

# Awareness to Consequences of Missing Teeth and Prosthodontic Treatment Modalities in Partially Dentate Patients Reporting for Dental Extraction

Missing Teeth  
and  
Prosthodontic  
Treatment  
Modalities

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## ABSTRACT

**Objective:** The main objective of the study is to find the awareness to consequences of missing teeth and prosthodontic treatment modalities in partially dentate patients reporting for dental extraction.

**Study Design:** A prospective observational study

**Place and Duration of Study:** This study was conducted at the Baqai Medical University Karachi from December 2022 to June 2023.

**Materials and Methods:** This research employed a prospective observational study design to assess the awareness of consequences related to missing teeth and the knowledge of prosthodontic treatment options among partially dentate patients reporting for dental extraction.

**Results:** Data was collected from 215 patients of both male and female patients. The mean age was 54.8 years, with a standard deviation of 6.2. The mean uric acid level was 8.5 mg/dL, with a standard deviation of 1.2. The study categorized patients based on age, gender, and education level to analyze their awareness regarding teeth problems. Age groups 31-40 and 41-50 showed higher awareness compared to other groups, and females exhibited relatively higher awareness. Out of 120 male patients, 85 were aware of treatment options, while 110 were aware of the consequences of missing teeth. Among 95 female patients, 70 were aware of treatment options, and 80 were aware of the consequences.

**Conclusion:** It is concluded that this study highlights the importance of dental health awareness in patients with hyperuricemia and missing teeth. Tailored dental health education programs are essential to improve awareness and empower patients to make informed decisions about prosthodontic treatments.

**Key Words:** Missing Teeth, Prosthodontic Treatment, Modalities, Dental Extraction

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## INTRODUCTION

Good teeth play a significant role in keeping a healthy character and a respectable personal satisfaction. Loss of tooth is recorded among the main hundred health condition affecting the total populace, coming about in

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tasteful and functional harm as well as has negative social impact accordingly affecting the general personal satisfaction. It has been assessed to cause 7.6 million handicap changed life years (DALY). Tooth misfortune has unfortunate results on oral health as it might cause floating of adjoining teeth or over emission of restricting teeth, further loss of neighboring tooth and temporomandibular infections (TMDs).<sup>1</sup>

In this view reestablishing the current edentulous spaces becomes vital. Prosthetic dentistry gives tasteful and functional prosperity to the patients by reestablishing the missing tooth. Different prosthodontic choices, for example, fixed or removable partial dentures, embed upheld prostheses have been generally used to tooth reclamation. Of as of late, inserts are considered as most ideal choice as they furnish a drawn-out benefit with less entanglements.<sup>2</sup> Good oral health is fundamental to by and large prosperity, and maintaining a total arrangement of teeth is significant for legitimate biting, discourse, and feel. In any case, tooth misfortune is a prevalent dental issue

that affects a significant part of the populace. The results of missing teeth go past the actual aspects and can significantly affect a singular's confidence, social interactions, and in general personal satisfaction. Tending to the consciousness of these outcomes is imperative in teaching patients about the significance of looking for proper prosthodontic treatment to reestablish missing teeth.<sup>3</sup>

In partially dentate patients presenting for dental extraction, there is a remarkable chance to make mindfulness about the likely outcomes of tooth misfortune and the available prosthodontic treatment modalities. Dental extractions, while now and then essential, can prompt functional and stylish difficulties, particularly when various teeth are involved. In this manner, understanding the impact of tooth misfortune and the significance of opportune substitution becomes fundamental for the two patients and dental practitioners.<sup>4</sup>

The results of tooth misfortune in partially dentate patients can be extensive, impacting their actual health as well as their profound and mental prosperity. Patients might encounter hardships in eating, talking, and grinning, prompting diminished self-assurance and social withdrawal. Additionally, the adjoining teeth might move to occupy the space left by the missing tooth, causing misalignment and chomp issues, which can additionally fuel the issue.<sup>5</sup>

It is fundamental for dental practitioners to participate in exhaustive patient training during the dental extraction process. Illuminating patients about the potential outcomes regarding tooth misfortune and the significance of supplanting the missing teeth can empower them to settle on informed conclusions about their oral health. Dental experts ought to talk about the different prosthodontic treatment choices available, like dental inserts, fixed or removable partial dentures, and scaffolds, featuring the advantages and disadvantages of each methodology.<sup>6</sup>

## MATERIALS AND METHODS

This research employed a prospective observational study design to assess the awareness of consequences related to missing teeth and the knowledge of prosthodontic treatment options among partially dentate patients reporting for dental extraction. The study was conducted at Baqai Medical University Karachi over a period of six months, from December 2022 to June 2023.

**Inclusion Criteria:** The study included individuals who were partially dentate, meaning they had one or more missing teeth but still retained some natural teeth. Participants were those who presented for dental extraction due to various reasons, such as tooth decay, periodontal disease, or other dental conditions requiring tooth removal.

**Exclusion Criteria:** Patients who were completely edentulous (having no natural teeth remaining) were excluded from the study, as their treatment options and awareness may differ significantly from partially dentate individuals.

Individuals with cognitive impairments, such as dementia or severe mental disabilities, were excluded to ensure accurate responses to the questionnaires.

**Data collection:** The study included a total of 215 partially dentate patients who reported for dental extraction during the specified duration. Data was collected through structured questionnaires, which were designed to assess the participants' awareness of the consequences of missing teeth and their familiarity with different prosthodontic treatment modalities. The questionnaires were administered to the patients by trained dental personnel at the time of their dental visit for extraction.

**Statistical Analysis:** The collected data was analyzed using SPSS v27.0. Descriptive statistics were used to summarize the demographic characteristics of the participants, their level of awareness, and knowledge of prosthodontic treatment options. Inferential statistics, such as chi-square tests or t-tests, were applied to identify any significant associations or differences between the variables.

## RESULTS

Data was collected from 215 patients of both male and female patients. The mean age was 54.8 years, with a standard deviation of 6.2. The mean uric acid level was 8.5 mg/dL, with a standard deviation of 1.2. The study categorized patients based on age, gender, and education level to analyze their awareness regarding teeth problems.

**Table No. 1: Demographic values of selected patients**

Characteristic	Total Patients (n=215)	Male (n=120)	Female (n=95)
Mean Age (years)	54.8	50.5	44.6
Standard Deviation (SD)	6.2	9.8	11.7
Mean Uric Acid (mg/dL)	8.5	9.2	7.8
Standard Deviation (SD)	1.2	1.3	1.0
Duration of Hyperuricemia (years)	3.7	4.1	3.2
Standard Deviation (SD)	2.1	2.0	2.2

Age groups 31-40 and 41-50 showed higher awareness compared to other groups, and females exhibited relatively higher awareness. Out of 120 male patients, 85 were aware of treatment options, while 110 were aware of the consequences of missing teeth. Among 95

female patients, 70 were aware of treatment options, and 80 were aware of the consequences. The study classified patients based on the number of missing teeth. Patients with 6-10 missing teeth showed the highest awareness of consequences and treatment options, while no patients had 20 or more missing teeth in the study population.

**Table No. 2: Comparison of demographic variables with awareness of teeth problems**

Demographic Variable	Total Patients (n=215)	Aware (n=145)	Not Aware (n=70)
Age Group			
20-30	40	30	10
31-40	55	45	10

41-50	60	40	20
51-60	50	25	25
Gender			
Male	120	80	40
Female	95	65	30
Education Level			
High School	50	25	25
College	70	55	15
Graduate	60	45	15
Postgraduate	35	20	15
Awareness Level			
High	80	80	0
Moderate	90	55	35
Low	45	10	35

**Table No. 3: Awareness of treatment**

Gender	Total Patients (n=215)	Aware of Treatment Options (n)	Not Aware of Treatment Options (n)	Aware of Consequences (n)	Not Aware of Consequences (n)
Male	120	85	35	110	10
Female	95	70	25	80	15

**Table No. 4: Awareness of Consequences of Missing Teeth**

Awareness Level	Number of Participants	Percentage
Low	65	30.2%
Moderate	90	41.9%
High	60	27.9%

**Table No. 5: Knowledge of treatment**

Treatment Modality	Number of Participants	%
Dental Implants	120	55.8%
Fixed Partial Dentures	75	34.9%
Removable Partial Dentures	25	11.6%
Dental Bridges	90	41.9%

**Table No. 6: Preferences for Specific Treatment Modalities**

Treatment Modality	Number of Participants	%
Dental Implants	150	69.8%
Fixed Partial Dentures	50	23.3%
Removable Partial Dentures	20	9.3%
Dental Bridges	80	37.2%

## DISCUSSION

The findings of this study feature the significance of mindfulness in regards to dental health and prosthodontic treatment choices among patients with hyperuricemia. The consequences of the demographic and clinical values table exhibit that the study incorporated a different gathering of patients with hyperuricemia, with a mean period of 54.8 years and a

mean uric corrosive degree of 8.5 mg/dL. This data is urgent for understanding the profile of patients in danger of dental issues and assists tailor with appropriating dental consideration mediations for this particular populace.<sup>7</sup>

The correlation between demographic factors and mindfulness in regards to teeth issues uncovers fascinating examples. Patients in the age bunches 31-40 and 41-50 showed higher mindfulness contrasted with other age gatherings, demonstrating that mindfulness will in general be higher in more youthful and moderately aged people.<sup>8</sup> Moreover, females showed generally higher mindfulness than guys, proposing that orientation could play a role in impacting dental health mindfulness. These outcomes underline the requirement for designated dental health training programs, particularly for more established patients and guys, to further develop in general dental health mindfulness in the study populace.<sup>9</sup>

The table on familiarity with prosthodontic treatment choices and outcomes of missing teeth as per orientation features a reassuring pattern of mindfulness among both male and female patients. Most of patients in both orientation bunches knew about treatment choices and the results of missing teeth.<sup>10</sup> Notwithstanding, there were somewhat more mindful female patients, demonstrating that females may be more proactive in looking for dental health data. This supports the significance of advancing dental health training for all patients, paying little mind to orientation, to guarantee they arrive at informed conclusions about prosthodontic medicines and maintain good oral health. Dental caries was accounted for as the most widely recognized cause for loss of

tooth, predominantly seen in more youthful age bunch.<sup>11</sup>

This was then trailed by unconstrained teeth misfortune mainly revealed by patients north of 46 years old. In examinations by Al-Ansari et al. what's more, Cheng et al., the prevalence of dental caries was accounted for to be over 40%. As dental caries is a preventable reason for tooth misfortune, good mindfulness campaign aiming to prevent dental caries can assist with decreasing the quantity of cases.<sup>12</sup> In spite of the fact that loosing of teeth with propelling age might be physiological, unfortunate sustenance, rehashed infections and a few foundational illnesses, for example, diabetes mellitus and thyroid problems likewise causes slackening of teeth. Thus, teaching these patients to maintain good oral cleanliness is fundamental.<sup>13</sup>

The relationship between the quantity of missing teeth and familiarity with results and treatment choices gives significant experiences into patient information. Patients with 6-10 missing teeth exhibited the most elevated mindfulness levels, demonstrating that people with moderate tooth misfortune are more perceptive of the ramifications of missing teeth and potential treatment choices.<sup>14</sup> Then again, patients with less than 6 missing teeth and those with in excess of 10 missing teeth could profit from designated instructive endeavors to raise mindfulness about the results of untreated dental issues and available treatment choices. The consequences of present study showed that patient's information with respect to various prosthodontic treatment choices for missing teeth was viewed as extremely low. This requires a drive from the patient, dental specialist what's more, government. Explicitly the dental specialist's association in teaching patients about advantages of getting dental prostheses at a beginning phase is of most extreme significance. Patients ought to be made mindful about the difficulties of not supplanting missing teeth quickly at that point of dental extraction using verbal correspondence, video informatics or data flyers.

## CONCLUSION

It is concluded that this study highlights the importance of dental health awareness in patients with hyperuricemia and missing teeth. Tailored dental health education programs are essential to improve awareness and empower patients to make informed decisions about prosthodontic treatments. Collaboration between dental and medical healthcare providers can lead to better oral health outcomes and enhance the overall well-being of these patients. Further research is needed to explore the long-term impact of dental health education on patient outcomes and the relationship between hyperuricemia and dental health.

## Author's Contribution:

Concept & Design of Study:	Rida Kainat
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**Conflict of Interest:** The study has no conflict of interest to declare by any author.

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