



## Prevalence of Myths Related to Oral Surgery Among General Public a Cross-Sectional Study

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### Abstract

Myth is a commonly prevailing but fanciful faith, a false belief, a misconception, or a fictitious imaginary understanding of a thing or a person by people which has no applicability to reality. People have strong beliefs and faith in these myths which hinders the promotion of oral health. The main objective of this study was to find the existing myths in oral surgical procedures among the general public thus trying to reduce their numbers.

**Aims:** To assess the prevalence of myths among general public in oral surgical procedures and in educating them.

**Materials and Methods:** A cross-sectional study with 384 Study subjects who visited the OPD of the Oral and Maxillofacial surgery department above the age of 18 years was included in the study. A questionnaire with 20 questions along with demographic details like age, gender, occupation, Education, Income and address were interviewer-administered to assess the prevalence of myths related to oral surgical procedures.

**Statistical analysis used:** The sample size was calculated by using the formula,  $X = Z(1-\alpha/2)^{2*}p*(1-p)/d^{2}$

**Result:** A total of 384 adults were included in the study. A relatively higher percentage of the study population has no belief in myths

**Conclusion:** The present study has depicted a relatively lower prevalence of myths in oral surgical procedures which imparts that the levels of myths are constantly being reduced which will pay way towards improved oral care and thus a healthy lifestyle.

**Keywords:** Myths; Misconceptions; Impaction; Pain; Oral Cancer; Tobacco; Menstruation; Pregnancy; Extraction

### Introduction

Myths are stories or beliefs shared by a group of people which have become a segment of their cultural identity. They have a significant effect on the life of people and their way of living including attitude towards health problems and probing for treatment procedures [3]. Myth is a commonly prevailing but fanciful faith, a false belief, a misconception, fictitious imaginary understanding of a thing or a person by people which has no applicability to reality [1,4]. Dental myths are highly reprehensible. From the Indian point of view, a dental myth usually arises from traditional beliefs of unexplored and unscientific sites [3]. People

have strong beliefs and faith in these myths which hinders the promotion of oral health. Myths cultivate from man's ignorance and imagination of what he/ she does not know [4]. Myths have become a part of everyone's life [3,7]. Myths which are usually passed from one generation to another exist in the population for a variety of reasons namely poor education, cultural beliefs, social misconceptions which are deep-rooted in various communities and are very challenging to be uprooted [1].

Oral health plays a vital role in the overall health and well-being of an individual. Oral disease is the fourth most expensive disease

to treat and has caused a global burden on backward groups of undeveloped, developing and even developed countries. These myths can sometimes be harmful and can cause defects of various sizes, so they should be eliminated at the bud stage [5]. People believe in spiritual healing, alternative medicine, treatment options and even prefer to see a local traditional practitioner or a roadside quack for oral health issues rather than seeing a qualified dentist [1]. India is a diverse country with various religious and cultural beliefs, with the majority of the population residing in rural areas. These diversities, which are linked to the people's behavioural patterns also greatly impact the health outcome of the community [1,4]. Dental myths are very common in India and hence it is important to be aware of the levels of these myths and misconceptions among the people to eliminate them by providing health education [5]. Thus, the study aimed to assess the prevalence of myths related to oral surgery among the general public.

### Subjects and Methods

This cross-sectional study with a convenient study sample of 384 subjects was carried in the OPD of Oral and Maxillofacial Surgery Department, Indira Gandhi Institute of Dental Sciences, Pondicherry. The study was approved before the start by Institutional Ethical Committee with registration number ECR/290/Indt/PY/2018 and was conducted for a period between June, 2019 to December, 2020. The minimum sample size was taken as 384. The prevalence of myths was assumed to be 50%,  $\alpha = 0.05$  (using previously done reference studies) and with a precession of 5%, the sample size was calculated by using the formula  $X = Z(1-\alpha/2)^{2*p}*(1-p)/d^2$ . Hence, the sample size,  $n = 384$ . Inclusion criteria included Patients in the age group 18-65 years attending the OPD and those Patients who have agreed to take part in the survey. Exclusion criteria consisted of patients who refuse to take part in the survey and those who are suffering from major diseases. Verbal consent was taken from the subjects before starting the study.

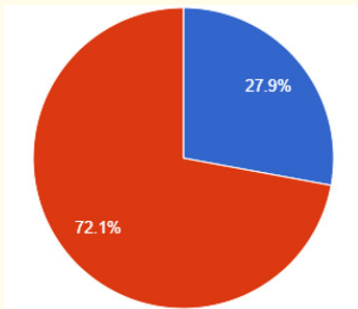
The Questionnaire comprises two parts with the initial part consisting of socio-demographic details of the study subjects Such as name, age, gender, address, education levels, employment status, Income and the latter part comprising of a questionnaire. The data were collected using a pre-validated, structured and self-administered closed-ended Questionnaire comprising of 20 questions seeking information about myths and misconceptions regarding procedures and post procedures in oral surgery. The questionnaire was filled accordingly then and there, by interviewers who were

trained and whose reliability was checked before the study. The study Subjects were assured of the confidentiality of the gathered data. Percentage distribution of responses to questions was calculated and the final results were acquired. Data were analysed by the SPSSv 19 Statistical Package Software for the Social Sciences (SPSS Inc., Chicago, IL, USA). Descriptive statistics such as mean, median, standard deviation and percentage were used. Comparison of frequencies was done using the Chi-Square test.

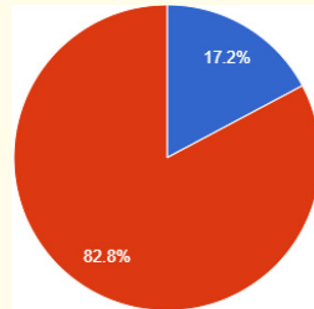
### Results

A total of 384 study subjects were included in the study. The study subjects were considered from those reporting to the OPD of the Oral and Maxillofacial Surgery Department of Indira Gandhi Institute of Dental Sciences. About 27.9% (Pie chart-1) of the study subjects believe that extraction of teeth impairs and adversely affects eyesight (may lead to blindness). Around 93.2% (Pie chart-2) of the study subjects did not believe in the myth that Local anaesthesia is impure and one must prefer undergoing extraction without Local Anaesthesia and on the contrary, only 6.8% (Pie chart-2) subjects believed in it. About 44.8% (Pie chart-3) of the subjects believe that there will be visible worms in the teeth which cause pain. Relatively 45.8% (Pie chart-4) of the subjects think that the swelling caused by painful teeth should be fomented with hot water and 17.2% (Pie Chart-5) of the subjects think that alcohol consumption reduces toothache. 79.9% (Pie chart-6) of the study subjects did not believe in the myth that the brain will be affected by the extraction of the upper teeth. About 80.2% (Pie chart-7) of the study subjects did not believe the myth that eruption of 3<sup>rd</sup> molar will increase the wisdom of a person and 36.7% (Pie chart-8) believed that exfoliated tooth must be buried. Over 45.3% (Pie chart-9) of the subjects still believed that extraction of the tooth is better than other dental procedures including root canal treatments and restorations and around 59.4% (Pie chart-10) did not believe in the myth that extracting teeth in pregnant women is dangerous.

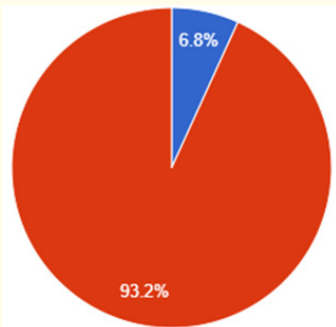
About 85.7% (Pie chart-11) of the study subjects did not believe the myth that one will not a victim of oral cancer because his/her friend who smokes more than him/her is healthy and around 54.7% (Pie chart-12) did not believe that head bath is contraindicated after extraction. Over 36.5% (Pie chart-13) of the study subjects believe that the application of painkillers will reduce toothache and only 10.2% (Pie chart-14) believed that extraction of milk teeth will lead to an edentulous state. Around 77.9% (Pie chart-15) of the study subjects did not believe the myth that brushing should



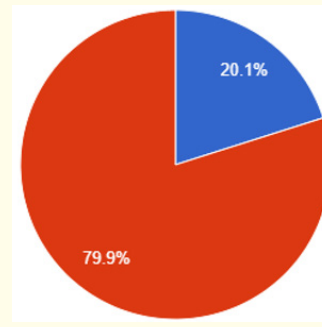
**Pie chart 1:** Do you think that extraction of teeth impairs and adversely affects the eyesight (may lead to blindness)?



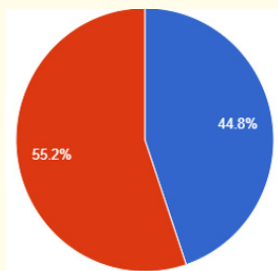
**Pie chart 5:** Do you think that consumption of alcohol will reduce toothache?



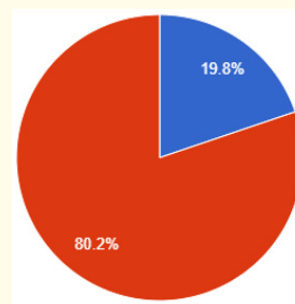
**Pie chart 2:** Do you think that Local anesthesia is impure and one must prefer undergoing extraction without Local Anesthesia?



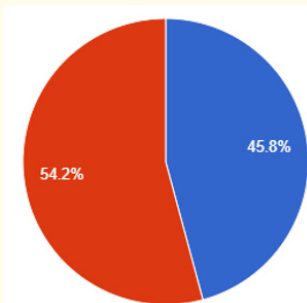
**Pie chart 6:** Do you think that extraction of upper tooth will affect Brain?



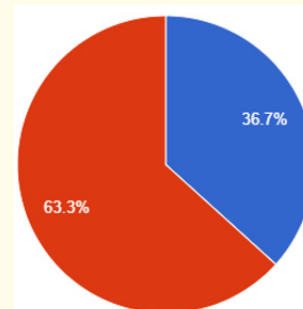
**Pie chart 3:** Do you think that there will be visible worms in the teeth which causes pain?



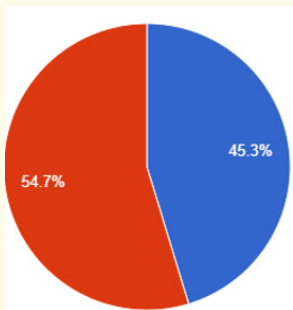
**Pie chart 7:** Do you think that Eruption of 3rd molar will increase your Wisdom?



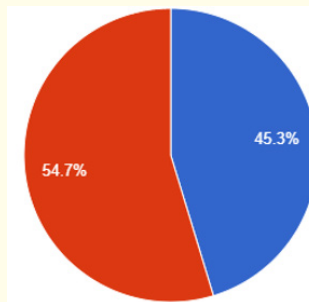
**Pie chart 4:** Do you think that the swelling caused by painful teeth should be fomented with hot water?



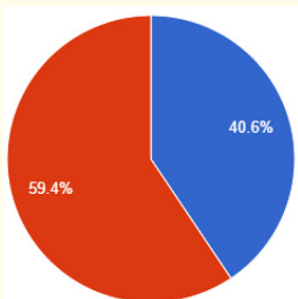
**Pie chart 8:** Should Exfoliated tooth be buried?



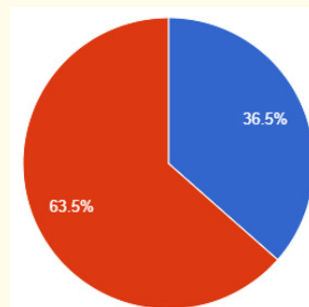
**Pie chart 9:** Do you think extraction of tooth is better than doing Root Canal Treatment & Restorations?



**Pie chart 12:** Do you think that taking head bath after extraction is contraindicated?

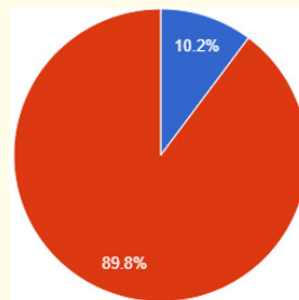


**Pie chart 10:** Do you think that extracting teeth in pregnant women is dangerous?

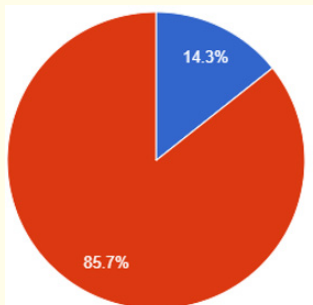


**Pie chart 13:** Do you think that application of painkiller (balms) will reduce toothache?

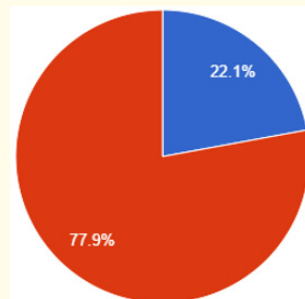
not be done after extraction and only 19% (Pie chart-16) of them believed that extraction should not be undergone on Friday while only 17.7% (Pie chart-17) believe that extraction should not be done on a no moon day. About 27.9% (Pie chart-18) of the study subjects think that menstruating women should not get their tooth extracted while 11.7% (Pie chart-19) think that everyone must get their wisdom teeth extracted. A relatively higher percentage (about 51.3%) of the study subjects think that extraction procedures are always painful (pie chart-20).



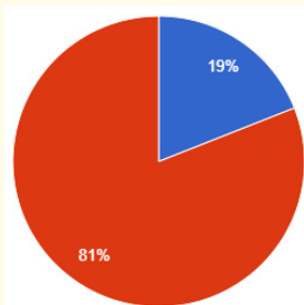
**Pie chart 14:** Do you think that extraction of milk teeth will lead to edentulous state?



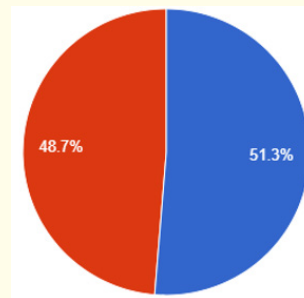
**Pie chart 11:** I will not be a victim of oral cancer as my friend, who smokes more than me is healthy. Do you think so?



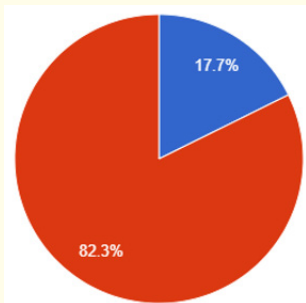
**Pie chart 15:** Do you think that brushing should not be done after extraction?



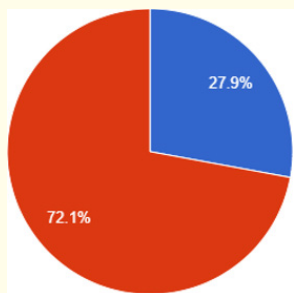
**Pie chart 16:** Do you think that extraction should not be undergone on Friday?



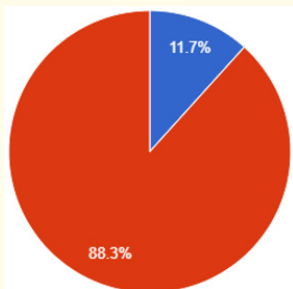
**Pie chart 20:** Do you think that extraction procedures are always very painful?



**Pie chart 17:** Do you think that extraction should not be done on a no moon day?



**Pie chart 18:** Do you think that menstruating women should not get their tooth extracted?



**Pie chart 19:** Do you think that everyone must get their wisdom teeth (Third molars) extracted?

### Discussion

This study was conducted to explore the existence of myths and to evaluate the diversity of these myths thereby educating people which can be a barrier to a healthy life. Through this study, it was found that 27.9% of respondent believe that extraction of teeth impairs and adversely affects the eyesight (may lead to blindness) which was less than the study done by Anubrata barman., *et al.* (66%) [1], sumit kochhar, *et al.* (49.6%) [2] and sadhana A. Raina., *et al.* (52.4%) [4]. The myth is that extraction of upper teeth deleteriously affects eyesight. Extractions performed on older patients, leading to weakening of eyesight may be due to vicinity in the maxilla and are merely coincidental, but still remain a myth. This myth might have been inherited due to misconceptions from those who have had previous negative dental experiences to which people relate themselves and avoid extraction of teeth in the upper arch. Vision is not affected by undertaking any dental treatment including its extraction [7].

More than 6% of participants think that local anaesthesia is impure and one must prefer undergoing extraction without administration of Local Anaesthesia. Local anaesthesia is considered very safe, especially for minor surgical procedures, it is safer than general anaesthesia. Even in this modern progressing world, 44.8% of the participants still exhibit faith in their cultural beliefs and myths that there will be visible worms in the teeth which cause pain. This may also be due to dentists relating dental caries to 'worms' in their native language to enable people to understand better and to undergo excavation of caries followed by restoration. The idea of tooth worms is merely an ancient myth [7]. In the present study, about 17.2% of participants think alcohol consumption reduces toothache but alcohol consumption and toothache have no rel-

Sl.no	Concept/Description	Yes(no. Of responses)	No(no. Of responses)	Percentage of yes%	Percentage of no%
1	Do you think that extraction of teeth impairs and adversely affects the eyesight (may lead to blindness)?	107	277	27.9%	72.1%
2	Do you think that Local anesthesia is impure, and one must prefer undergoing extraction without Local anesthesia?	26	358	6.8%	93.2%
3	Do you think that there will be visible worms in the teeth which causes pain?	172	212	44.8%	55.2%
4	Do you think that the swelling caused by painful teeth should be fomented with hot water?	176	208	45.8%	54.2%
5	Do you think that consumption of alcohol will reduce toothache?	66	318	17.2%	82.8%
6	Do you think that extraction of upper tooth will affect Brain?	77	307	20.1%	79.9%
7	Do you think that Eruption of 3rd molar will increase your Wisdom?	76	308	19.8%	80.2%
8	Should Exfoliated tooth be buried?	141	243	36.7%	63.3%
9	Do you think extraction of tooth is better than doing Root Canal Treatment & Restorations?	174	210	45.3%	54.7%
10	Do you think that extracting teeth in pregnant women is dangerous?	156	228	40.6%	59.4%
11	I will not be a victim of oral cancer as my friend, who smokes more than me is healthy. Do you think so?	55	329	14.3%	85.7%
12	Do you think that taking head bath after extraction is contraindicated?	174	210	45.3%	54.7%
13	Do you think that application of painkiller (balms) will reduce toothache?	140	244	36.5%	63.5%
14	Do you think that extraction of milk teeth will lead to edentulous state?	39	345	10.2%	89.8%
15	Do you think that brushing should not be done after extraction?	85	299	22.1%	77.9%
16	Do you think that extraction should not be undergone on Friday?	73	311	19.0%	81.0%
17	Do you think that extraction should not be done on a no moon day?	68	316	17.7%	82.3%
18	Do you think that menstruating women should not get their tooth extracted?	107	277	27.9%	72.1%
19	Do you think that everyone must get their wisdom teeth (Third molars) extracted?	45	339	11.7%	88.3%
20	Do you think that extraction procedures are always very painful?	197	187	51.3%	48.7%

Table 1

evance. About 20.1% of participants think that the extraction of the upper tooth will affect the Brain. This could be the result of a bad experience that is passed on to generations and due to the myths, that were spread in the times when the field of dentistry was still developing. About 19.8% of participants think that Eruption of the 3rd molar will increase your Wisdom and this one still remains a myth.

About 36.7% of participants think that exfoliated teeth should be buried. There are several myths about exfoliated tooth that have been rooted deep among people for generations [4] about 45.3% of participants think extraction of the tooth is better than doing Root Canal Treatment and Restoration which is lesser than the outcome of the study conducted by Renu M., *et al.* (49.5%). It may be because of multiple visits for dental treatments, expenditure and lack of awareness about the importance of saving natural teeth. This also shows the ignorance of people about the various existing treatment modalities to save natural teeth [5] 40.6% of participants think that extracting teeth in pregnant women is dangerous but extracting teeth during the 2<sup>nd</sup> trimester is not dangerous [4] 14.3% of participants think that they will not be a victim of oral cancer as their friend, who smokes more than them are healthy. Cigarette smoke contains various carcinogens of which the most important are PAH, N-nitrosamines, 1,3-butadiene, benzene, aldehydes, and ethylene oxide because of their carcinogenic potency and higher levels in cigarette smoke. The frequency of smoking cigarettes is not the only component that results in cancer. Smoking cigarettes itself is an important risk factor for the development of cancer and it does not necessarily depend on the frequency and number of cigarettes smoked per day. About 45.3% of participants think that taking head bath after extraction is contraindicated which is also only a myth and has no relevance to reality. This myth still exists due to lack of unawareness about dental procedures.

About 36.5% of people think that application of painkiller (balms) will reduce toothache. The majority of the rural population tend to prefer the application of pain killers (balm) rather than visiting a dentist. Painkillers treat only the symptoms and not the cause and should not be taken over a long period of time without dental consultation. Hence it is necessary to visit a dentist immediately. About 10.2% of participants think that the extraction of milk tooth will lead to an edentulous state which is also merely a myth as the extraction of the primary tooth will not lead to an edentulous condition but will be gradually followed by the eruption of the

permanent tooth. About 22.1% of participants think that brushing should not be done after extraction but brushing can be done after extraction in non-extracted sites to maintain oral hygiene. Even in the 21st century, the participants still depend on the cultural beliefs and taboos in seeking treatment for their dental problems such as extractions. They believe that extractions should not be undergone on Friday (19%) and on a no-moon day (17.7%). This myth mostly is inherited mostly on a religious basis.

About 27.9% of participants think that menstruating women should not get their tooth extracted which is not true. Menstruation is a natural process and physiologically most of the medical treatments are not contraindicated during them. A small amount of blood loss due to extraction may not cause any major problems. Most women experience pain and discomfort during their periods; therefore, an extraction might be an additional discomfort apart from which it is safe to get the tooth extracted during menstruation. About 11.7% of participants think that everyone must get their wisdom teeth (third molars) extracted. Only decayed, Impacted and hopeless third molars are advised for extraction. About 51.3% of participants think that extraction procedures are always very painful. This could be the result of a bad experience in the past dental treatment [5].

## Conclusion

It is a fact that myths and cultural beliefs have been constantly hampering the oral health of the population. This reflects lack of dental health education among people. The present study has depicted relatively lower prevalence of myths in oral surgical procedures which imparts that the levels of myths are constantly being reduced which will pave way towards improved oral care and a healthy lifestyle. Basic principles and concepts regarding oral health and hygiene must be a part of the education curriculum straight from the preliminary classes. Dental education campaigns and awareness programs must be constantly conducted especially in rural area which might also greatly help in eradicating these myths.

## Acknowledgement

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