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Research Article

**STUDY TO KNOW THE CAUSES OF TOOTH EXTRACTION  
IN MULTAN DIVISION****\*Dr. Saba Riaz, \*Dr. Hifza Niazi, \*Dr. Ujala Arshad, \*Dr. Mohsin Majeed, \*Dr. Sara Izhar**  
\*Nishtar Institute of Dentistry, Multan**Abstract:****Objective:** A questionnaire was used to determine the causes of tooth extraction.**Location and duration:** This Cross Sectional Study was conducted in Multan Division for a period of six months from January 2018 to June 2018. The patients attending the Outpatient Department of Nishtar Institute of Dentistry were also included.**Methods:** Data were obtained from 80 dentists who practice general dentistry and for 2 weeks after their treatment the data was collected.**Results:** It was determined that 39.7% of 1030 teeth were due to widespread caries, 20.9% of them belonged to periodontal diseases and 13.4% on patients request and 10.1% for pericoronitis of the third molars. Prosthetic reasons were 4.1%, orthodontic 2.5%, 2.03% for endodontic insufficiency, 1.4% for tooth fractures, 1.3% for the affected teeth and 0.19% for the removed teeth. Trauma was 1.16% of the extractions and the other reasons were 1.6%. The rear teeth were removed more than the front teeth.**Conclusion:** The results of this study show that the most common cause of tooth extraction is extensive tooth decay and periodontal disease.**Key words:** Extraction, common caries, causes of periodontal disease.**Corresponding author:****Dr. Saba Riaz,**\*Nishtar Institute of Dentistry,  
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**INTRODUCTION:**

No new study has been conducted on the current causes of tooth extraction in the Pakistan. Models changing dental diseases and treatments, a decline in tooth decay has been accompanied by a change in prevention of emphasis removal to preserve tooth structure as much as possible. These changes may have an effect on the causes of tooth extraction. Studies have been conducted to determine the causes of tooth extraction in many countries (Agerholm D 2003 Richards et al 2005, June 2006) Shammari et al. 2009 Folayan et al 2010 Corbet's & Davies 1992 recent studies have indicated that the purpose of this study was to know the cause of removal of permanent teeth, in addition to the extension of old age, the decay is the main cause of tooth loss under 40 years because of periodontal disease.

**METHODOLOGY:**

This Cross Sectional Study was conducted in Multan Division for a period of six months from January 2018 to June 2018. The patients attending the Out Patient Department of Nishtar Institute of Dentistry were also included. Eighty dentists from the public and private sectors that practice dentistry in Southern Punjab (Multan Division) participated in this study. The collected data forms were distributed to these dentists and they were asked to record their dental causes or extractions. The questionnaire consists of three parts:

1. Age and Gender of the patient.
2. The main reason determined by the dentist for extraction.
3. Which teeth should be removed? Dentists have noted the causes of tooth extraction, including extraction of caries, periodontal disease, trauma, prosthesis or orthodontics, third molars, and others. When no cavities, periodontal disease, or others are specified, we have included third molar extractions as a cause. All patients were included in the study until the maximum of 10 patients who received milk and permanent teeth were removed within 2 weeks of consultation by dentist.

The data were entered in the analysis of SPSS computer system. As the data were categorical, chi-square analysis system was used. The test was considered statistically significant when the probability was less than 0.05.

**RESULTS:**

In 1030 extractions of teeth, 39.7% was removed with 13.4% patient's request, 20.9% with large bruises and periodontal disease, Pericoronitis with third molar 4% 10.1, 1% of prosthetic causes, 2.03%. endodontic failure, 1.3% for buried teeth, 2.5% for orthodontic reasons, 1.4% for broken teeth, 1.6% due to trauma, 0.58% for wide external and internal absorption, 0.2% for fracture line, 1.9% for insufficient capacity of operator 0.8% (table 1).

**TABLE 1: DISTRIBUTION OF TEETH EXTRACTED ACCORDING TO CAUSES**

<b>Reasons for Extractions</b>	<b>Number</b>	<b>(%)</b>
<b>Caries</b>	<b>409</b>	<b>39.7</b>
<b>Periodontal diseases</b>	<b>215</b>	<b>20.9</b>
<b>Patient desire</b>	<b>138</b>	<b>13.40</b>
<b>Fractured teeth</b>	<b>14</b>	<b>1.40</b>
<b>Prosthetic reasons</b>	<b>42</b>	<b>4.10</b>
<b>Orthodontic reasons</b>	<b>26</b>	<b>2.50</b>
<b>Inadequate technical capability</b>	<b>20</b>	<b>1.9</b>
<b>Pericoronitis of 3rd molar</b>	<b>104</b>	<b>10.1</b>
<b>Trauma</b>	<b>12</b>	<b>1.16</b>
<b>Impacted tooth</b>	<b>13</b>	<b>1.3</b>
<b>Endodontic failure</b>	<b>21</b>	<b>2.03</b>
<b>Involved in cystic lesions</b>	<b>0</b>	<b>0.00</b>
<b>Involved in fracture line</b>	<b>2</b>	<b>0.19</b>
<b>Extensive external and internal resorption</b>	<b>6</b>	<b>0.58</b>
<b>Other reasons</b>	<b>8</b>	<b>0.77</b>

Of the total teeth obtained, 0.77% were extracted from male patients; 26.9% of them were irregular and 73.1% were regular attendants. 41.6% of the female patients were represented, 32.2% of them were irregular and 67.8% were regular attendants. 730 patients were regular staff; Places where approximately 300 patients are irregular assistants.

**TABLE 2: DISTRIBUTION OF EXTRACTION BY TOOTH TYPE**

Tooth type	Number of teeth	Percentage of extraction	Total percentage of extraction
<b>Permanent teeth</b>			
<b>Incisors</b>			
Uppers	88	8.54%	13.78%
Loweres	54	5.24%	
<b>Canines</b>			
Uppers	50	4.85%	7.96%
Loweres	32	3.11%	
<b>Premolars</b>			
Uppers	116	11.26%	20.59%
Loweres	96	9.33%	
<b>1st &amp; 2nd Molars</b>			
Uppers	132	12.82%	28.35%
Loweres	160	15.53%	
<b>Third molars</b>			
Uppers	114	11.07%	26.22%
Loweres	156	15.15%	
<b>Total</b>	<b>998</b>	<b>96.89%</b>	
<b>Deciduous teeth</b>			
<b>Incisors</b>			
Uppers	2	0.19%	0.19%
Loweres	0	0%	
<b>Canines</b>			
Uppers	10	0.97%	1.75%
Loweres	8	0.78%	
<b>Molars</b>			
Uppers	6	0.58%	1.16%
Loweres	6	0.58%	
<b>Total</b>	<b>32</b>	<b>3.11%</b>	<b>100%</b>

Table 2 shows the extraction distribution according to the type of tooth. The data were originally analyzed by quadrants, but the number of teeth removed was similar on both sides of the mouth. Teeth extracted with greater frequency are the first molars followed by third molar, premolar, incisor and canine teeth respectively. The differences in the number and types of teeth removed from the upper and lower jaws were relatively small.

**TABLE 3: PERCENTAGE DISTRIBUTION OF PERMANENT TOOTH TYPE ACCORDING TO REASONS FOR EXTRACTION**

Reason for extractions	Tooth type (%)				
	Incisors	Canines	Pre-molar	1st & 2nd molars	3rd molar
Caries	11.27	17.07	49.06	60.96	51.11
Periodontal diseases	53.52	60.98	21.7	32.19	18.52
Patient desire	23.49	24.39	14.15	7.53	11.85
Fractured teeth	0	0	3.77	2.83	0
Prosthetic reasons	1.14	4.88	7.55	4.79	2.22
Orthodontic reasons	0	0	6.6	0	0
Inadequate technical capability	0	0	0	1.41	0
Pericoronitis of 3rd molar	0	0	0	0	38.52
Trauma	7.04	0	0	0	0
Impacted tooth	0	0	0	0	13.33
Endodontic failure	2.82	0	1.89	8.9	0.74
Involved in fracture line	0	0	0	0.34	0.37
Extensive ext. & int. resorption	2.82	0	0	1.41	0
Other causes	0	0	0	0	0.74

Table 3 shows that the first and second molars (60.96%) were removed more frequently due to decay and due to periodontal diseases of 32.19%. The third molar teeth were removed with pericoronitis in

38.52% and implants were applied in 13.33% of these teeth. First and second premolars were removed more frequently (49.06%) than caries. Periodontal diseases caused 21.7% of the extraction of these teeth

while 6.6% of these teeth were removed for orthodontic reasons. Cutters and incisors were extracted for periodontal reasons (53.52% and 60.98%, respectively). Most of the teeth extracted for prosthetic reasons are first and second premolar and first and second breaks. In patients under the age of 20 years, 54.28% of the large caries extractions accounted for 31.33% of the total extraction for this age group for orthodontic reasons. In the age range, tooth decay was the most important cause of periodontal disease for tooth extraction until 59 years of age. For children under 12 years of age there were several extraction of deciduous teeth, 3.4% of general extractions. For adults aged 13-19 years, 20-39 and 40-59 years, and for adults over 60 years, the main reason for caries removal was 44.62% of all extracted teeth. The most common reason for extraction in patients aged 20 to 39 years was extraction based on the patient's request (20.09%) followed by pericoronitis and periodontal causes of 18.8% and 8.12%. extracted teeth respectively.

**TABLE 4: PERCENTAGE DISTRIBUTION OF DECIDUOUS TOOTH TYPE ACCORDING TO REASON FOR EXTRACTION**

Causes for extractions	Tooth type		
	Incisors	Canines	1st & 2nd molars
Caries	0	11.11	83.33
Orthodontic reasons	0	55.56	16.67
Trauma	100	0	0
Other reasons	0	33.33	0

Between 40 and 59 years of age, the most common causes of extraction, common caries and periodontal diseases are 57.14% and 37.76% respectively. From 60 years of age, periodontal rates are the main reasons for 68.24% extraction, but 23.65% of the teeth in this age group are still dental caries.

### DISCUSSION:

It is interesting to make a comparison between studies, but care should be exercised in interpreting existing dental services due to cultural differences. Caution should be exercised when comparing the results of independent studies at different times, as various bias sources may override comparisons. Important bias sources in the context of this study may include:

- Exclusion and non-response of dentists.
- The age of patients and dentists.
- Classification and definition of the causes of extraction.
- The availability of dental services. Philosophy of treatment
- Attitudes and cultural factors associated with patients and dentists.

Since these and other possible confounding factors are difficult or impossible to control sufficiently, the comparisons have been limited to mark differences and apparent time trends. Other measures include the comparison of specific rates by age and sector and the exclusion of dentists or subgroups of patients to minimize confusion. This study confirms that dentists most common do tooth extraction for caries, and other studies have reported that periodontal diseases are the most common cause. The results of this study show that one of the main causes of tooth decay in the Pakistan is the main cause of extraction and it lasts a lifetime. There is a global prevalence of 39.7% of losing teeth. The most common cause is periodontal disease (20.9%). This finding is consistent with other studies in industrialized countries, but the prevalence of this study is less than 59% reported in South Wales, 55.4% in Japan, 49% in France, and 47% in England. Our results were 35% in Norway, 20.7% in western Germany and 21% in the United Kingdom. The contribution of caries was lower than in other studies. Surveys of industrialized countries, most of which were made a few years ago, were expected. In fact, it can be explained by the very limited and widespread prevalence of tooth decay activity in the permanent teeth between populations in many areas developed especially under 30 in the world, and only with the moderate prevalence of destructive periodontitis.

### CONCLUSION:

The results of this study showed that the most common cause of periodontal disease (20.9%) was dental caries which results in tooth extraction.

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