

# A Survey of the Knowledge of Dental Implants as a Choice in Treatment of Edentulous Jaws among Health Workers in Government Dental Clinics in Enugu

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## Abstract

**Background:** Dental implantology is fast becoming a specialty in the field of dentistry. Within the last five decades, dentistry appears to have recorded its most significant advancement in the field of dental implantology. With dental implants, missing teeth can now be replaced with stable, comfortable and natural-looking and feeling artificial replacements. In spite of this length of time associated with the innovation, the awareness and practice of dental implantology in the government dental clinics in Enugu is still aground.

**Objectives:** To determine if health workers in these hospitals were aware of dental implants as a choice for replacing missing teeth.

**Methods:** The survey was conducted using a random sampling with self-administered questionnaires among health workers in the three health institutions in Enugu between January and February, 2009.

**Results:** Out of 320 respondents in the study, only 31 (9.7%) were aware of dental implant, while 23 (7.2%) recognised it as a choice in tooth replacement.

**Conclusion:** The knowledge of dental implants as a replacement choice for missing dentitions is low among health workers in Enugu.

**Key words:** Survey, knowledge, dental implants, health workers.

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## Introduction

The loss of natural teeth is a health problem that is associated with functional, cosmetic and psychological morbidities since antiquity.<sup>1</sup> In order to assuage these problems, various

attempts have been made to replace the lost dentition with artificial teeth (prostheses) that resemble the natural teeth in function and appearance. This solution is often achieved with dentures and fixed bridges.<sup>2</sup> However, in spite of the obvious rapid advancement in the technology of these prostheses, there are problems that are still associated with their use. For instance, there can arise the problem of loose or rocking dentures that may disturb feeding and speech in social

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gatherings. Also, there can be impairment of taste sensation, accumulation of food debris and plaque that will embarrass the patient with offensive oral hygiene. And in the case of treatment with fixed bridges, there is the usual compromise of the adjacent healthy teeth while preparing the abutment teeth for retainers.<sup>3</sup> Problems of recurrent gingivitis arising from faulty gingival margin preparations have also been reported.<sup>4</sup>

Some of these problems often make the patients ask for treatment alternatives to dentures and bridges which would not expose them to the above uncomfortable challenges.<sup>5</sup> Fortunately, restoration of missing teeth with dental implants offers far reaching solution to the problems.<sup>6</sup> Dental implants are stronger, functionally effective and more durable than bridges and dentures.<sup>7</sup>

Apart from the dental surgeons and medical doctors in these health institutions, the nurses, dental therapists, dental technologists, laboratory staff, health attendants and orderlies form a formidable segment of the hospital work-force. Patients and indeed the public have easy access to these health workers either through formal or informal interactions. Through these interactive avenues, they often play the role of health educators in their work places.<sup>8-11</sup> Therefore, their knowledge of the different treatment options available in their hospitals can go a long way to imparting positively to patients' education and choice of treatments. In this paper, a survey of the knowledge of dental implants as a choice for the replacement of missing teeth among the health workers was undertaken.

## **Materials and Methods**

This survey was conducted in three government health institutions in Enugu namely, University of Nigeria Teaching Hospital (UNTH), Enugu State University Teaching Hospital (Parklane Dental Clinic), and Federal School of Dental Technology and Therapy, between January and February, 2009. A total of 320 health workers were randomly selected and given a self administered pre-tested questionnaires. The questionnaires were written in simple English for easy understanding and response, and they contained specific questions on the topic. However, no question on the source of their knowledge of implantology was included and therefore, it was assumed that the internet, health journals, televisions and other unidentified personal efforts were the source of their knowledge. It was ensured that all the respondents recruited into the study had been in their respective jobs for not less than one year. This was to ensure that they had spent enough time in their jobs so as to have acquired adequate knowledge of the treatment options available in their clinics. All the respondents had at least secondary school education.

Statistical analysis was done descriptively using Epi Info Version 332 package.

## **Results**

A total of 320 (91.4%) questionnaires were returned out of 350 administered. This comprised of 140 (43.7%) males and 180 (56.3%) females. The mean age for the males was  $32.6 \pm 13.82$  years while that of females was  $33.6 \pm 13.16$  years. One hundred and seventy (170) respondents (53%) were between the range of 21-20years, 82 (26%) were within 31-40years, 44 (14%) were within 41-50 years while only 24 (7%) were within the range of 51-60 years. A total of 115 (35.9%) respondents had secondary school education while 205 (64.1%) had post-secondary school educations. Eighty

respondents (25%) were nurses, 40 (12.5%) were dental therapists, 33(10.3%) were dental technologists, 50 (15.6%) were medical laboratory staff, 45(15%) were health attendants, while 69 (21.5%) respondents did

not specify their occupation.(Table1). Only 31 (9.7%) respondents had heard about dental implants. Twenty-three (7.2%) respondents had preference for dental implants as a choice in teeth replacement. (Table 2).

**Table 1: Occupational Distribution of the Respondents**

Occupation	Frequency	Percentage
Nurses	80	25.0
Dental therapists	40	12.5
Dental technologists	33	10.3
Med lab staff	50	15.6
Health attendants	48	15.0
Others	69	21.6
<b>Total</b>	<b>320</b>	<b>100</b>

**Table 2: Knowledge and Preference of Dental Implants as a Choice for Teeth Replacement among the Respondents**

Knowledge	Frequency (N=320)	Percentage
<b>Aware of dental implants:</b>	31	9.7
<b>Preferred option for tooth replacement:</b>		
Dental implants	23	7.2
Denture	210	65.6
Fixed bridge	87	27.2

### Discussion

Replacement of missing teeth with prosthesis has received positive evaluation by patients who underwent implant treatments.<sup>5</sup> This positive trend is usually associated with awareness of different replacement options for missing teeth among the population.<sup>5,13-15</sup> Health workers are an integral part of the population and therefore, the poor knowledge of dental implant (9.7%) recorded among them in this survey could be as a

result of lack of practice of dental implantology by dentists in their hospitals. Dental surgeons are known to play a critical role as health-care educators and also in defining the type of treatments that obtain in their clinics.<sup>12</sup> This role is dependent to a large extent on the skill and dexterity of the dentists and also on availability of facilities in their clinics.<sup>13,14</sup> It can be argued that restoration with dental implants was not usually included in the treatment protocols for the

patients and because such treatment modality was not discussed freely in the clinics, the result was the poor knowledge of dental implant among the health workers in the government hospitals in Enugu.

Ramesh *et al.*(2010)<sup>5</sup> reported that the use of dental implants as the only prosthesis or in part to support other dental prostheses is a treatment modality that has received a wide acceptability by patients who have undergone implant treatment. In support of this trend, Giedre *et al.* (2009)<sup>15</sup> reported improved swallow function in their edentulous patients by treating them with fixed implant-supported prosthesis. Dentures and bridges are easily incorporated into the implants in wide edentulous jaws and this leads to improved and sustained oral health. These benefits, apparently, were not enjoyed in the government dental clinics under survey because the dentists did not practise implantology and this was reflected in the poor knowledge of implant as a treatment choice among the health workers.

In resource-deficient centres, dentists are known to perform procedures which patients can easily afford or procedures that are less demanding in terms of skill and dexterity.<sup>16</sup> These less-tasking and less-demanding procedures include extraction of teeth. The edentulous jaws are often treated with dentures and fixed bridges which are less demanding both in skill and facility than dental implant treatment. This 'easy-way-out' treatment modality can explain the better appreciation of dentures (65.6%) and fixed bridges (27.2%) ahead of implants (7.2%) as replacement choice in this study. It was possible that the dentists in these centres had limited knowledge of oral implantology and therefore did not practise it, and in place of it, they did other apparently simpler procedures. The overall effect therefore, was poor

information and poor knowledge of dental implantology among the health workers.

The higher population of female respondents in this study was similar to results reported by other investigators. Udoye and Aguwa (2007)<sup>8</sup> while evaluating oral health related knowledge and behaviour among nursing students at Enugu, found the number of female respondents higher than the male. They argued that this trend was suggestive of women's superior interest over men on matters of health. This trend was supported in a similar study in Iran where Taghizadeh *et al.* (2008)<sup>9</sup> evaluated the knowledge, attitude and practice of Tabriz's school health workers about oral and dental health, and found female respondents in the majority. They argued that women were more active on health matters than the men. This opinion perhaps explained the preponderant female population in our study.

It is the primary concern of dentists to impart positive oral health knowledge and behaviour to the society and this is done through clinic work and organised discussions and lectures. In order to impact knowledge, they need continuing education which will equip them with more skill. We advocate further trainings and workshops for the dentists in the field of dental implantology to increase their knowledge and skill.

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