



## Original Article

## Know-How and Preferences of Prosthesis among General Dental Patients after Extraction

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## ABSTRACT

Tooth loss is physically and emotionally a traumatizing event as it gives a feeling of being handicapped just as any other part of the body. **Objective:** To assess the level of knowledge among dental patients regarding options and benefits of dental prosthesis. Moreover, it was also focused to analyze the level of awareness among patients regarding the consequences of non-replacement of missing teeth. **Methods:** A cross sectional qualitative descriptive study was conducted among general dental patients visiting University Dental Hospital (UDH), University of Lahore, who have undergone extraction and willing for rehabilitation. The sampling was done with non-probability purposive sampling technique. A self-structured questionnaire with 24 close ended questions was used. Questionnaire was divided into two sections; Section A consists of 9 questions regarding patient's demographic data and section B comprised of 15 close ended questions regarding patient's chief presenting complaint leading to dental extraction and prosthesis preference. **Results:** Majority of the patients (43%) revealed that pain was the main reason for extraction. A major bulk of the patients (37%) opted rehabilitation of missing teeth to attain masticatory efficiency. Patients who were aware of the consequences of non-restoration of missing teeth (60%) outnumbered those who were not having this awareness. Majority of the respondents (37%) preferred fixed prosthesis as a replacement option. **Conclusion:** Dentists play a very vital role in oral-dental rehabilitation of the patients therefore restoring a healthy mind within a healthy body. The majority of the patients are keen on getting missing teeth replaced mainly for comfortable mastication.

## INTRODUCTION

Every tooth in a man's head is more valuable than a diamond written by world's prominent novelist of Spanish language Miguel De Cervantes Saavedra. This is fairly a true statement because teeth are segment of the face which is most pleasing to the eye [1]. Healthy teeth play a vital role in keeping a good and healthy life style [2]. Tooth loss is physically and emotionally a traumatizing event as it gives a feeling of being handicapped just as any other part of the body [3]. It also exerts a significant impact on person's quality of life by causing esthetic, functional and social damage. Thus eventually every patient feels the desire to rehabilitate the loss tooth [4]. Rehabilitation is a person centered process depending on patient and dentists goals and preferences. According to WHO, "Rehabilitation is a set

of interventions designed to optimize functioning and reduce disability in individuals with health conditions in interaction with their environment" [5]. The oral- dental rehabilitation encompass several levels of oral therapy, usually dentist misunderstands oral rehabilitation as the restoration of only teeth in the oral cavity [6]. Decision on getting the missing teeth replaced is related to patient's level of education and economic condition. Education is considered a potent tool for promoting general health related issues in patients to make them aware of consequences of missing teeth [7]. Different replacement options for missing teeth used in past were removable partial dentures, fixed partial denture and complete denture, however implant supported prosthesis are used

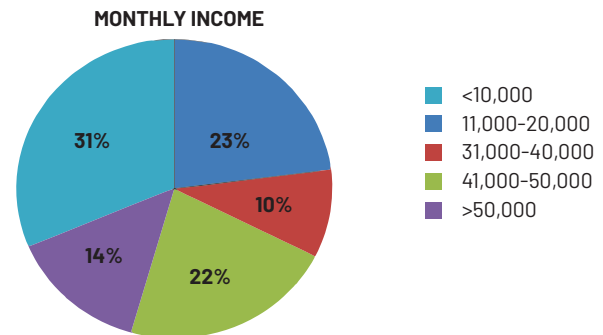
now a days for better aesthetics along with comfort [8]. The choice of prosthetic option depends on multiple factors including socioeconomic status, demographic features like age, gender and level of education [1]. The purpose of the current study is to assess the level of knowledge among dental patients regarding options and benefits of dental prosthesis. Moreover it was also focused to analyze the level of awareness among patients regarding the consequences of non-replacement of missing teeth.

## METHODS

A cross sectional qualitative descriptive study was conducted in UDH from September 2021- April 2022 on patients who have undergone extraction and were willing for rehabilitation. The sampling technique used was non probability purposive sampling. The research was conducted following the approval of Institutional Ethical Committee, University of Lahore. Informed consent was taken from all patients. Inclusion criteria was comprised of patients with one or more missing teeth (except 3rd molar) and willing for prosthesis while children with extraction of primary teeth and patients with existing prosthesis were excluded from this study. A total of 305 structured questionnaires were distributed to patients fulfilling the inclusion criteria. The questionnaire contained 24 close ended self-constructed questions. The questionnaire was divided into two sections; section A contained 9 questions regarding demographic data which includes age, gender, occupation, residence (rural/urban), level of education, socioeconomic status, physical disability and treatment sector. Section B included 15 questions to evaluate the purpose of extraction and prosthesis preference of patients.

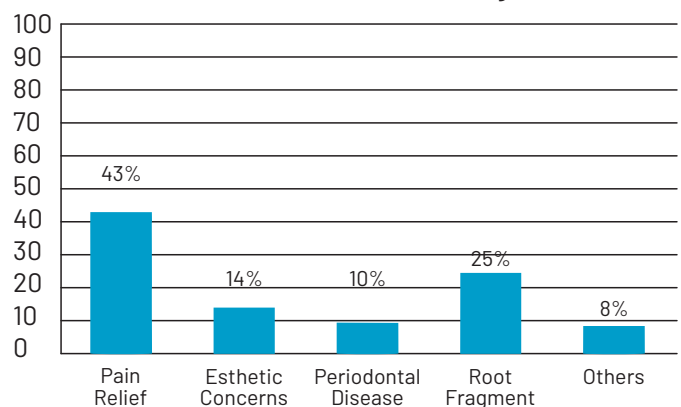
## RESULTS

A total of 305 patient participated in the study out of which 43% (n=131) were male and 57% (n=174) were female. Largest portion of respondents were between the ages of 20-29 with majority (n=109, 36%) had bachelor level of education. Most respondents were from the urban population and did not have any physical disability. Most people (n=109, 36%) had bachelor's degree. Patient's economic status was also taken in account. Patients visiting the UDH belonged to a moderately high economic status 14% (n= 43) or high economic status 31% (n=94) with monthly income of 41,000 to 50,000 Pakistani rupees and >50,000 Pakistani rupees respectively (Figure 1).



**Figure 1:** Economic status of patients

A large number of patients (n=210, 69%) included in the study preferred to visit private sector hospital for treatment and 85% (n=259) preferred to visit hospital setup over private clinics for dental treatment. Patients in present study preferred getting extraction because of high cost and more time consumption in other restorative procedures such as a root canal treatment. The most common reason for tooth extraction for the respondents in the present study was for pain relief (n=131, 43%), followed by extraction of remaining tooth fragments/root (n=76, 25%), esthetic concern (n=43, 14%), periodontal disease (n=31, 10%) and other reasons (n=24, 9%) (Figure 2).



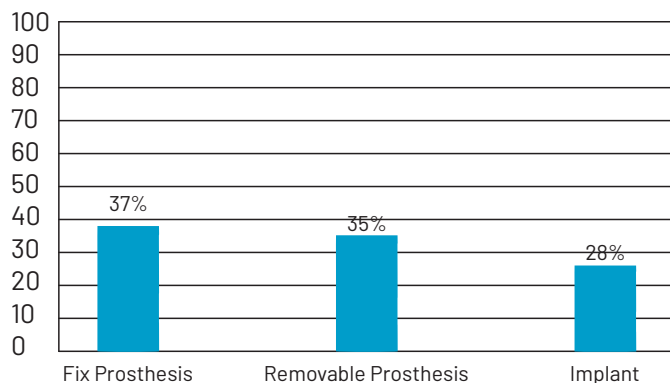
**Figure 2:** Causes of tooth extraction

A significant proportion of patients (n=241, 79%) agreed that they were provided with adequate information regarding prosthesis option by their dentist whereas only 21% (n=64) denied of getting any information from the dentist. Regarding benefits after rehabilitation, most patients (n=119, 39%) believed that rehabilitation improves masticatory efficiency, lesser number of patients (n=79, 26%) were of the opinion that it provides better esthetics, (n=61, 20%) were of the opinion that it improves confidence and significantly less respondents (n=46, 15%) thought of other benefits. Majority of respondents (n=198, 65%) had previous knowledge regarding prosthetic option after extraction and nearly 35% (n=107) had no previous knowledge regarding prosthetic option. A major bulk of patients (n=220, 72%) believed that their financial status determine the type of prosthesis they opt while only (n=85,

28%) thought that the decision is not dependent on financial status. Nearly half of the total respondents (n=162, 53%) reflected that their fear of any possible complication play a role in determining the type of prosthesis they prefer while 47% (n=143) didn't have this opinion. A significant number of respondents (n=177, 58%) thought that number of missing teeth influence their prosthetic option while a lesser proportion of respondents (n=128, 42%) did not think the same. Furthermore, larger number of the participants (n=177, 58%) claimed that their previous dental experience influence their rehabilitation decision while 42% (n=128) thought their previous dental experience have no influence on their decision. Almost half of the participants (n=134, 44%) believed that their decision is influenced by their peers whereas a greater number of participants (n=171, 56%) thought that there is no influence of peers on their decision. (Table 1)

| Questions  | Yes (%)   | No (%)    | Total |
|--|-----------|-----------|-------|
| 1. Did your dentist provide you with adequate information regarding prosthesis option? | 241 (79%) | 64 (21%)  | 305   |
| 2. Did you have any previous knowledge regarding prosthesis option after extraction?   | 198 (65%) | 107 (35%) |       |
| 3. Does your financial status determine the type of prosthesis you opt for?            | 220 (72%) | 85 (28%)  |       |
| 4. Does your fear of complication determine the type of prosthesis you opt for?        | 162 (53%) | 143 (47%) |       |
| 5. Do you think number of missing teeth influence your prosthesis option?              | 177 (58%) | 128 (42%) |       |
| 6. Does the duration of rehabilitation influence in any way influence your decision?   | 164 (54%) | 141 (46%) |       |
| 7. Does your previous dental experience in anyway influence your decision?             | 177 (58%) | 128 (42%) |       |
| 8. Does your decision in anyway is influenced by your peers?                           | 134 (44%) | 171 (56%) |       |

**Table 1:** Frequency of patient's responses regarding knowledge of dental rehabilitation



**Figure 3:** Patient's preference of rehabilitation option

## DISCUSSION

Teeth play a significant part in maintaining a healthy body and a positive self-image. Tooth loss is very disturbing and displeasing life event, which may affect facial esthetics [3]. Following the loss of one or more teeth, patient may suffer negative effects which significantly reduce the quality of life affecting the patient socially, physically, emotionally

and psychologically thus requires a major social and psychological readjustment [9]. The present study was conducted to evaluate the level of knowledge among dental patients regarding options and benefits of dental prosthesis. Furthermore it also focused on the consequences of non-replacement of lost teeth. Considering the demographic information, most of the participants were female which is similar to the findings of Hakam et al., where more than half of the participants were female [7]. The age group with the most participants was between 20-29 years of age which shows that tooth extraction is very common in young individuals which is consistent with the findings of Preetinath where majority of the participants were between 20-30 years of age [10]. Patients with low economic status prefer extraction of tooth because of high cost of alternative conservative treatments. In the present study the most common reason for tooth extraction was to relieve pain, stated by 43% (n=131) of patients, which is in contrast to the results of Al Qudah et al., and Passarelli et al., where caries in younger patients and periodontal diseases in elderly patients were the main causes of extraction [11, 12] Destruction of tooth structure due to caries and failure of restorative procedure indicate extraction. Second common cause for extraction in the present study was extraction of remaining tooth fragments/ root (25%, n=76) which is in line with finding of Al Jafar et al., [13]. Other reasons stated by the patients in present study were periodontal disease, orthodontic treatment, esthetic concern and caries. Most common site of tooth extraction in existing study was posterior region of dental arches which is consistent with the finding of Al Jafar et al., and Sahibzada et al., where common site of extraction were posterior region of both arches as mostly caries appear in the posterior segment due to multiple reasons such as bad oral hygiene, food impaction or bad dietary habits [13, 14]. In assessing patient's knowledge regarding consequences of tooth extraction, 43% (n=131) of patients were aware of masticatory impairment which is similar to the result of Dosumu et al., where 42% of patients faced masticatory impairment [15]. Other consequences such as social awkwardness, speech impairment and esthetics were also of concern in the present study. Having the knowledge of these consequences, majority of the patients (74%, n=226) decided to have dental rehabilitation which is in line with the finding of Jayasinghe et al., where 76.2% were in favor of replacing missing teeth [16]. Moreover a large number of the participants (60%, n=183) in the current study agreed that they have knowledge regarding consequences if no restoration of missing teeth done which is similar to the finding of Benetti et al., where patients in general agreed to the consequences of no treatment [17]. In response to prosthetic options, a larger

number of respondents (64%, n=195) answered that they have knowledge regarding different dental rehabilitation options which is somewhat similar to the result of Hussain et al., [18] where 60% respondents were aware of the prosthetic options and in contrast to the findings of Hakam et al., [19] where only 17.8% respondents were aware of replacement options. In the current study majority of the participants (72%, n=219) stated that their financial status determine the type of prosthesis they opt which is in contrast to the result of AlQuran et al., where the treatment cost is an important factor for only 27.5% of the participants as majority of the participants in the study were with high income [20]. A large number (79%, n=241) of the participants in the current study declared that dental professionals were the main source of information regarding prosthesis option which is line with the findings of Tomruk et al., where majority of the patients stated the same [21]. Regarding the choice for each treatment modality, the main determining factor in existing study was duration where majority of the participants (54%, n=164) express their concern about longer duration of treatment; this result is in contrast to the finding of Al Quran et al., where fewer participants, only 38.5% had concern about the duration of treatment [20]. In present study (37%, n=113) of the participants preferred fixed prosthesis as an option for rehabilitation which is in contrast to the result of Kumar et al., where 63% of the patients believed that fixed prosthesis is a better option [22]. Only 28% (n= 85) of patients showed implant as a treatment of choice which is in contrast to the finding of Kumar et al., where 48% participants showed positive attitude towards implants [22]. Nearly half of the respondents (44%, n=134) in present study stated that their decision for tooth replacement was influenced by their peers which is in line to the findings of Amjad et al., where family and friends were significant motivators for tooth replacement [9].

## CONCLUSIONS

The findings of the present study significantly reveal that majority of the patients were willing to get the missing teeth replaced essentially for efficient masticatory function. Participants of the study had knowledge and awareness regarding different prosthetic options. There were a small number of respondents who felt that replacement of missing teeth was not required probably because they were not well informed about the consequences of not replacing the missing teeth.

## Conflicts of Interest

The authors declare no conflict of interest.

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