

Patients' Preference for Exodontia versus Preservation in India

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Abstract: Aim of the study is to know about the latest advances in the patient preferences for their treatment plan regarding preservation of a tooth or opting exodontia. **Material and methods:** A total of dentate 501 subjects attending department of Oral Surgery of a Local Dental College participated in this study. A questionnaire was used for data collection which enquired the preference of the volunteers about either exodontia or preservation when exposed to tooth ache in total, anterior and posterior tooth respectively. **Results:** A total of 95.4% people preferred preservation while only 4.6% of them stated exodontia as their preference. Exodontia and preservation in total with age presented a significant value of (p: 0.00). **Conclusion:** Majority of the subjects preferred preservation when having tooth ache irrelevant of their socioeconomic status, level of education which is a clear signal of increasing awareness in dentistry.

Keywords: Exodontia, Preference, Preservation, Toothache.

1. INTRODUCTION

It is not so much the patient perception of the illness but rather the subjective reaction to the “Medical Condition” which motivates a specific choice of treatment ¹. The decision among older people to seek certain kinds of health care is determined by the relative significance the individual attaches to symptoms of illness and his belief regarding the most appropriate response to these symptoms ^{2,3,4}.

Dental caries and chronic destructive periodontal diseases are two of the most salient problems for dental public health systems worldwide. Tooth loss is particularly important due to the functional, psychological, social, and financial impact that may result from the substantial number of teeth being lost. While dental caries appears to be the main cause of tooth loss, chronic destructive periodontal diseases also contributes to this problem ⁵. The relative impact of either caries or periodontal etiologies for tooth loss seems to vary across countries, age groups, levels of access-to-care, and opportunities to use different care-delivery models ⁶.

It is important to define the meaning of “aged”. The bureau of health professions define it as a “population with health condition and needs significantly different from those of young people that are frequently complicated by physical, behavioral and social changes associated with age ⁷. This group which is to be studied include people older than 60 years but also refers to young people with physical and mental conditions similar to those described above for the aged. The age should receive special consideration with respect to their need and each case should be judiciously examined since a patient may have a single problem that affects the organism as a whole or that cause changes in the protocol of the treatment plan. ⁷

Some nation wide social survey reported that major reason for dental visits among the general population in the United States during 1 year relates to the individual's perception that a dental problem does in fact exist⁸

Other authors Kegeles SS et al⁹, Dauglas et al¹⁰, Holtzman JM et al¹¹ and Gift HC et al¹² have stated that though the perception of illness and the recognition of the potential seriousness of its symptoms may be necessary, this is insufficient reason for the decision to seek professional care. The potential patients must also believe that professional care is available, effective and appropriate to use in response to that symptom. The appropriate choice of treatment will be influenced by the subjective assessment of the benefit from a particular procedure.

Extraction is a term given to a tooth removal. It can also be known as exodontia .It is a removal of tooth from its socket in the bone. It is done because badly decayed or bracken tooth that can not be restored or for requirement of space for Ortho treatment.

Oral diseases may be the preponderant direct cause of tooth losses¹³ and social factors may play a significant indirect role¹⁴ not only in the development and progression of such diseases but also in the decision for extracting a tooth, even when it appears that, clinically, there are better options¹⁵.

Low income and educational level are strong risk factors for tooth loss according to Burt BA et al.¹⁶, Marcus SE et al.¹⁴ , Locker D et al.¹⁷, Gilbert GH¹⁸ , Hamasha AH et al.¹⁵ , Thomson WM et al.¹⁹

Various factors affect tooth loss in older age including cigarette smoking, however, evidence regarding the association between smoking and tooth loss during young adulthood is limited .The present study examined the association between cigarette smoking and tooth loss experience among adults aged 20-39 years using linked data from two national data based in Japan²⁰.

In world health organization publication World Health Organization²¹ it is postulated that pain usually provokes an immediate demand for care aimed primary at pain relief with the consequence of premature loss of the teeth. Surveys conducted in United Kingdom have shown that patients were more willing to have posterior teeth extraction than anterior teeth.^{22, 23, 24}

The assumptions to be tested in this study were that patients prefer exodontias rather than preservation when exposed to toothache and that patients are more willing to have posterior teeth extracted than anterior teeth for caries. These assumptions were subsequently tested in relation to the patients' demographic, ethnic, educational and socioeconomic characteristics.

2. MATERIAL AND METHODS

The study was done in three months during and ethical clearance was taken from institutional ethical review board along with the consents being obtained from the volunteers before commencing the study.

Inclusion criteria: All dentate adult attending department of Oral Surgery of a Local Dental College, during the month of January March 2008.

Exclusion criteria: The individuals who were not interested in the study and were uncooperative were excluded from the study.

A total of 539 adult attending were invited for the study. Those who voluntarily participated were interviewed using self prepared questionnaire. The overall response rate for self prepared survey was 94.33% with 500 subjects participating in study with 273 male and 228 female respectively.

A self prepared questionnaire was used for data collection which comprises of following questions:

- 1) What do you prefer when you have tooth ache?
 - a. Extraction
 - b. Preservation
- 2) What do you prefer when you have anterior tooth caries?
 - a. Extraction
 - b. Preservation

3) What do you prefer when you have posterior tooth caries?

a. Extraction

b. Preservation

Along with the above questions their education level and socio economic level were recorded, response to questionnaire was varying.

A team of 2 doctors were selected for interpreting the minute data from the questionnaires. The kappa statistics for inter and intra examination variability between the two was found to be 91.2 when tested two days prior to study.

Background information: Till date no such study has been conducted in this part of the country.

ANALYSIS- All the data collected were entered into the spreadsheets. The statistical package for social sciences (SPSS) software version 11.0 was used for data processing and data analysis. ANNOVA, chi-square tests were applied.

3. RESULTS

Table 1: Percentage of subject preferring exodontia or preservation when exposed to toothache

Subject category	Total	Exodontia		Preservation		Chi-square	p
		N	%	N	%		
Sex-							
Male	273	18	6.6%	255	94.35%	5.492	0.19
Female	228	5	2.2%	223	97.5%		
Education							
Primary	121	9	7.4%	112	92.6%	2.953	0.86
Secondary	380	14	3.7%	366	96.3%		
Income							
Primary	357	14	3.9%	343	96.1%	1.270	0.260
Secondary	144	9	6.3%	135	93.8%		
Age							
15-24	246	2	0.8%	244	99.2%	149.521	0.00
25-34	91	3	3.29%	88	96.7%		
35-44	80	5	6.25%	75	93.75%		
45-54	61	9	14.8%	52	85.3%		
55+	23	12	52.2%	11	47.8%		

TABLE 1: Interpretes that the rounded-off percentage of subjects who preferred either exodontias or preservation when exposed to toothache or carious tooth. Most of the male and female patient preferred preservation with 94.35% and 97.5% respectively. Sex did not appear to be differential. The higher rate of education level and income level showed preservation of teeth in abundance. The younger subjects are showing more preference for preservation.

Table 2: Percentage of subject who preferred to have carious anterior teeth extraction

Subject category	n	Exodontia	%	Preservation	%	Chi-square	P
Gender-							
Male	273	44	16.1%	229	83.9%	1.388	.239
Female	228	46	20.2%	182	79.8%		
Education							
Primary	121	36	29.8%	85	70.2%	15.042	.000
Secondary	380	54	14.2%	326	85.8%		
Income							
Primary	357	72	20.2%	285	79.8%	4.094	.043
Secondary	144	18	12.5%	126	87.5%		
Age							
15-24	246	15	6.1%	231	93.9%	62.169	0.00
25-34	91	20	22.2%	71	78.0%		
35-44	80	19	23.8%	61	76.3%		
45-54	61	25	41.0%	36	59.0%		
55+	23	11	47.8%	12	52.2%		

Table 2, Interpretates the rounded –off percentage of subject who preferred to have carious anterior teeth extracted. More educated and young people wanted to preserve their anterior teeth rather than extraction with 85.8% and 93.9% respectively. Old age people wanted their anterior teeth to be extracted. People under low socioeconomic status (20.2%) preferred exodontia. 85.8% individuals wanted to preserve their tooth in higher education group.

Table 3: Percentage of subject who preferred to have carious posterior teeth extraction

Subject category	N	Exodontia	%	Preservation	%	Chi-square	P
Sex-							
Male	273	69	25.3%	204	74.7%	.356	.551
Female	228	63	27.6%	165	72.4%		
Education							
Primary	121	36	29.8%	85	70.2%	.953	.329
Secondary	380	96	25.3%	284	74.7%		
Income							
Primary	357	105	29.4%	252	70.6%	6.011	.014
Secondary	144	27	18.8%	117	81.3%		
Age							
15-24	246	46	18.7%	200	81.3%	25.017	.000
25-34	91	25	27.7%	66	72.5%		
35-44	80	22	27.5%	58	72.5%		
45-54	61	28	45.9%	33	54.1%		
55+	23	11	47.8%	12	52.2%		

Table 3, shows the rounded-of percentage of subjects who preferred to have carious posterior teeth extraction or preservation.

Lower level of income and education subjects wanted their carious posterior teeth to be extracted (29.8%) and (29.4%) respectively when compared with higher level of income and education (25.3%) and (18.8%) respectively .Similarly old age subjects who preferred to have carious posterior teeth extraction rather than preservation.

4. DISCUSSION

Dental care was probably thought of as unpleasant, painful and only valuable in the relief of pain.

The cost is not a factor in seeking dental care as a treatment is provided at no or minimal cost in various dental institutions around the country, and therefore cost should not be a major determinant in choice between exodontia and preservation. The assumption that patients prefer exodontia to preservation when having toothache was rejected in this study.

A study done by Razak IA et al.²⁵ showed that majority of the people in Malaysia preferred preservation (59%) and exodontia was the treatment of choice of subjects (41%) , while in our study we found that a very large number of subject (95.4%) preferred preservation and less number of subject (4.6%) preferred exodontia when exposed to toothache or carious teeth.

This must be due to the wide spread dental awareness which is scattering in the country these days, and people wants to get the best of the treatment available in present times.

The assumption that patients are more willing to have carious posterior teeth extracted than carious anterior teeth was rejected. This response is contrary to the findings in earlier studies done in United Kingdom by Todd JE et al²², Todd JE et al²³, Rhdes JR et al ²⁴. Other study in Malaysia also showed that the value of anterior versus posterior teeth is not differential²⁵. But in our study we found that the preference of anterior teeth was found more versus posterior teeth 95.6% and 73.8% respectively.

This study represents that only 18.2% subjects preferred to have carious anterior teeth extracted while 26.47% subjects preferred to have carious posterior teeth extracted which is in accordance with the Chinese people who lived in Malaysia who appeared to have stronger preference for tooth preservation ²⁵.

A study conducted in United States stated that the older age group individuals those with the least education and income were most likely to be edentulous and with fewest number of teeth present. These findings suggest that efforts to reduce tooth loss among the elderly should target those with the least education and income ¹⁶.

This study clearly indicates an inverse relationship between education status and the preference for exodontia when experiencing toothache or having carious teeth. This inverse relationship was also found when analyzed for level of income. This appears to imply that higher the level of education and income, greater is the preference for preservation of tooth.

Age of the individual played a key role in treatment preference for the sample group. The older age group individuals had greater preference for exodontia on contradictory younger persons had more affinity towards preservation.

The study shows that sex did not appear to be differential in treatment preferences.

Highly significant difference (p 0.000) was found among age groups.

Whereas income and education levels were found to be insignificant. Old age people wanted their carious anterior teeth to be extracted. More subjects wanted to extract their posterior carious teeth rather than anterior carious teeth.

The loss of teeth associated with aging process may be perceived as unavoidable by the senior subjects. It is encouraging to note that the younger adults in this study exhibit a more positive attitude toward the preservation of teeth. If this positive attitude is sustained throughout their lifetime than it can be predicted that this future senior generation will retain more functional teeth.

5. CONCLUSION

Even though majority of the subjects preferred preservation 95.4% when having tooth ache, exodontia 4.6% was a treatment of choice in proportion of subjects. Prevalence of tooth loss and preservation, factors affecting were life style, stress, anxiety and economical status which plays an important role in the tooth loss since long time but this study concluded that these days awareness among patients have touched high standards and all these above stated factors do not play any role in patients preference of treatment plan and want to go for the best available treatment for tooth preservation.

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