



PATIENT KNOWLEDGE ABOUT DENTAL IMPLANTS AND THEIR EXPECTATIONS PRIOR TO IMPLANT INSTALLATION

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ABSTRACT

Objectives: The aim of the present study is to clarify the level and source of information, and the patient's expectations about implant dentistry prior to treatment. **Materials and methods:** Questionnaires were used to collect data regarding implant dentistry from 155 dental patients before receiving their dental implants. **Results:** Out of the 155 dental patients, 83.7% need more information about dental implants. Friends and/ or family were the main source of information for 41% of the questioned patients, followed by the dentist for 31.5% of them. 54.2% of the participants were willing to undergo the treatment if needed, and 43.4% cited high cost as the main reason for refusal of the treatment. **Conclusion:** The results of this study indicated that public awareness and acceptance of implant treatment were moderate. This awareness was limited to general information, and there is a need for more awareness about dental implants. Friends and/ or family were the most common source for patients' information. Dentists should play a role in promoting community awareness about dental implants as they are becoming a more popular treatment modality.

Keywords: dental implants, knowledge, cost, patient information, patient expectations.

INTRODUCTION

There is no doubt that dental health is an important element in affecting esthetics, general well-being and quality of life ⁽¹⁾, and in many cases, implant dentistry could be the best reconstruction option for removable or fixed prosthetics. Nevertheless, the success of treatment critically depends on informed, motivated patients, as effective execution of oral hygiene measures that is essential for stable long-term results. ⁽²⁾ Many studies showed that long term success rate of implants is high ⁽³⁾; and that the patients' esthetics, functional and psychosocial conditions are improved with implant supported restorations in comparison with conventional removable dentures ^(4,5). However, it is important to discuss with the patient all the alternative possible treatment plans. And the discussion must not be limited to the treatment longevity and economic aspects. In fact, the doctor must not forget to discuss

with the patients the potential surgical risks and complications ⁽⁶⁾.

One of the important goals for any dental therapy is a positive patients' satisfaction. In a 10-year retrospective study, more than 90% of patients were satisfied with the function and esthetics of their implants 10 years after treatment ⁽⁷⁾. Moreover, Johansen and his colleagues concluded in a recent study that implant dentistry enhances the overall quality of life ⁽⁸⁾. However, there are only few studies which focused on the patient's information and expectations about implant dentistry before consulting a professional dentist ⁽⁹⁾. Accordingly, due to the shortage and the critical need for such studies, the aims of this study were to clarify the level and source of the information and the expectations of the patients about implant dentistry prior to the treatment.

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MATERIALS AND METHODS

One hundred and fifty five adults over 20 years of age were participated in this study between March 2017 and January 2018. They represent different geographical areas (north, west & center) of Riyadh city, Kingdom of Saudi Arabia. A survey was conducted through printed and online questionnaire composed of 17 multiple choice questions. The items of the questionnaire included demographics, and evaluated patients' knowledge, and expectations prior to receiving implant supported restorations. A random sampling method with convenient sample size was used. The questionnaires were formulated in simple Arabic language and designed specifically for the study to get better understanding of the questions by the respondents. Non-Saudi patients were excluded from the study. A pilot test was performed on 20 patients to evaluate the efficiency of the questionnaire after which the survey questionnaire was finalized. The questions were divided into two parts. The first part dealt with level and source of patient information as well as the need for patient information in the Saudi population, while the second part represented questions related to patients' expectations prior to receiving dental implants. The selected data were analyzed using factor weighting for the variables like sex, age, level of education, net monthly income. Descriptive statistics were generated to summarize the responses.

RESULTS

Study population:

Respondents were compared based on their gender, level of education, marital status, and history of previous implant installation. Of the 155 respondents, 89 were females (57.4%), and 66 were males (42.6%). A total of (57.1%) had a university degree as their highest level of education. A majority of respondents were married (62.7%), whereas a minority were single (37.3%), only (12.4%) of the respondents had undergone dental implant treatment before.

Factors in choice of treatment:

All responses regarding the factors affecting choice of implant treatment are shown in table (1). The most decisive factors in the choice of implant dentistry were satisfactory chewing/function (46.0%), appearance/esthetics (30.4%), or both factors with equal importance (23.6%). The main reason for refusing implant treatment was the cost (43.4%) followed by, fear, treatment time, and lack of information about dental implant.

TABLE 1: Factors in Choice of Treatment

Question	Measure	No %
What is your primary reason for choosing dental implant treatment?	Chewing /function	46.0
	Esthetics	30.4
	Both factors equally	23.6
What are the main disadvantages of dental implant treatment?	Cost	43.4
	Fear of surgery	14.6
	Treatment time	25.7
	Lack of information	9.3
	Other	7

Patient's knowledge about dental implant:

All responses regarding the source of information and knowledge about implant dentistry are shown in Table (2). The first source of information about implant dentistry was the respondent's friends and/or family (41%), almost (30%) of the respondents were first informed through dentist, while internet and newspapers /magazines were other information sources (23%) and (6.5%) respectively. Again, the most useful information regarding implant dentistry was provided most often by friends (43.7%), followed by the dentist (31.5%). Only a few responses indicated other sources, including the internet, television, or radio.

According to the respondents (56.5%) of those within their social circle (friends /family) had received dental implant treatment, and their experiences were almost exclusively positive. A

total of (27%) the respondents reported that they had little knowledge about implant dentistry, whereas (38.3%) believed they had intermediate knowledge.

TABLE 2: Level and Sources of Information about Implant Dentistry

Question	Measure	N (%)
How were you first informed?	Dentist	29.5
	Friends/acquaintances	41
	Newspapers/magazines	6.5
	Internet	23
Where did you get the most useful information?	Dentist	31.5
	Relatives/friends/acquaintances	43.7
	Television/radio	7.4
	Newspapers/magazines	5.3
	Internet	12.1
Has anyone in your social circle (friends/family) been treated with implants?	Yes	56.5
	No	27.3
	Do not know	16.2
Have you heard about experiences with implants from friends or acquaintances?	Yes, very positive	48.5
	Positive fairly	48.5
	Yes, negative experiences	3
How much do you know about treatment with implants?	Very good	17.5
	Good	38.3
	Weak	27.3
	Do not know	16.9
Do you want to learn more about dental Implant?	Yes	83.3
	No	16.7

Expectations about dental implants:

All responses regarding patients` expectations prior to receiving implant are shown in Table (3). The respondent`s expectations of time needed to complete implant treatment ranged between 1day and 1 year. However, most of responders (50%) believed that 6 months would suffice. Similarly, their beliefs about how long the implants could survive showed that (43.4%) thought it can survive through their lives, and (27%) believed that implant survival ranges between 5 and 10 years.

Regarding implant hygiene, (28.6%) of the respondents believed that implants would require the

same level of hygiene as natural teeth, and (24.7%) answered that implants would require even greater hygiene measures. To assess the level of patients` general knowledge about dental implant, they were asked how implants were anchored in the jaw. (43.5%) of the respondents answered “in the jawbone”, while (27.3%) thought that implants are placed in the gums”, (5.2%) of the respondents believed that implants are carried by “the neighboring teeth”, and (24%) did not know.

Regarding the treatment options for replacing missing teeth, (54.2%) of the respondents preferred dental implant, (19.6%) of the respondents indicated fixed prostheses, while (23.5%) did not know the best option, and only (2.7%) of the respondents chose removable denture.

TABLE 3 : Expectations prior to receiving implant

Question	Measure	No %
How long do you think dental implant treatment will require from first examination until your prosthesis is finished?	1 year	24
	6 months	50
	1 day	1.3
	Do not know	24.7
How long do you think you can retain your implants?	The rest of my life	43.4
	Between 10 and 20 years	18.4
	Between 5 and 10 years	27
	Between 1 and 5 years	11.2
What do you believe about care of dental implant as compared to natural teeth?	Similar to natural teeth	28.6
	Require more care than natural teeth	24.7
	Do not know	46.7
Where do you believe dental implants are placed?	In the jaw bone	43.5
	In the gums	27.3
	On the adjacent teeth	5.2
	Do not know	24
What is the best prosthetic option to replace lost teeth?	Removable denture	2.7
	Crown /bridge	19.6
	Dental implant	54.2
	Do not know	23.5

DISCUSSION

Replacement of missing teeth by means of implant supported prosthesis for esthetic and functional rehabilitation has turned out to be an established and extensively used treatment modality in dentistry. Accordingly the aim of the present study was to assess the extent of knowledge and expectations of Saudi Arabian patients about dental implants prior to implant installation. In brief, patients chose implants mainly to improve function and secondarily esthetics. Cost was the main cause of refusing implant treatment. Overall, the patients exhibited a moderate knowledge level about implant dentistry, and friends and/or family were the most common source of patients' information about implant treatment followed by the dentists. Among the 155 respondents in the present study, the majority of those who had heard of dental implants (43.1%) were amongst the 20-29 year age group, and (57.1%) were educated to a university level or higher. This can be attributed to the increased interest in dental treatment amongst the younger generation and changing attitudes towards the advancements in medical and dental technology. In a line with previous findings^(1,9,11), the primary reason of choosing implant treatment was chewing/function. These results agreed with the fact that the main clinical benefit gained with an implant supported restoration is greatly improved function particularly when compared with conventional removable dentures.

Typically, another important aspect in the choice of implant dentistry is cost. In the present study, (43.4%) of the respondents stated that cost is the main cause of refusing the treatment, while the risk of surgery and the treatment time were the second most common disadvantages. This finding is in line of the finding of previous studies showed that the cost was the most frequently mentioned reason for not considering implant treatment.⁽¹⁴⁾ The contribution of dentists in patients' knowledge was relatively low; and (41%) of the respondents had their knowledge about dental implants from

friends and/or family that corresponds with the findings reported by several others.⁽¹¹⁻¹³⁾ However, this is different than what were published by Zimmer et al. who showed that the media was found to be the main source of information about dental implants.⁽¹⁴⁾ On the other hand, other studies revealed that the dentist continues to be the most important source of information about dental implant.^(9,10)

Participants in this survey appeared to be motivated to accept implant treatment by their personal communication with the members of their social circles as around (97%) of them had a positive experience with their previous implant prosthesis. This was agreed by several studies in which most of the patients were recommended to have implant treatment by their friends or relatives.^(9,14) Around (83%) of the dental patients questioned in this survey were interested in having more information about dental implants. This indicates the real need for dental education about dental implants.

The responses regarding how long the patients believed the treatment would take until it was completed revealed considerable uncertainty. This is understandable in view of the many options and procedures that are currently available. For the same reason, a referring general practitioner cannot—and should not—give specific information with regard to treatment time⁽⁹⁾. In other trials, (9.1%) of patients already fitted with implants complained about the duration of operation time.⁽¹⁰⁾

The patient's expectations about implant treatment were mirrored by the responses regarding the longevity of prosthetic restorations supported by implants. As many as (43.4%) of the respondents optimistically estimated the durability of implants to last for the rest of life, and (57.1%) thought that implants could survive for less than 20 years. These results were similar to what was concluded by Simensen et al that most of the patients expected long survival rate for implant treatment.⁽⁹⁾

The patient's unsatisfactory low level of knowledge was evidenced by their incomplete under-

standing of the importance of implant-focused oral hygiene measures as (28.6%) of the respondents believed that the implants would require the same level of hygiene as natural teeth. However, those who claimed to be most knowledgeable were more likely to respond that the implants needed more cleaning than natural teeth. Furthermore, only (43.5%) of those questioned correctly cited the jawbone as the host site for implants, which reveals incomplete or incorrect information about dental implants even when being aware of this treatment option.

In accordance with previous studies ^(9,14), only (2.7%) of the subjects chose removable prosthesis as the best treatment in replacing missing teeth, which confirms the fact that most patients do not prefer removable prosthesis in replacing their missing teeth regardless of the clinical situation they have. Most of the patients felt that implants (54.2%), followed by fixed prosthesis (19.6%) gives better function and appears more natural.

CONCLUSION

The results of this study indicated that public awareness and acceptance of implant treatment were moderate. This awareness was limited to general information, and there is a need for more awareness about dental implants. Friends and/ or family were the most common source for patients' information. Dentists should play a role in promoting community awareness about dental implants as they are becoming a more popular treatment modality.

ACKNOWLEDGMENT

The author gratefully acknowledge Miss. Haya AlSebaei-dental assistant intern- for her great help in the distribution of the questionnaire.

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