

Knowledge, Awareness, and Attitude toward Dental Implants among Patients Attending a Comprehensive Medical Care Center in Jordan

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Abstract: *This study was conducted to assess the knowledge, Awareness, and Attitude toward Dental Implants in a randomly selected group of Jordanian patients and compare it with findings from other studies. 350 questionnaires were distributed between December 2022 to February 2023 to patients attending a primary health care center in Amman, Jordan. The final sample includes 280 respondents. Respondents' ages ranged from 18 to 74 years. The majority (85%) of respondents agree that it is necessary to replace missing teeth. (71.4%) of respondents chose implant as the best option for replacing a missing tooth. The primary source of participants' information about the dental implant is the Internet (36.4%). Most participants (70.7%) thought that placing a dental implant is an invasive procedure. (39.3%) of participants indicated that dental implant needs More care than natural teeth. (30.7%) of respondents had no idea about the life span of dental implants. (55%) reported that the cost is the main barrier against dental implant treatment. The majority (77%) wanted to get more information about dental implants. There is a lack of knowledge regarding certain aspects of dental implant therapy among the participants. It is strongly recommended that dentists educate their patients about dental implants and clarify the procedure.*

Keywords: Dental implant, Awareness, knowledge, Jordan

1. Introduction

A dental implant is one of the treatment modalities for replacing a missing or nonrestorable tooth in which an alloplastic structure mimicking the natural root is inserted into the mandible or maxilla to support a removable or fixed prosthesis.

Modern dental implantology has its roots in 1965 when Dr. Branemark, an orthopedic surgeon, placed the first dental implant made of titanium in the human body based on his previous experiments on the femur bone of rabbits. However, historical studies showed that ancient civilizations like Maya and Egyptians used different materials like pieces of shells, bamboo pegs, and carved precious metals to restore missing teeth (1).

In the last two decades, the increased use of virtual surgical planning and surgical guides as well as the advancements in dental implant technology have improved the predictability and success rate of dental implant making this option of treatment more popular (2).

There have been a number of studies conducted in various parts of the world to investigate the knowledge and awareness of dental implants among the general population, with varying results; however, there have not been any such studies conducted in Jordan. As a result, we carried out this study to evaluate the knowledge and awareness of dental implants in a randomly chosen group of Jordanian patients and compare it with findings from other studies.

2. Materials and Methods

This research was a cross-sectional questionnaire-based study, which was carried out in the period between December 2022 to February 2023. Questionnaires were randomly distributed to 350 patients attending a primary health care center in Amman, Jordan. Institutional ethical approval was obtained before the beginning of this research.

The questionnaire consists of eleven questions, three questions about the participants' demographic information, two questions about treatment for missing or nonrestorable teeth and the prosthetic options, and six questions regarding the participants' knowledge, awareness, and attitude toward dental implants.

The questionnaires were translated from English to Arabic, the local language, and were self-filled by the participants. Participants completed the questionnaire while waiting for their appointments in medical and dental clinics.

Exclusion criteria include individuals below 18 years and questionnaires that were partially filled out.

The data were obtained, and the results were analyzed using Microsoft Excel software.

3. Results

Out of the 350 distributed questionnaires, 310 participants answered the questionnaire with a response rate of (89%); furthermore, 30 questionnaires were excluded according to the previously mentioned criteria yielding a final sample of 280 respondents.

The respondents' ages ranged from 18 to 74 years, with a median age of 35.09 years ± 13.47; of them, (45.7%) were male, and (54.3%) were female.

The majority of respondents (85%) agreed that it is necessary to replace missing teeth.

(71.4%) of respondents chose implant as the best option for replacing missing teeth, (27.1%) chose Fixed prosthesis, and (1.5%) preferred removable prosthesis.

As shown in Figure 1, the primary source of participants' information about the dental implant was the Internet (36.4%), followed by dentists (30.7%), Relatives (25%), TV and radio (7.9%).

As demonstrated in Figure 2, the majority of participants (70.7%) thought that placing a dental implant is an invasive procedure, (15.7%) had no idea, and only (13.6%) indicated that implant insertion is not an invasive surgery.

The next question was about participants' opinions about the required care and hygiene of dental implants compared to that needed for natural teeth. Table (1) summarizes participants' answers to this question.

Regarding the lifespan of a dental implant, the participant's answers varied where (30.7%) of respondents had no idea, (25%) of them thought it would last long life, (23.6%) thought it would exist for more than ten years, (14.3%) said that it would survive for 5 to 10 years and (6.4%) thought it would last for less than five years.

The following question was about barriers against dental implant therapy; Table (2) shows the detailed answers to this question.

The last question was about participants' desire to get more information about dental implants, and the answers showed that (77%) wanted to get more information and (23%) did not want.

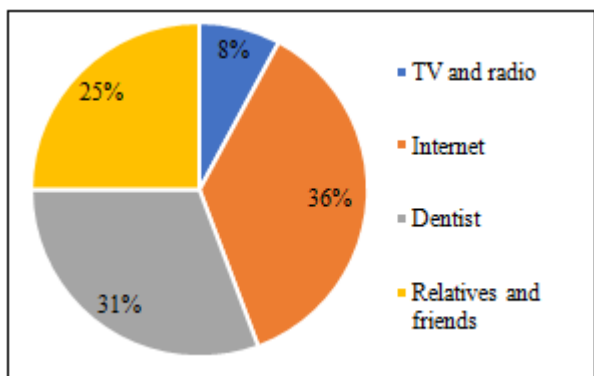


Figure 1: Source of information about dental implants

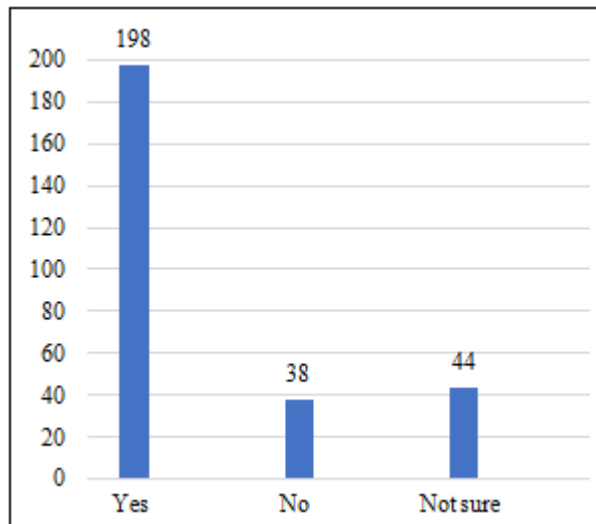


Figure 2: Participants' answers to the question: Do you think that placing dental implant is an invasive procedure?

Table 1: Participants' answers to the question: Do you think that dental implants require special care compared with natural teeth?

Answer	Number	Percentage
Less care than natural teeth	20	7.1%
Same care like natural teeth	101	36.1 %
More care than natural teeth	110	39.3%
No idea	49	17.5%

Table 2: Participants' opinions about barriers against dental implant therapy

Answer	Number	Percentage
Cost	154	55%
Surgery	36	12.9%
duration of treatment	44	15.7%
No idea	46	16.4%

4. Discussion

Teeth play an important role in a variety of physiological processes, including speaking, eating in addition to esthetic and self - esteem, as a result, tooth loss can have serious negative effects on both oral and overall health. Nowadays, with the recent advances in the technology and surgical techniques of dental implant procedure, restoring a missing or non restorable tooth by a dental implant is recognized as the gold standard treatment modality, however it has been found that some people are still unaware of the advantages of dental implants and do not seek them out for treatment.

In the present study, most of the participants (85%) thought it is crucial to replace a missing tooth and When asked about the best option for tooth replacement, the majority (71.4%) said that an implant is the best option, which is similar to a study conducted by Pommer et al. (3), who reported that (79%) of the interviewees preferred dental implants as an alternative for replacing teeth, Narby et al. (4) also found a dramatically increased desire of dental implant over ten years longitudinal study on a Sweden population.

The current survey revealed that the participants' most popular information source for dental implants (36.4%) was the Internet. This finding may be explained by the

widespread use of the Internet and its accessibility in our country, Jordan, where (88%) of the people, according to a recent Data Reportal platform report utilize the Internet. Similarly, according to Zimmer et al. (5), the Internet and the media were the primary sources of information regarding dental implants.

There is a discrepancy between earlier studies about the primary sources of information about dental implants. Prabhu et al. (6), Sinha et al. (7), Hosadurga et al. (8), Alshamari ST et al. (9), stated that dentists were the essential source of information. However, in the present study dentist were the second source (30.7%) of participants' information. Akawgawa et al. (10) reported that dentists were the source of information for only 20% of participants in their study. These findings recommend that dentists should be more involved in raising public awareness of dental implants through educational initiatives or by using various media to disseminate information. In contrast to our findings, Rehman et al. (11), Alajlan A et al. (12), Awooda E et al. (13), and Suwal et al. (14) reported that friends and family were the primary sources of information about implants.

The results of the present research revealed that the majority of participants lacked sufficient knowledge about dental implant surgery, with (70.7%) of participants assuming that implant placement is an invasive procedure. This suggests that dentists should explain the procedure to patients and calm any fears they may have about it.

In the present study, (39.3%) of subjects said that dental implant needs more hygiene and care in comparison with natural teeth while (36.1%) believed that caring for implants is similar to caring for natural teeth. A number of previous researches looked at participants' perceptions of the level of hygiene necessary for dental implants in comparison to natural teeth, with different results; Tepper, Gabor, et al. (15) found that only (44%) of respondents believed that implants require special oral cleanliness, whereas Alajlan A et al. (12) showed that (34.5%) of patients thought that the implants need more care than natural teeth. However, according to a study by Alanazi et al. (16) (66%) of respondents indicated that dental implants require more maintenance and hygiene than natural teeth.

When asked about the expected lifespan of dental implant, most (30.7%) of participants had no idea, and only (25%) of participants thought that implant last long life. In a similar manner, Ozcacr Tomurk et al. (17) found that (33.0%) of respondents said implant survive a lifetime, and (15.6%) had no answer. Alshammari ST et al. (9) also revealed that (34.60%) of the respondents assumed implant durability would be a lifetime. interestingly, Faramarzi et al. (18) revealed that (70.7%) of the patients had no clue about theimplant'sdurability.

The cost was the main barrier against implant therapy in the present study as indicated by (55%) of participants which agrees with the majority of similar previous researches conducted Zimmer Faramarzi et al. (18), Tepper, Gabor, et al. (15), Alshammari ST et al. (9), Pommer et al. (3)

In the current survey, we found that majority of respondents were interested in receiving more information about dental implant which is in consistent with previous studies performed by Tanvir Met al. (19), Alshammari ST et al. (9), Awooda E et al. (13), Al - Johany S et al (20).

Once more, this demonstrates the importance of dentists' roles in educating patients and increasing their knowledge about dental implants.

5. Conclusion

There is a lack of knowledge regarding certain aspects of dental implant therapy among the participants. The Internet is the primary source of information for participants regarding dental implants. It is strongly recommended that dentists educate their patients about dental implants and clarify the procedure.

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