

Patients awareness and attitude towards dental implants

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Abstract

Aims: The aim of the study was to assess the awareness of the patients regarding implant-retained prosthesis as an option for tooth replacement and the knowledge about tooth replacement as a whole including source of information and attitude towards it amongst Malaysian population. **Materials and Methods:** Information on demographic characteristics, knowledge about implant as an option for missing tooth replacement, source of information and knowledge about other options of tooth replacement were obtained from patients visiting various dental outpatient departments of hospital and private dental clinics using nationwide self-explanatory survey. **Results:** Amongst the 1013 response retrieved, 27% of respondents felt moderately well informed about the dental implant treatment. Only 9% of the respondents had dental implant treatment before and 17% felt well informed about different alternatives of replacing missing teeth. The dentists were the main source of information regarding dental implant treatment modality followed by friends and electronic media. 55.6% respondents felt implant to be as good as own teeth during function whereas high cost was the major limiting factor for implant treatment. **Conclusion:** 56% of Malaysian population was aware of dental implant as an alternative for replacing missing teeth. Necessary efforts and measures should be made to raise the awareness of dental implant treatment in the country.

Key words: Awareness, attitude, dental implants, knowledge, Malaysia

INTRODUCTION

Dental implant is an artificial root that is surgically inserted into the jawbone to support a single tooth replacement, fixed partial, complete denture or maxillofacial prosthesis.

It has become increasingly important^[1,2] as majority of patients treated with implant-supported prosthesis have reported improvement in their quality of life, assurance, self-confidence^[3] including psychological benefits and moreover conservation of the tooth structure adjacent to the teeth to be replaced.^[4] Due to its high success rates and predictability, its clinical implication is increasing rapidly.^[5]

The perspective and outlook of the population towards dental implants are less known. Several studies have been conducted to show the patients' awareness about

implants in different countries. Pommer *et al.* reported 79% of the Austrian population expressed desire for implant treatment.^[1] A survey from Sweden in 1999, reported a histrionic rise in interest of implant treatment to 95% over a period of 10 years.^[6-8] Chawdhary *et al.* reported that the level of awareness of implant treatment was 23.24% in 2010.^[9] Zimmer *et al.* in 1992 demonstrated a high awareness rate as well as general positive attitude toward oral implant therapy.^[10]

Implant treatment is an increasingly popular treatment option with a high success rate. Recently, it has become the focus of the patients' interest hence for dentist, it is vital to assess their level of knowledge

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with regards to dental implants and whether their perception of dental implants does in fact reflect reality in order to guide patients who do not have the education or background knowledge to make an informed decision between implant supported dentures and removable dentures.^[7-10] Overall aspiration for improved oral health related quality of life has become a truth after the arrival of dental implants. Replacement of missing teeth with implant supported prosthesis has been accepted and rated as a positive experience by patients who have undergone implant treatment.^[9,11] Many studies have been done in different parts of the world with regards to the awareness of dental implants as a treatment option. An overwhelming majority of patients with severely compromised local host bone can be offered implant-supported rehabilitation with a very good prognosis and improved esthetics, phonetics and function.^[2,9,12-17] Thus, the aim of the study was to assess the awareness of the patients regarding implant-retained prosthesis as an option for tooth replacement and the knowledge about tooth replacement as a whole including source of information and attitude towards it.

MATERIALS AND METHODS

A survey was conducted through printed and online questionnaire composing of multiple questions with the intention of evaluating dental implant awareness among the Malaysian population in 2012 (May to December). A random sampling method with convenient sample size was used. Questionnaire was prepared both in English and Bahasa Malaysia (local language) to facilitate completion and to get better understanding of the questions by the respondents’.

Most of the hospitals with a dental outpatient department and private dental clinics were included in the study. The questionnaires were handed to the patients during their regular dental visits. All the respondents were informed about the aims and objectives of the study. Those who were not willing to give informed consent were excluded from the study. So out of 1500, only 1013 respondents agreed to participate in the survey with the non-response rate 32.46%.

For the purpose of the study the Malaysian population was grouped according to:

Gender: Male/Female

Age:

- a. 16-20 yrs
- b. 21-40 yrs
- c. 41-60 yrs
- d. 61-80 yrs
- e. 81 yrs and above

Education:

- a. Up to high school
- b. Up to college
- c. Up to university and above

The survey form included self explanatory questions which were in correspondence to previous studies conducted Chowdhary *et al.*,^[9] and Berge *et al.*^[18]

RESULTS

Figure 1[a-c] depicts the characteristics of all the respondents based on their gender, age and education levels. Based on the 1013 responses retrieved, only

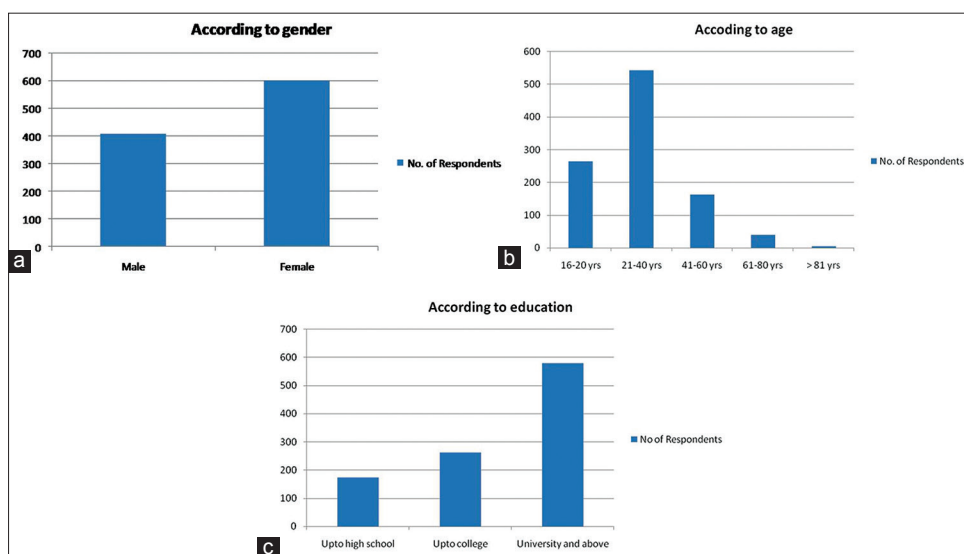


Figure 1: (a) Demographic profile of the respondents according to gender. (b) Demographic profile of the respondents according to age. (c) Demographic profile of the respondents according to education

9% of the respondents had undergone dental implant treatment before [Table 1]. Respondents with age group of 21 to 40 years were most well informed regarding dental implants.

Among the 1013 respondents, 17% were well informed, 41% moderately well informed, 36% poorly informed regarding different alternatives for replacing missing teeth. Most were aware of complete dentures (59%), followed closely by implant supported denture (56%) and partial dentures (55%) as an alternative for the replacement of missing teeth. 113 respondents were not aware of any alternatives given [Table 2]. Only 8% of respondents felt very well informed about dental implant, 14% well informed, 27% moderately well informed and 47% poorly informed as mentioned in Table 3.

47% of the respondents felt moderately well informed regarding the source of information about alternatives for replacement of missing teeth. Most of them stated their dentist (53.6%) followed by friend, relatives, internet, magazine and newspapers as the various source of information regarding dental implants [Table 4]. 69.9% of the respondents wished to get more information about dental implants and of those 72.16% wished it to get from the dentist, 16.5% from internet and 2.96% from friends and relatives [Table 5].

80.5% (816) of the respondents were willing to consider dental implant treatment if needed whereas 19.5% (197) refused for it.

Regarding the advantages of the non-removable vs. removable denture, 51.4% reported 'more comfortable in the mouth', 47.8% defined better in 'appearance' and 55.6% reported that non-removable dentures 'are as good as own teeth during function'. When all the respondents were questioned on disadvantages of implant supported prosthesis most respondents' stated high costs (80.2%) followed by long treatment time, need of surgery and inadequate knowledge as the main limitations of dental implant treatment and the major reasons for refusing such treatment options [Table 6].

DISCUSSION

Replacement of missing teeth by means of implant supported prosthesis for esthetic and functional rehabilitation has turn out to be an established and extensively used treatment modality in dentistry. Among the 1013 respondents in the present study, majority of those who had heard of dental implants were amongst

Table 1: Have you had dental implant treatment before

	N	Percentage
Yes	88	9
No	881	87
No answer	44	4

Table 2: Questions on alternatives for replacing missing teeth

	N	Percentage
How well do you subjectively feel informed about alternatives of replacing teeth		
Very well	46	5
Well	176	17
Moderately well	412	41
Poor	369	36
No answer	10	1
Alternatives for replacing missing teeth		
Implant supported dentures/bridges	571	56
Partial dentures	562	55
Complete dentures	599	59
Bridges (fixed partial dentures)	432	43
None of the above	113	11

People may select more than one option, so percentages may add up to more than 100%

Table 3: How well do you subjectively feel informed about dental implant?

	N	Percentage
Very well	81	8
Well	142	14
Moderately well	274	27
Poor	476	47
No answer	40	4

Table 4: Questions on source of information regarding different alternatives for replacement of missing teeth

	N	Percentage
How well do you subjectively feel informed regarding source of information about different alternatives for replacement of missing teeth		
Very well	28	2.7
Well	207	20.5
Moderately well	478	47
Poor	285	28
No answer	15	1.5
Source of information regarding dental implants		
Television/radio	73	9.5
Internet	267	34.6
Dentist	414	53.6
Relatives/friends	350	45.3
Someone who received an implant	259	33.5

People may select more than one option, so numbers may add up to more than 1013

the 21-40 year age group (54.5%) and with the education of university level or higher (62.3%). This can be attributed to the increased interest in dental treatment amongst the younger generation and changing attitudes

Table 5: Questions on expectations about the source of information

	N	Percentage
Would you like to get more information regarding dental implants		
Yes	709	69.9
No	304	30.0
From where would you like to get information about dental implants		
Television/radio	48	6.81
Internet	116	16.5
Dentist	511	72.16
Relatives/friends	21	2.96
Someone who received an implant	13	1.77

Table 6: Questions on advantages and disadvantages of different prosthesis

	N	Percentage
What do you think are the advantages of non-removable versus removable dentures?		
More comfortable in the mouth	521	51.4
Better appearance	484	47.8
As good as own teeth during function	564	55.6
What do you think are the disadvantages of implant supported dentures/bridges?		
High costs	813	80.2
Lack of knowledge	344	33.9
Need of surgery	384	37.9
Long treatment time	418	41.2

People may select more than one option, so percentages may add up to more than 100%

towards the advancements in medical and dental technology.^[9] Factors such as high level of education coupled with a reasonably higher income and age can influence the findings of this research. Berge *et al.*^[18] conducted a study in Norway and claimed people of ages 45 and above with a high level of education were well informed about dental implants, which is concurrent with the findings of Chowdhary *et al.*,^[9] that stated respondents in the age groups of 25 to 44 with a college or university education were more aware of dental implants in India. In the present study, among the different options to rehabilitate missing tooth, 56% knew about dental implants as a treatment option. The results of the present study were significantly different from the results reported by Zimmer *et al.*^[10] and Berge *et al.*^[18] which reported high level of awareness as 77% and 70.1% respectively.

In the present study, only 47% of the respondents felt moderately well informed regarding the different sources of information about alternatives for replacement of missing teeth. Thus it is imperative to endorse dental implant and upsurge the awareness of such advanced treatment modalities in the society. 53.6% of the respondents stated their dentist as their source of hearing about dental implants followed by relatives and friends, internet, someone who has received an implant, newspapers or magazines. This is

in agreement with Pommer *et al.*,^[1] Chowdhary *et al.*,^[9] Satpathy *et al.*,^[16,19] Mukatah *et al.*,^[20] and Ravi Kumar *et al.*,^[21] all of which stated dentists as the main source of information. This finding is contrary to that reported by a study done in the USA, stating media as the main source.^[18,22] Thus, it is important to promote dental implant treatment, most importantly by means of effective communication between patients and their dentists and other options such as highlighting the usage of dental implants in health related articles in newspapers or health magazines.^[23] As dentist were found to be the major information source, dental education must include suitable implantology courses to provide appropriate and realistic implant knowledge.

51.4% of those questioned reported that non-removable dentures were more comfortable in the mouth, 47.8% defined it to be better in appearance and 55.6% reported it to be as good as own teeth in function. High costs (80.2%), long treatment period (41.2%) and need for surgery (37.9%) were the main disadvantages of the implant treatment according to patients. These results were consistent with the other American and Japanese studies which reported the similar results.^[10,24] As high costs was the main reason not to choose implant therapy, it is vital to highlight the patients that quality of life overshadows high cost of implants. The benefits and drawbacks of different types of treatment modalities should be properly explained so they can make a learned choice.

CONCLUSION

Bearing the results of our study, it is vital to raise the awareness of dental implant treatment in Malaysia. This survey among patients in Malaysia showed that the many of them were unaware about using dental implants as an option for replacing missing teeth. As dentists were the main sources of information regarding dental implants, further efforts should be made by them and the governing bodies to take necessary steps for creating awareness amongst the people. As most of the patients found dental implants treatment to be expensive and unaffordable efforts should be made to reduce the cost of dental implants to a more affordable rate. Adequate awareness and ironic, factual and exhaustive data are the indispensable tools that project dental implant-retained prostheses as the best choice for the tooth and lost maxillofacial tissue replacement. The dentist as a professional has the foremost role to play in this regard, and this can be achieved by executing patient education programmes and counseling centers on dental implant usage and advantages in order to concoct a patient's mind.

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Conflicts of interest

There are no conflicts of interest.

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