physical, mental, sensory, behavioural, cognitive or emotional impairment or limiting condition that require medical management, health care intervention and/or use of specialised services or programmes. The condition may be developmental or acquired and may cause limitations in performing daily self maintenance activities or substantial limitations in a major life activity. Health care for patients with SHCN is beyond that considered routine and requires specialised knowledge, increased awareness, attention and accommodation (American Academy of Paediatric Dentistry, 2005).

There are many reports in the literature that such individuals do not receive adequate oral health care, both in Nigeria and other countries (Finger and Jedrychowski, 1989; Kendall, 1992; Oredugba, 2006; Waldman and Perlman, 1997). This is despite the fact that they have poorer oral health and higher unmet oral health care needs than their healthy peers across all income levels (Silver and Stein, 2001). Their oral health problems may arise from oral effects of their systemic conditions, poor muscle control of the cheeks, lips, tongue and neck or side effects of medications such as dry mouth, which may lead to an increased incidence of dental caries and gingivitis. Intellectual disabilities may reduce perception of need for general personal care; physical disabilities
may reduce manual dexterity and so lead to poor tooth brushing skills. Some chromosomal abnormalities such as Down syndrome also make the individual more susceptible to oral infections.

The Commission on the Status of People with Disabilities in Ireland in 1996 stated that people with disabilities have the right to a health service which is fair, accessible and which meets their needs (Commission on the Status of People with Disabilities, 1996). The problem of access has been linked to many factors which include problems/barriers created by patients or parents and caregivers, inadequate government policies, stigmatisation and lack of support by Society and health care professionals (Federation Dentaire Internationale, 1998). The barrier created by oral health care professionals is reported to arise from dental schools which are not providing enough didactic and clinical experience in how to care for people with SHCN (Fenton, 1999).

An earlier study on the knowledge and behaviour of Nigerian dentists concerning the treatment of children with SHCN showed that apart from the challenging behaviour of the patients and the time taken to treat such patients, impediments to delivery of care also include lack of training and exposure of students to this special group (Oredugba and Sanu, 2006). Reports from a National Survey in the United States of America in the last decade and early in this decade showed that more than half of dental schools provided fewer than five hours of classroom presentations and 75% of schools provided 0.5% of patient care time for the treatment of patients with special needs. Also, 50% of students reported no clinical training in the care of such patients and 75% reported little to no preparation in providing care to the patients (Fenton, 1999; Romer et al., 1999; Waldman and Perlman, 2002; Wolff et al., 2004).

There is a continuing global call for improved access to care for this vulnerable group. This can be achieved by educating health care professionals who will be at the forefront of providing care. The objectives of this study were to determine the preparedness of dental undergraduates for providing care to individuals with SHCN in Nigeria, to identify the area of need concerning their education and to provide recommendations for improvement of curricula in the areas of deficiency.

Materials and method

Ethical clearance for this survey was obtained from the Research, Grants and Ethics Committee of the College of Medicine, University of Lagos. Nigeria is in the South of the Sahara with an approximate population of 130 million and four dental schools, all located in the south-west region. The schools are part of the universities and are all located in the vicinity of the corresponding university teaching hospitals.

Three survey questionnaires were employed for this survey one each for: the Deans of the four dental schools in Nigeria, the lecturers teaching the course and the final year dental students. Information requested include name and year of establishment of the dental school, average number of students in the final year, the department responsible for teaching ‘Dental care of patients with special health care needs’, course content, method of teaching and rating of preparedness of the students. The students were also asked if they were willing to treat such patients in their future practices, the reasons for their willingness to treat, rating of their course and their preparedness to treat such patients. The data collected were analysed using descriptive statistics and chi-square test where appropriate. The level of significance was set at p<0.05.

Results

All the Deans, lecturers and students responded to the questionnaires. The dental schools were established in 1967 (Lagos, 1976 (Benin); 1976 (Obafemi Awolowo, Ile-Ife); and 1981 (Ibadan). The Department of Child Dental Health is responsible for teaching care of patients with special needs in three schools, jointly taught by the Department of Oral and Maxillofacial Surgery in one of these three and the Department of Preventive Dentistry in the fourth school, during the final year of the BDS programme.

Two schools give six hours and two schools give four hours of lectures. One school gives one semester of clinical demonstration, two school visits and clinical care for at least two patients with special needs. The number of clinical hours could not be determined in two schools, while clinical training is not provided in one school. One lecturer cited one area of deficiency as insufficient teaching equipment, one reported that patients were not available in the clinic and one felt the curriculum was not well defined. Individuals with disabilities encountered in all the schools are mostly children and adolescents with intellectual or physical disabilities and those with chronic medical conditions.

Only one Dean and two lecturers felt their students were adequately prepared to treat patients with SHCN in their future practices. Others responded ‘limited preparation’ and ‘inadequate preparation’. The course contents were not the same in all the schools. They included definitions of disabilities, impairments and handicaps, medically compromising conditions, drug interactions, various types of disabilities and impairments and their associated oral features. Only one school taught aspects of legislation, rights, ethics, informed consent, restraint, organisations which cater for those with disabilities in Nigeria and care of the elderly.
Two schools also included the American Society of Anaesthesiology (ASA) Classification.

Of the 130 students who responded to the questionnaire 83 (63.8%) were males and 47 (36.2%) females aged 22-33 years (mean 23.05±8.6). One hundred (76.9%) were willing to treat patients with SHCN while 30 (23.1%) were not willing, with no significant gender difference ($p = 0.11$) (Figure 1). Only 7 (5.4%) would treat the patients to improve knowledge, 25 (19.2%) would do so to improve skill and 68 (52.3%) out of sympathy for the patients (Table 1).

Eighty-nine students (68.5%) had either clerked, observed treatment or treated patients with special needs. Only 18 (13.8%) had actually carried out a treatment procedure on one or more patients. Sixteen (12.3%) rated their course as extensive, 72 (55.4%) as fair and 42 (32.3%) as inadequate (Figure 2). Fifty-four (41.5%) felt they were adequately prepared to treat the patients in their future practices while 76 (58.5%) felt they were inadequately prepared (Table 2).

Discussion

The result from this survey showed that dental students are not given adequate training in the care of patients with special health care needs in Nigeria. This is because most of the Deans, lecturers and students felt they were not adequately prepared to do so. This finding is not exclusive to Nigeria, as reports from other countries showed that dental schools typically provide little experience to predoctoral students in treating young children, especially those with complicated needs (Bonito, 2002). Students in another study in the USA also reported a lack of preparation for, and little knowledge of, the dental needs of people with mental retardation (Wolff et al., 2004).

In 2003, the Federation Dentaire Internationale carried out a survey among the Deans of dental schools around the world on the preparation of dental school students to provide services to individuals with special health care needs (Federation Dentaire Internationale, 2003). It was found that although the majority of Deans who responded felt they prepared their students to provide care for those with special needs, most employers of the graduates assessed them as being less competent. It is also observed from the response of the participants in this survey that classroom teaching alone may not be sufficient to prepare dental students for this important role.

Only a few of the students in this study had actually
### Table 2. Students’ self-rated preparedness to provide oral health care for patients with SHCN

<table>
<thead>
<tr>
<th>Gender</th>
<th>Adequately prepared (%)</th>
<th>Not prepared (%)</th>
<th>Total (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>18 (38.3)</td>
<td>29 (61.7)</td>
<td>47 (36.2)</td>
</tr>
<tr>
<td>Male</td>
<td>36 (43.4)</td>
<td>47 (56.6)</td>
<td>83 (63.8)</td>
</tr>
<tr>
<td>Total</td>
<td>54 (41.5)</td>
<td>76 (58.5)</td>
<td>130 (100.0)</td>
</tr>
</tbody>
</table>

Chi sq = 0.26  
P = 0.60

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treated a patient with any type of disability or medically compromising condition. Hence, less than half of the student population felt they were adequately prepared to manage these patients in future. The impediment to delivery of care among dentists is because, as students, they did not have training and/or exposure in caring for those with disabilities and are therefore not emotionally and professionally prepared to do so (National Conference on Dental Care for Handicapped North Americans, 1979). The patient is also fundamental to developing the student’s experience of treatment. This means that hands-on experience in the educational setting produces a greater degree of comfort with this patient population (Marrinelli et al., 1991). Many dental professionals in circumstances where they need to treat patients with disabilities reported being poorly or totally unprepared (Bonito, 2002; Oredugba and Sanu, 2006). Dentists who had had hands-on experience as undergraduates with such patients are less likely to see the degree of disability or behavioural problems as a barrier to dental care and are more likely to express interest in continuing education in this field (Casamassimo et al., 2004).

Just over a decade ago, the Department of Child Dental Health, College of Medicine of the University of Lagos Dental School commenced a series of six hours of lectures on the care of children and adolescents with disabilities. This has been improved upon with the inclusion of visits to institutions for those with disabilities, in order to carry out oral health screening, seminars and clinical care for patients with disabilities, as part of clinical requirements for the final BDS examination. This is a model similar to that developed for the undergraduate curriculum in Hong Kong (Bedi and O’Donnell, 1989). The model is an all-encompassing one, which seeks to remove the barrier caused by dentists’ attitude to provide care for those with disabilities by exposing students to...
all aspects of their care. This includes classroom, clinical and community teaching. The students are able to learn from different perspectives; that of the patient, Society and the health professional.

From the study of Wolff et al (2004), it was shown that students who had experienced working with people with intellectual disabilities reported that they believed they better understood their dental needs. However, most of the students would treat them not to improve knowledge and skill but out of sympathy for the patient. In our environment, most people with disabilities are taken to the hospital only for emergency care, including oral health care; and this could be any health care centre. Since there are no designated places for provision of care for such groups of people, our dental graduates should be well prepared to give care, either in the general or teaching hospitals, health centres or private practices.

There was a proposal by the Special Olympics Special Smiles Program that at a minimum, dental graduates must be competent in providing oral health care within the scope of general dentistry, as defined by the dental school, for the child, adolescent, adult, geriatric, medically compromised and mentally/physically disabled patient (Waldman and Perlman, 2001).

The Department of Child Dental Health is mostly responsible for teaching the SHCN’s course in Nigerian dental schools. Paediatric dentists are primarily responsible for provision of care to children and adolescents and those with SHCN. However as we now have an increasing population of those with disabilities growing into adults, there is a need for an integrated care approach with other departments. Collaboration between dental care and other health and social service providers has also been suggested in addition to this integrated care delivery system, which will lead to the appreciation of each other’s roles in care of people with SHCN.

The conclusion from a study by Holland and O’Mullane in 1986 is that the dental needs of the majority of people with disabilities could be met by final year dental students or house officers, with the remaining needs met by consultants. Key recommendations that have been suggested for the improvement of oral health care also include:

- Disability-equality awareness, including in-service work in the community which needs to be a central part of training of the oral health team
- Continuing education programmes for oral health care personnel involved in providing care to persons with disabilities (Elliot et al., 2005).

These will help to eliminate the communication difficulties which exist between the practitioner and patient/caregiver.

Also included in the terms of reference for the Special Committee on Oral Health and Disability of the Federation Dentaire Internationale, among others, are:

- To convey to the international dental community that giving adequate oral health care to chronically ill and disabled persons should be an obligation and a challenge to the profession
- To make proposal for minimum educational requirements for dental students in the field of disability and oral health
- To investigate all possible ways to facilitate oral health personnel to offer emergency oral health care to disadvantaged groups in developing countries (Friedman and Andersson-Norinder, 2002).

It has been suggested that students must be provided with other opportunities to treat people with intellectual disabilities during the regular curriculum because the patients are not routinely seen in dental school clinics (Block and Walken, 1980). This is similar to one of the reasons given by one of the lecturers as responsible for the inadequate training of the students in one of the schools in this study. In the Lagos Dental School, collaboration has been developed with some institutions for children and adolescents with physical and mental disabilities. They are now seen more often in the dental school clinics by students, house officers, registrars and consultants.

The result of this survey will be shared among the dental schools with the aim of improving the undergraduate curriculum in the area of people with SHCN. It is recommended that:

- There should be harmonisation of curriculum content and teaching methods with more lecture and clinic hours if all aspects of the course are to be covered
- Students should be enabled to have hands-on clinical experience with this group of patients
- Clinics should be equipped with aids and assistive devices which will make provision of care to the patients easier and less time-consuming for both patient and clinician
- Oral health care may be taken to the institutions of people with SHCN with involvement of students, house officers and registrars.

**Conclusion**

It is concluded from this study that few dental undergraduates in Nigeria are adequately prepared to provide care for individuals with SHCN. It is suggested that improvement and harmonisation of the undergraduate curriculum
should be made to include all aspects of the course with the aim of increasing interest, knowledge and skill of students in this field.

Acknowledgement

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