



## FACTORS RESPONSIBLE FOR TOOTH EXTRACTION AMONG PATIENTS OF DENTAL DISEASE

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### Abstract:

**Objective:** The aim of this study was to determine the factors affecting tooth extraction in adult dental patients.

**Study Design:** A Cross-Sectional Study.

**Place and Duration:** In the Dental Department of Lahore Medical and Dental College for one year duration from November 2017 to November 2018.

**Methods:** The study was performed in 205 adult dental patients. Using face-to-face interview techniques, he observed the attitudes and practices of the patients and the perception of dentists, and he determined the condition of the oral disease, which indicated the loss of periodontal attachment, especially using the crystal violet solution.

**Results:** The results showed that extraction cases (n = 134) were older than non-extraction cases (n=71) (p = 0.001). The level of education was higher (p = 0.001) and the number of teeth in the oral cavity was greater in the absence of extraction (p = 0.001). Tooth decay was the main cause of tooth extraction (77.6%). In the extraction cases, the rate of tooth decay was greater than that of non-extraction patients, but was not statistically significant. The knowledge and application score was better than the extraction status in non-extraction (p = 0.001). Most dentists perceived that patients had teeth extracted due to lack of knowledge and were not interested in other treatments. 17 percent of patients suffer from periodontitis.

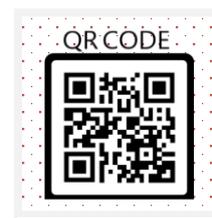
**Conclusion:** As a result, the finding revealed that dental caries were the main cause of tooth extraction, most of the patients were older, had fewer teeth, had less training, and had a lower PD score. Promotive and prevention programs were strongly recommended.

**Key words:** Tooth extraction, tooth decay, periodontitis.

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**INTRODUCTION:**

The retention of teeth in the 90s has shown much improvement in all developed countries. Improvements in change restorative dentistry have been associated with improved efficacy and attitudes towards convergence of concomitant healing and important research advances in the prevention of oral diseases. However, tooth loss remains an alarming problem in developing countries and developed countries. Dental epidemiology is useful to determine the needs of the population. Dental diseases vary from one country to another, actually from one community to another. Therefore, tooth extraction is the result of the causes and / or interactions of diseases and attitudes. No single feature was measured for predominant variation in tooth extraction reasons. Due to the etiology of multifactorial tooth extraction, all these factors should be included in any tooth extraction study. The number of studies conducted in many countries and between different population types is almost unanimously matched to finding that it is the leading cause of tooth decay at almost any age, apart from some studies. Differences in these findings may reflect cultural differences in the habits, diet, socioeconomic status and dental health service system. Luan et al. found that people living in the countryside have more teeth than the inhabitants for tooth extraction. Beyond 50 years, the number of teeth requiring tooth extraction was due to periodontal disease and was more in the city than in rural areas and in women more than men. Burt et al. showed that people with high dental retention usually had higher socioeconomic status and superior oral hygiene. OHI-S is always good for men from women at the level of dental health seizure, but the general mold for men and women is the same. The Akanayaka study showed that in Sri Lanka more females are toothless than males, and that a notable feature of the results is that the age-specific specific toothless is always lower than the EU populations. In addition to gender and age, ethnicity may be one of the contributing factors. In addition, research has shown that non-dentist factors are important in the decisions of dentists. There is a communication gap between dentists and patients, and dentists show the attitude of the dentist to provide training to patients, as well as connecting the main problem to patients.

**MATERIALS AND METHODS:**

This Cross-Sectional Study was held in the Dental Department of Lahore Medical and Dental College for one year duration from November 2017 to November 2018. The range of the patients were

from 25-65 years. The variables of interest are sociodemographic variables of patients such as tooth decay, periodontal disease, sex, caste, occupation and education. Tooth decay and periodontal disease were applied to teeth stained with violet crystal. The patients were determined by KAP interviewing the truth. It was accepted that the knowledge and application scores were below or below the average, low and the average was high. In addition, the use of face-to-face interviews evaluated the perception of the dentist. Dental records and laboratory findings of hospital patients were evaluated for the measurement of the results. Dental caries and periodontal status were measured. After determination of the removed teeth, periodontal status and tooth decay were evaluated. Periodontal state was measured by attachment loss. The removed teeth were rinsed with running water to remove blood and then the teeth were fixed in 10% formalin before staining. After one minute staining in crystal violet, the tooth was rinsed with running water for 10-15 minutes and air dried.<sup>31</sup> Union loss was now expressed as a percentage of root length covered with periodontal fibers. Four surfaces were measured with a periodontal probe and the affected surface determined the loss of the most severe junction. An insertion loss of 50% or more was selected as the level of advanced periodontal disease considered to be present. The dental caries were evaluated visually and measured as enamel caries, dentin decay with pulmonary involvement and root caries. Fractured root after extraction is excluded for laboratory data. A total of 125 cases were included in 125 of 134 cases. Data were analyzed using the Social Sciences Statistical Program (SPSS version 17.0). Descriptive statistics such as mean, median and frequency distribution are used to define sociodemographic characteristics and clinical examination. Then, we compared the status of clinical examination and KAP score by using the chi-square test and t test. In addition, multiple logistic regression was used to simultaneously determine the amine extraction of the tooth.

**RESULTS:**

Of the 205 patients, 134 were extraction and 71 were non-extraction. The mean age was 37 years. 64% were male and 36% were female. More than half of the patients earned less than Rs. 3000 / - and less than five years of training. The average number of teeth lost was about 5. As shown in Table 1, extraction cases were generally older than those without extraction ( $p = .001$ ).

**TABLE 1. GENERAL CHARACTERISTICS AMONG TOOTH EXTRACTION AND NON-TOOTH EXTRACTION**

Variable	Extraction cases n=134	Non-extraction case n=71	p— Value
Age (Mean± sd)	39.41 ± 11.68	33.55 ± 8.75	.001
Gender			
Male	63	66	.609
(Percentage)			
Urban	53	49	.615
(Percentage)			
Number of missing teeth (meant ± sd)	5.59 + 7.01	2.45 ± 4.36	.001
Education < 5 years (Percentage)	66	35	.001

The mean number of missing teeth was higher in the extraction cases compared to the ones without extraction ( $p = .001$ ). Less than five years of training were found to be more frequent than the non-extraction cases ( $p = .001$ ). While the high rate of extraction cases (76%) had a low KAP score, the teeth of patients with low KAP scores were 4.9 times more likely to be compared to those with higher KAP scores ( $p = .001$ ), as shown in Table 2, as the main complaint in extraction.

**TABLE 2. COMPARISON OF KAP OF PATIENTS AND DENTAL CARIES AS A CHIEF COMPLAINT AMONG TOOTH EXTRACTION AND NON-TOOTH EXTRACTION CASES.**

Variable	Extraction cases	Non-extraction cases	OR (95% CI)	P-Value
KAP score lower than mean score	76%	39%	4.895 (2.63-9.09)	.001
Dental caries as a chief complain	77.6	69	1.626(.849-3.11)	.141

The rate of dental caries was higher. Multivariate analyzes have shown that tooth decay is a major contributor to tooth extraction after adjustments are made according to age, training and number of missing teeth, as shown in Table 3, as a major complaint.

**TABLE 3. FACTORS CONTRIBUTING TO TOOTH EXTRACTION AMONG DENTAL PATIENTS USING MULTIPLE LOGISTIC REGRESSION**

Independent variables ß	OR (95%CI)		P-value
Dental caries	1.20	3.33	.0047
Education < 5 years	1.04	1.40	.0014
Age	.042	2.84	.0339
Number of missing teeth	.084	1.09	.040

Reported that the patients who had taken their teeth for insufficient curative treatment were extracted. Half of the dentists said that patients were not interested in dental education. As shown in Table 4, tooth decay is the main cause of tooth extraction (77.6%).

**TABLE 4. COMPARISON OF CAUSES OF TOOTH EXTRACTION AS DIAGNOSED BY DENTISTS AND IN VITRO DETERMINATION OF EXTRACTED TEETH**

Oral Diseases			
As diagnosed by dentists in	n	%	In vitro determination
Dental caries	97	77.6	Dentinal Caries Pulp Exposed
Periodontitis	21	16.8	Attachment loss < 50% Attachment loss > 50%
Other Diseases	7	5.6	Other Diseases

The tooth extraction due to periodontists was 16.8% and 5.6% of the other diseases. When comparing the diagnoses of the dentists with the condition of the extracted teeth, it is seen that dental caries are the main cause of tooth extraction in all age groups and they are higher in the young age group.

#### DISCUSSION:

Our study showed that the extraction cases were older and less number of teeth were present in their mouth and they were less educated as compared to non-extraction cases. The studies of Razaq and Chauncey also decided that the educational situation showed significant differences between the subjects extracted or not. Our study showed that there is no difference between the urban and rural population in terms of tooth extraction. In addition, there is no difference in sex between cases without extraction and extraction. Burt et al. Also showed that the general model of tooth holding is the same for women and men, but in the studies conducted by Luans and Ekanayaka, the tooth loss in women is seen more frequently than in men. This difference may reflect differences in the sample.

The study showed that the presence or absence of natural teeth is highly dependent on oral health behaviours. In our study, patients who came for extraction had a more limited attitude and knowledge application (KAP) compared to patients who applied to other treatments, and the findings of this study coincided with previous findings. In addition, this study showed that all interviewed dentists perceived that many patients had removed their teeth due to lack of information about other treatment options or previous bad experiences. In a study conducted by Bouma, dentists showed that in 43% of cases, the teeth extracted and given reasons not related to the disease for total tooth extraction, instead they used words such as non-motivated patients, "unrelated patients", "financial problems". In this study, half of the dentists said that patients were not interested, seventy-five percent had many patients a day, and sixty-two percent did not have time to educate patients. Our study also confirmed that tooth decay is the main cause of tooth extraction in all age groups. The distribution of the extracted teeth showed that 77.6% of the extractions were due to tooth decay. Periodontitis was 16.8% of all teeth

removed as diagnosed by dentists, and the result was similar to that of Chauncey.

#### CONCLUSION:

There is a need to improve dental services in this hospital because more than half of the dentists working in the hospital reported that facilities other than extraction equipment were missing. In this sense, it is strongly recommended to design effective dental care messages that must be initiated in the community to change the patient's beliefs about tooth extraction. In addition, research is needed to further investigate the disclosure of dental health information in order to identify patients at higher risk of tooth extraction by seasonal changes and to increase the positive attitude towards dental health.

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