Prevalence of Implants in Jeddah City and socio demographic factors associated with it.

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Abstract:

Introduction:

In the past two decades, dental implants have become a widely accepted and implemented therapeutical method to replace missing teeth and support fixed and partially removable prostheses. High long-term survival rates have been reported both for systemically healthy (cumulative survival rates of 83.8% after 25 years, 96.1% after 10

Methods:

This retrospective study was conducted in the Dental college of Jeddah. In this study, all the dental implants which were placed during June 2017–April 2018 the patients having dental problem included in this study.

Results:

34% of the dental patients undergoing the Implant Process, males are dominating

Conclusion:

These findings provide valuable information for workforce development and for the implant industry to allocate resources for the anticipated future demand among patients eligible for implant treatment yet not receiving it.

Introduction:

Dentistry is a continually evolving branch of medicine that is significantly affected by technological developments. The goal of modern implant dentistry is to restore physiological function, comfort, aesthetics, speech, and health to individuals who have missing teeth. Tooth loss is mostly caused by decay, by failed root canal treatment, by inflammatory loss of periodontal tissue, or by fracture. In the past, single tooth loss was usually treated with a three-unit fixed partial denture, filling the gap with a pontic which was supported on both sides by the abutment teeth. This treatment, also known as a fixed bridge, is not necessarily the optimal solution, as it requires crown preparation of the abutment teeth. As a result, these

teeth are more susceptible to decay and gum disease, which can lead to further tooth loss or denture failure [1-5]

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As per Rehaf etal in KSA , (12.7%) patients who had at least one dental implant, (5.3%) had one implant, (5.4%) had 2-4 implants, (1.5%) had 5-8 implants, and (0.4%) had >8 implants. [10]

There is a general impression that use of implants has been increasing, and market research indicates that the overall number of implants used has been increasing. What has not been documented is the temporal trend in the proportion of patients receiving implants when they are missing teeth. Evaluating current and future trends in the prevalence of implants is important for understanding potential health disparities in access to this treatment and could also assist in the allocation of health care resources. [11-14]

There are many related factors affecting implant failure. First, group of factors are host related, second, related to implant placement site-related factors, third, related to surgery-related factors and fourth are implant fixture-related factors and fifth are implant prosthesis-related factor. Age and gender of the patient, smoking habits, systemic disease, and oral hygiene are host-related factors. Position in arch, quality, and quantity of bone are implant placement site-related factors. Initial stability, angulations and direction of implant and the skillfulness of an operator come under surgery-related factors. Surface roughness, length and diameter of dental implant, macrostructure and microstructure of an implant fixture are implant fixture-related factors. Type of prosthesis, retention method, and occlusal scheme are implant prosthesis-related factors.[3-4]

The main aim of the study to find out the prevalence of dental implants in Jeddah city and factors associating with it.

Methods:

This retrospective study was conducted in the Dental college of Jeddah. In this study, all the dental implants which were placed during June 2017–April 2018 the patients having dental problem included in this study. The inclusion criterion was: All patients missing at least one permanent tooth were included in the study. Missing tooth means: tooth is absent (partially edentulous or fully edentulous). The exclusion criterion was: All patients who had only one or more missing third molars were excluded from the study. The term prevalence of dental implants was used in this study to indicate the number of patients who had at least 1 dental implant among all of those with at least 1 missing tooth. Data was entered in the SPSS ver.20 for analysis. Descriptive and inferential statistics was obtained. Chi-square and t test was used to measure the significance differences at 5% level of significance.

Results:

Table 1:

Total Patients	223	100%
Patients undergoing the Implant Process	75	34%
Patients NOT undergoing the Implant Process	148	66%

Table 1 depicted that 34% of the dental patients undergoing the Implant Process
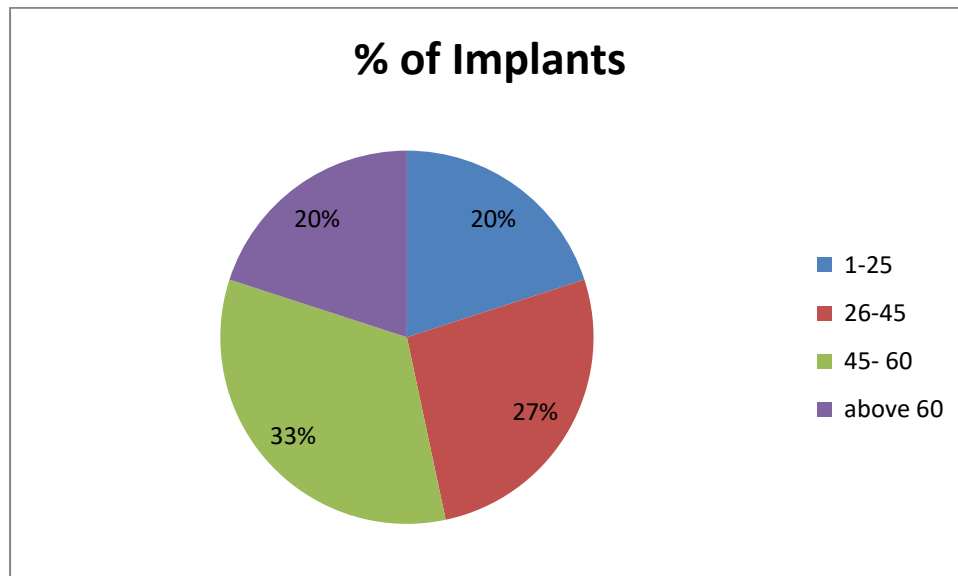
Figure 1:

Figure 1 depicted the age groups and implants , 33% of the implants patients lied in the age range of 45-60(years)
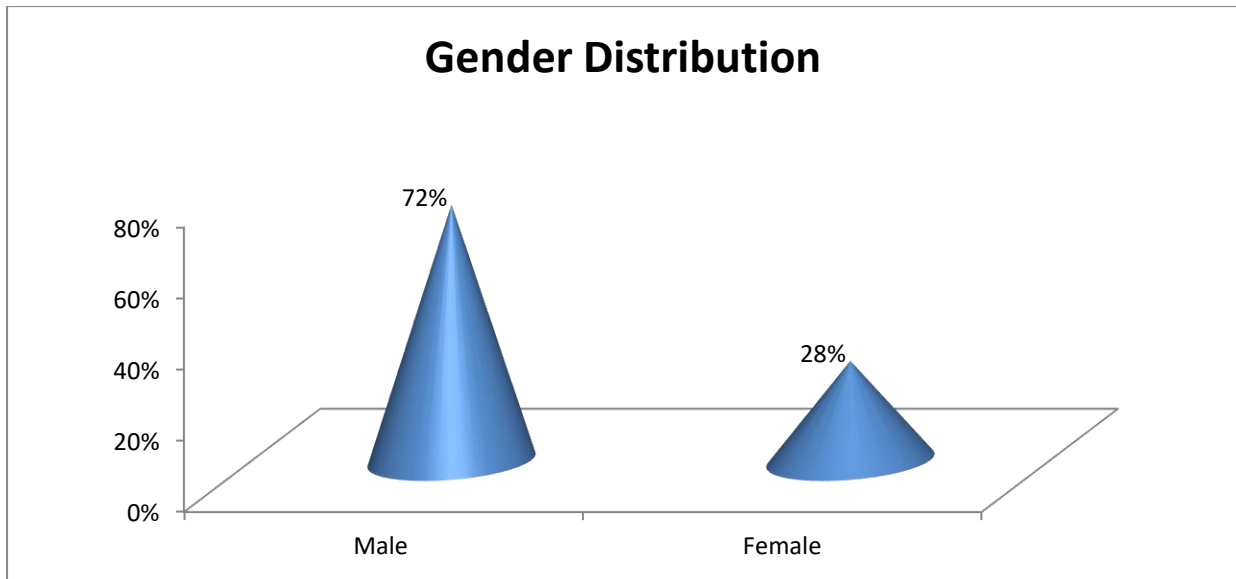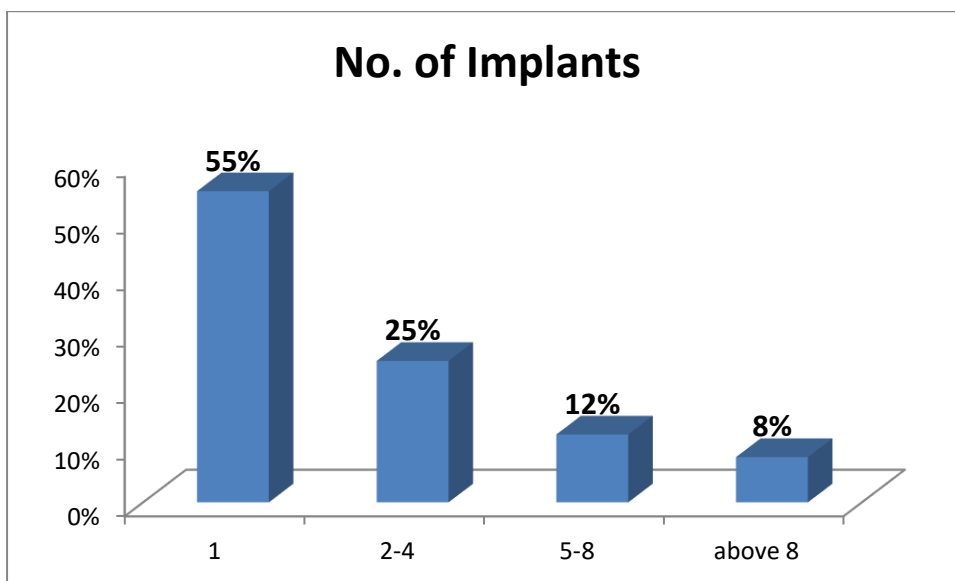
Figure 2 :

Gender Distribution

Figure 2 depicted that 72% were males while 28% were females.

Table 2:

	Implants	Non Implants	Total
Smoking	45	15	60
Non smoking	30	133	163
Total	75	148	223
p=0.0001			

Table 2 depicted that smoking had a significant relation with implants.

Figure 3:

No. of Implants

Maximum number of implants were 1 (55%)

Discussion:

Little information is known about the prevalence of dental implants among different populations including Saudi Arabia. Therefore, it's important to keep searching in order to find out the common global phenomena and in order to help implement effective health policies

Recent advancements in the field of dentistry have revolutionized the use of dental implants. Thus, missing teeth can be well managed. Nowadays, there is increase in demand for dental implant. However, failures in implants are also common. We found that maximum implants were seen in age group above 45-60 years of age. It has been match able with other studies.

Busenlechner *et al.* stated that smoking in the patients also increased the rates of implants in the patients. [12-18]

In contrast of Roberto Carlos etal, we observed males are more as compare to females, may be due to the culture of Saudi Arabia.

Alkan et al. found that, of those patients with implants, 43.9% had only one implant, 27.3% had two implants, 18.2% had three or four implants, and 10.7% of implant patients had five to eight implants.[17] In addition, Alkan et al. study and the present study were consistent and found that patients treated with single-tooth implants were the majority of all implant patients which is inline with our study. Some study reflect that patients were doing smoking have greater chance to lose the teeth early. [19]

Our study was inline with previous Saudi base studies stated that Of the (12.7%) patients who had at least one dental implant, (5.3%) had one implant, (5.4%) had 2-4 implants, (1.5%) had 5-8 implants, and (0.4%) had >8 implants

Conclusion:

These findings provide valuable information for workforce development and for the implant industry to allocate resources for the anticipated future demand among patients eligible for implant treatment yet not receiving it.

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