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Prevalence of Myths and Misconceptions Regarding Dental Extractions among Dental Patients: An Institutional Study

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ABSTRACT

INTRODUCTION: Myths related to oral ailments and dental health care practices are very common in Indian society and it is strenuous to break this chain as these myths are deep-rooted in society. Understanding the myths and misconceptions about oral diseases is important in providing excellent care and health education to both patients and healthy individuals.

AIM: The aim of this study is to evaluate the myths and misconceptions regarding dental extraction among dental patients.

MATERIALS AND METHODS: A survey was conducted among 100 dental patients to evaluate the myths and misconceptions regarding dental extraction by preparing a set of questions. The answers were collected through an online survey method. Data were collected and tabulated in the Microsoft Excel sheet and the results were analyzed through spss software and results obtained.

RESULTS: In this study, the number of male participants was 43% and the number of female participants was 56%. Among the participants of the survey, 61 % of them are in the middle-class category. Patient's belief extraction affects the brain which is 62 %, tooth extraction affects eye vision which is 58%, extraction of a tooth causes hearing loss which is 49 %. 61% of patients believe that extraction of a tooth causes fever, 65 % of the patient's belief that extraction of the tooth causes damage to nerves. 38% of the patient's belief that extraction of the tooth causes miscarriage.

CONCLUSION: The study population has significant belief in one or more myths and misconceptions regarding dental extraction. The myths are due to illiteracy and lack of knowledge about dental extraction and they act as barriers to the utilization of dental services. There is a need to educate people about the facts of dentistry. The dentist should also maintain a friendly relationship

with the patient so that the patient openly tells about the beliefs and gets a clearer idea. It is our responsibility to explain the harmful dental myths and promote the truth.

KEYWORDS: Innovative techniques, Painful, Recovery, Wisdom, myths, misconceptions, dental extractions

INTRODUCTION :

The Indian population consists of people from different cultures and they strongly believe various myths and misconceptions on health-seeking behavior in our population. Myths are defined as the stories shared by a group of people that are deep-rooted in the minds of future generations over a period of time(1). Myths related to health care practices are very common in Indian society and it is necessary to break this chain. Myths are regarded as the false perspectives that emerge from traditional beliefs and non-scientific knowledge. A misconception is defined as an idea or belief that is not based on correct information.

Myths and misconceptions are present in all cultures, all professions and they have a strong influence on the life of individuals including treatment during illness(2, 3). The standard of oral health greatly depends on diet, socioeconomic status, educational qualification, habits, and oral hygiene practices. Dental-related myths and misconceptions are transferred from one generation to the next because these are provincial and are heard everywhere by those who had previous personal negative dental experiences(4). These myths and misconceptions lead the patients towards a wrong protocol making it difficult for the dentist to provide satisfying treatments. This is due to a lack of awareness, low educational levels, anxiety, etc.

Tooth extraction is often associated with a patient's false myths to be triggered by the factors such as pain, systemic factors, and the patient's attitude(5). Myths such as drinking alcohol reduce tooth pain, the use of stems of plants instead of toothbrushes will be effective for maintaining good oral hygiene, extraction of upper teeth affects eye vision, use of tobacco or tobacco products used as the remedy for tooth pain, use of coal makes the tooth strong, cleaning with salt makes teeth white and shiny causes the negative effect on oral health as these are not recommended in the oral hygiene practices(6),(7),(8). Many people think the stems of plants have antimicrobial and anti-plaque activity but these cause gingival trauma and occlusal wear. The use of coarse materials such as coal and salt in cleaning procedures abrade the enamel and damage periodontal ligament(9),(10–19) .The majority of the female population believed in the myth that no dental treatment should be done during pregnancy because that affects the development of the fetus. However, they are unaware that the treatment could be done during the 2nd trimester when organogenesis is complete(20),(21),(22),(23),(24).

Most people believe scaling leads to mobility, sensitivity, and also creates gaps between teeth, this is because of the calculus that fills the gaps, after the removal of calculus the undermined enamel will be exposed resulting in a sensitivity of teeth. Poor oral health has a significant impact on the quality of life which leads to deterioration of general health(25),(26–28). The attitude of people toward their own teeth, the attitude of dentists who provide dental care play an important role in determining the oral health condition of the population. Physicians and dentists create awareness by teaching and practicing evidence-based medicine. Cultural beliefs due to illiteracy and lack of knowledge act as barriers to the utilization of dental services. Coordinated efforts by dental care professionals, public health personnel, and health care workers are needed to impart health education (29) - (30)

Very limited research has been conducted related to myths and misconceptions in dentistry among dental patients in India. Therefore, the present survey was conducted to assess the prevalence of myths and misconceptions related to dental extractions among patients visiting a Dental College and Hospital and suggest possible measures to raise awareness regarding dental extractions.

MATERIALS AND METHODS :

An online survey was conducted among 100 dental patients of Saveetha dental college and hospitals, Saveetha university to evaluate their myths and misconceptions regarding dental extractions. A questionnaire was distributed on an online platform. This online questionnaire survey consisted of 13 questions that were distributed to the study population through google forms [Table 1]. The questionnaire was assessed by experts in the field for validity and reliability. The same was assessed by conducting a pilot survey in a smaller sample size. Data was entered into a spreadsheet using Excel version Microsoft. The data tabulation in Excel was according to education qualification, Gender, socioeconomic status, myths and misconceptions related to tooth extraction. The data which was collected was analyzed using Statistical Package for Social sciences (SPSS) software. Descriptive statistics were done, percentages and frequencies were calculated and to test the difference among categorical variables chi-square test was done with a p-value <.05 considered as statistically significant.

Table 1 : Questionnaire regarding Myths and misconceptions about tooth extraction

QUESTIONS	**OPTIONS**
Gender	a) Female b) Male
Socioeconomic status	a)Middle class b)Upper class c) Lower class
Do you think extractions of the upper teeth affect the brain?	a)Yes b)No c)Don’t know
Do you think Extraction of wisdom teeth will lead to loss of wisdom?	a)Yes b)No c)Don’t know

Do you think nothing should be eaten before the extraction of teeth?	a)Yes b)No c)Don't know
Extraction of teeth must not be done in the presence of swelling	a)Yes b)No c)Don't know
Extraction of teeth should not be done in winter or rainy seasons	a)Yes b)No c)Don't know
Do you think Extraction of teeth is a painful procedure?	a)Yes b)No c)Don't know
Tooth extraction is always the best option for the decayed tooth	a)Yes b)No c)Don't know
Do you think extraction of upper teeth will cause loss of vision ?	a)Yes b)No c)Don't know
Do you think recovering from a tooth extraction is a long process?	a)Yes b)No c)Don't know
Do you think removal of upper teeth causes hearing loss?	a)Yes b)No c)Don't know
Do you think extraction of teeth causes any damage to nerves?	a)Yes b)No c)Don't know
Do you think extraction causes	a)Yes b)No

miscarriage?	c)Don't know
Do you think extraction of teeth causes any swelling in the face?	a)Yes b)No c)Don't know

RESULTS

The responses of the participants about the prevalence of myths and misconceptions regarding dental extraction are depicted in Figures 1-17.

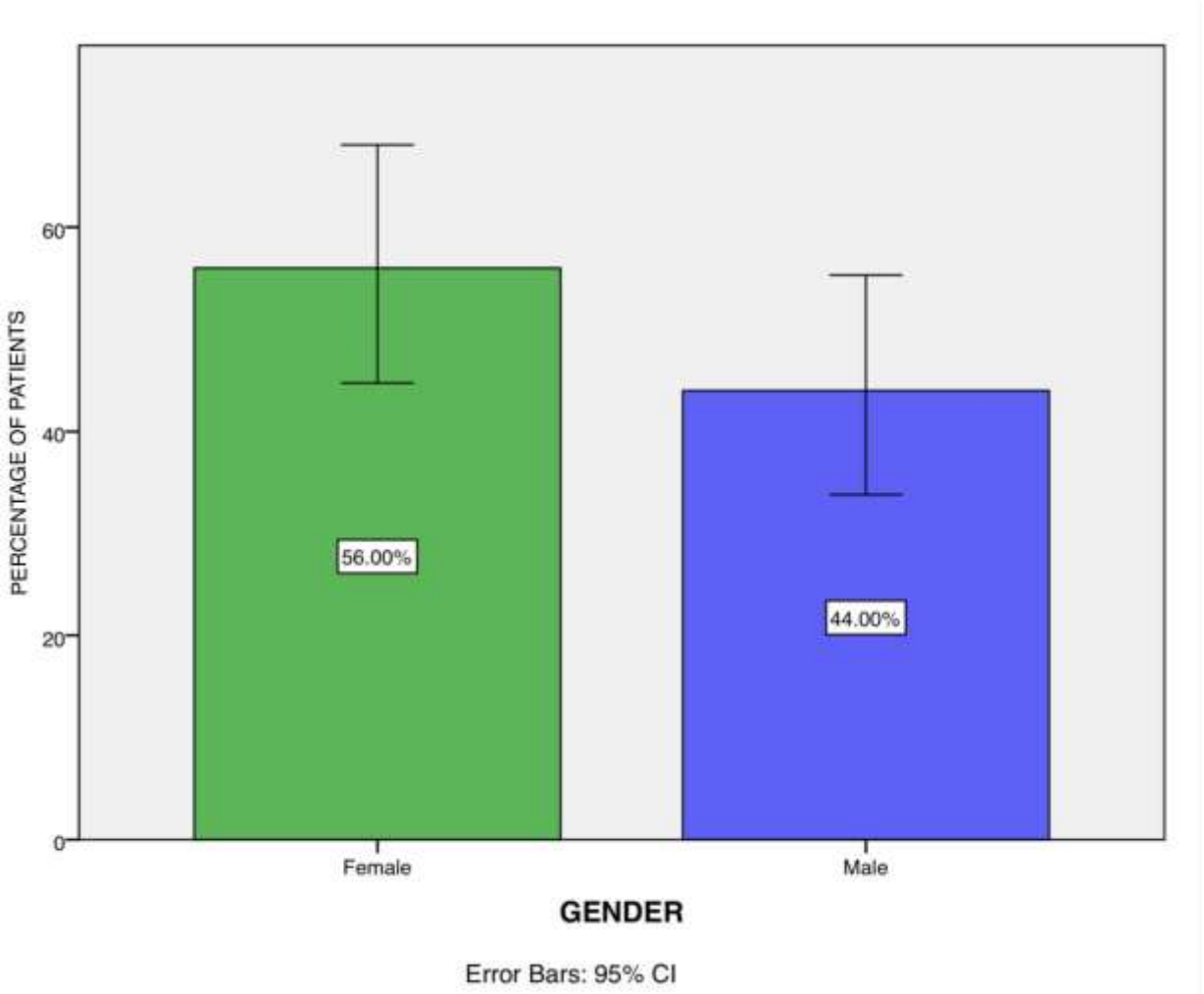

FIGURE 1: The bar chart represents the gender distribution of the study population.

Green represents females which is 56 % and blue represents 44% male.

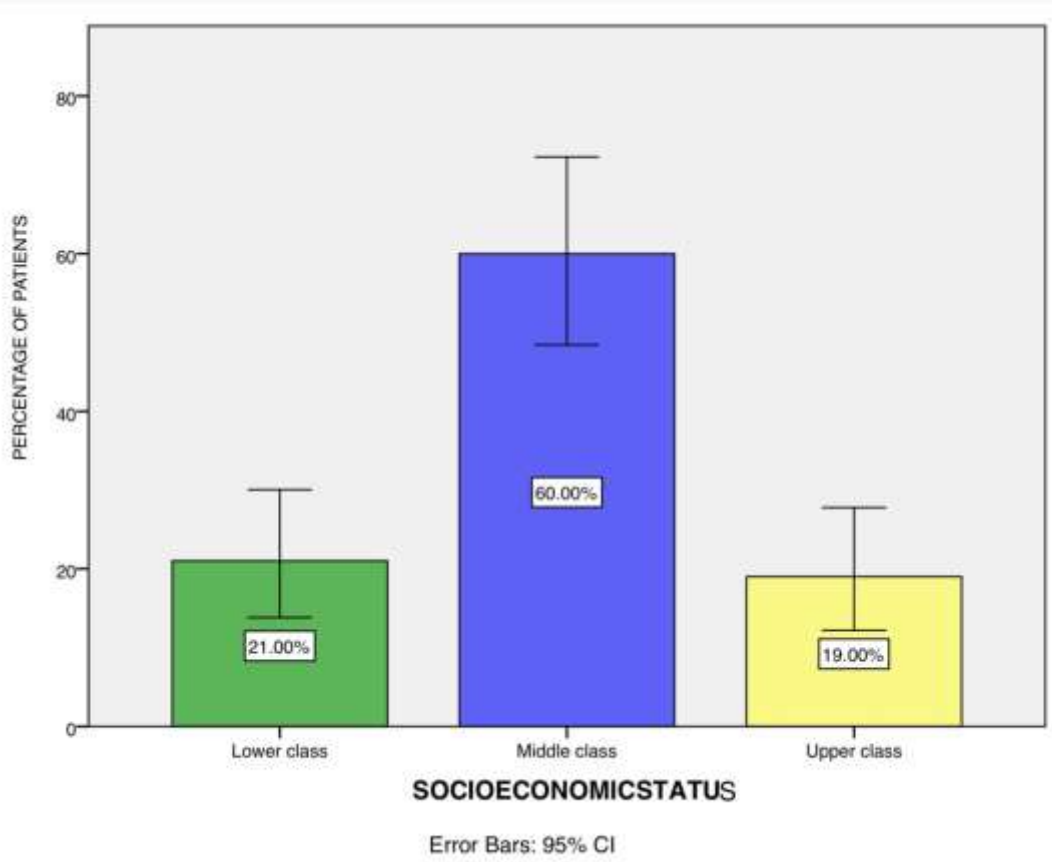

FIGURE 2: The bar chart represents the distribution of socioeconomic status of the study population. Blue represents the middle class which is 60 % and green represents the lower class which is 21 % and yellow color represents the upper class which is 19 %.

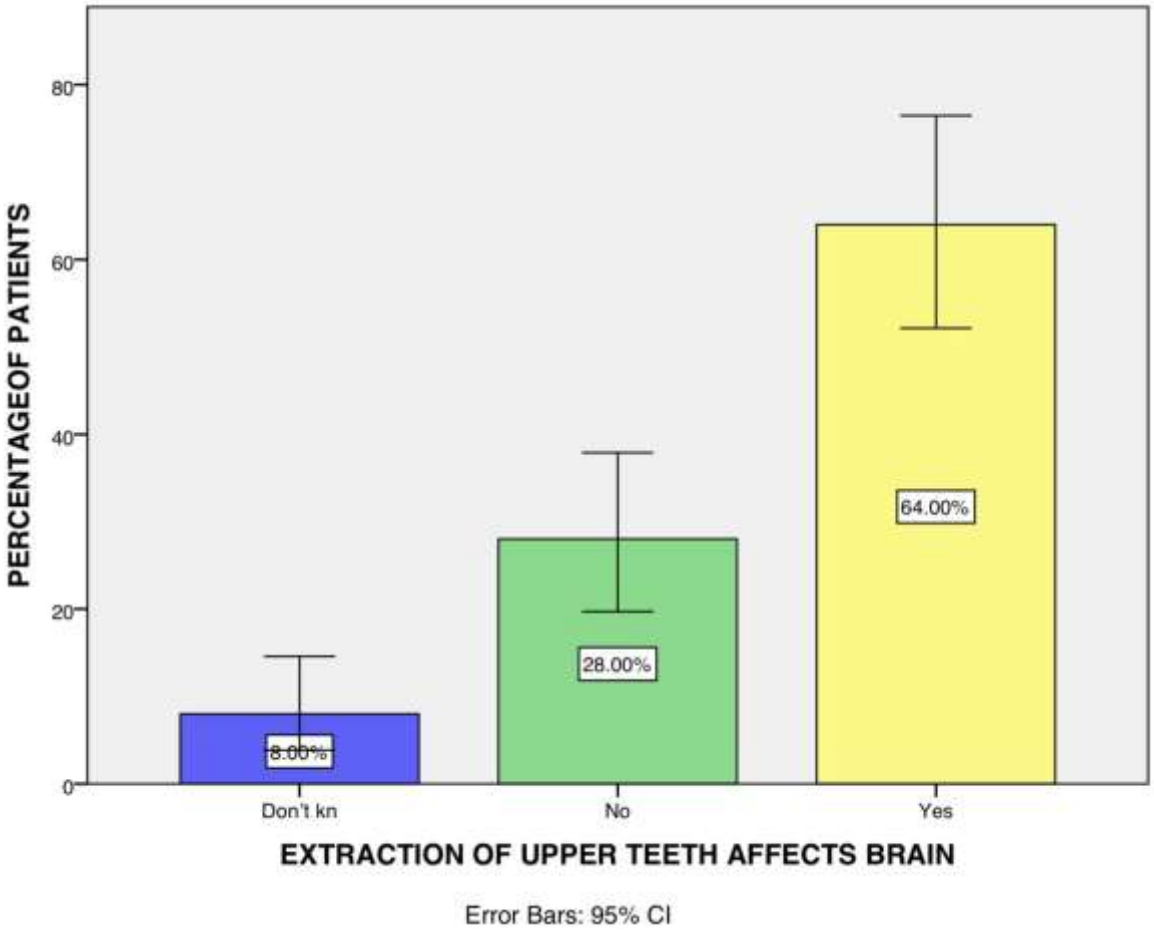

FIGURE 3: The bar chart represents the response of the patients regarding their belief if extraction of upper teeth affects the brain. Yellow represents the patient's belief extraction affects the brain which is 64% and green represents extraction does not affect the brain which is 28% and the blue color represents 8 % of the participants who do not know extraction affects the brain.

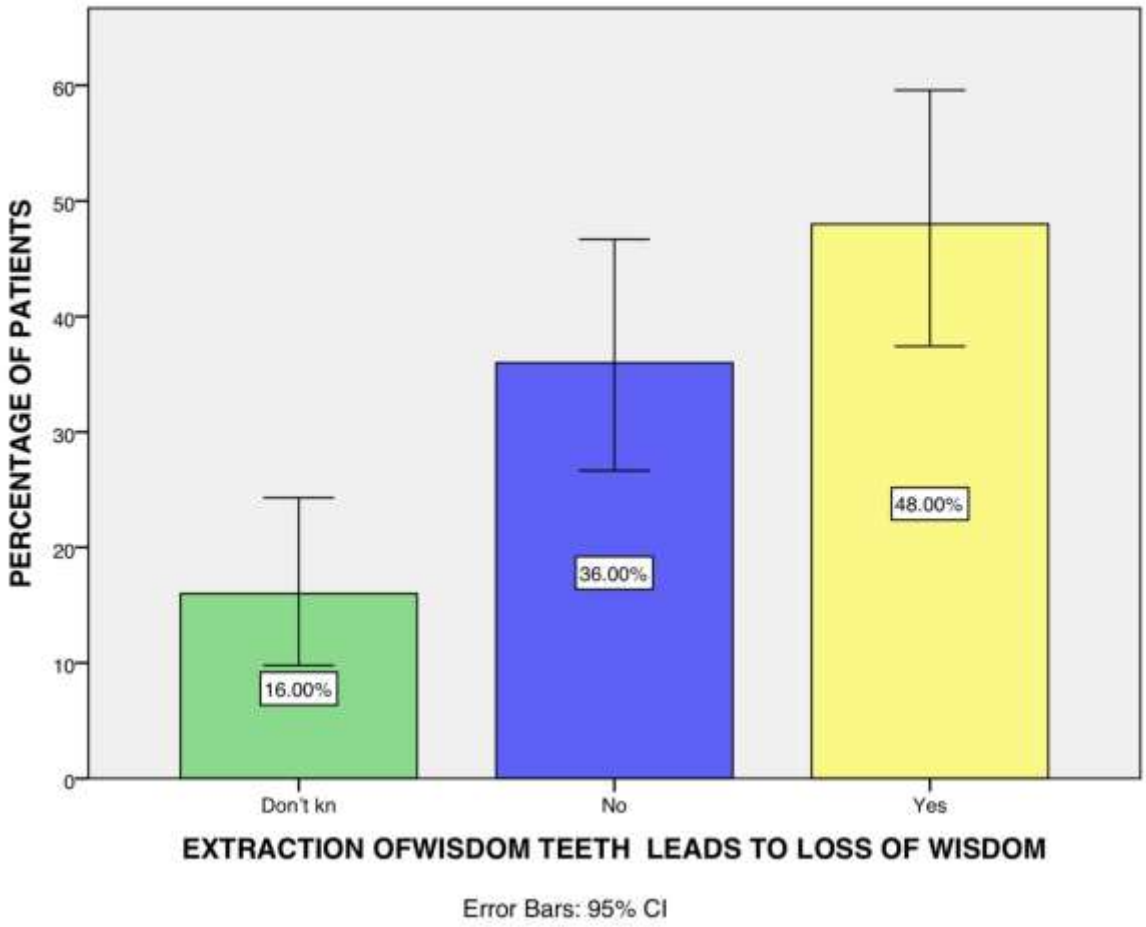

FIGURE 4: The bar chart represents the response of the patients regarding their belief if extraction of wisdom teeth leads to loss of wisdom. Yellow represents the patient's belief that extraction of teeth causes loss of wisdom which is 48% and blue represents extraction does not affect wisdom which is 36% and the green color represents 16 % of the participants who do not know extraction of wisdom teeth affects wisdom.

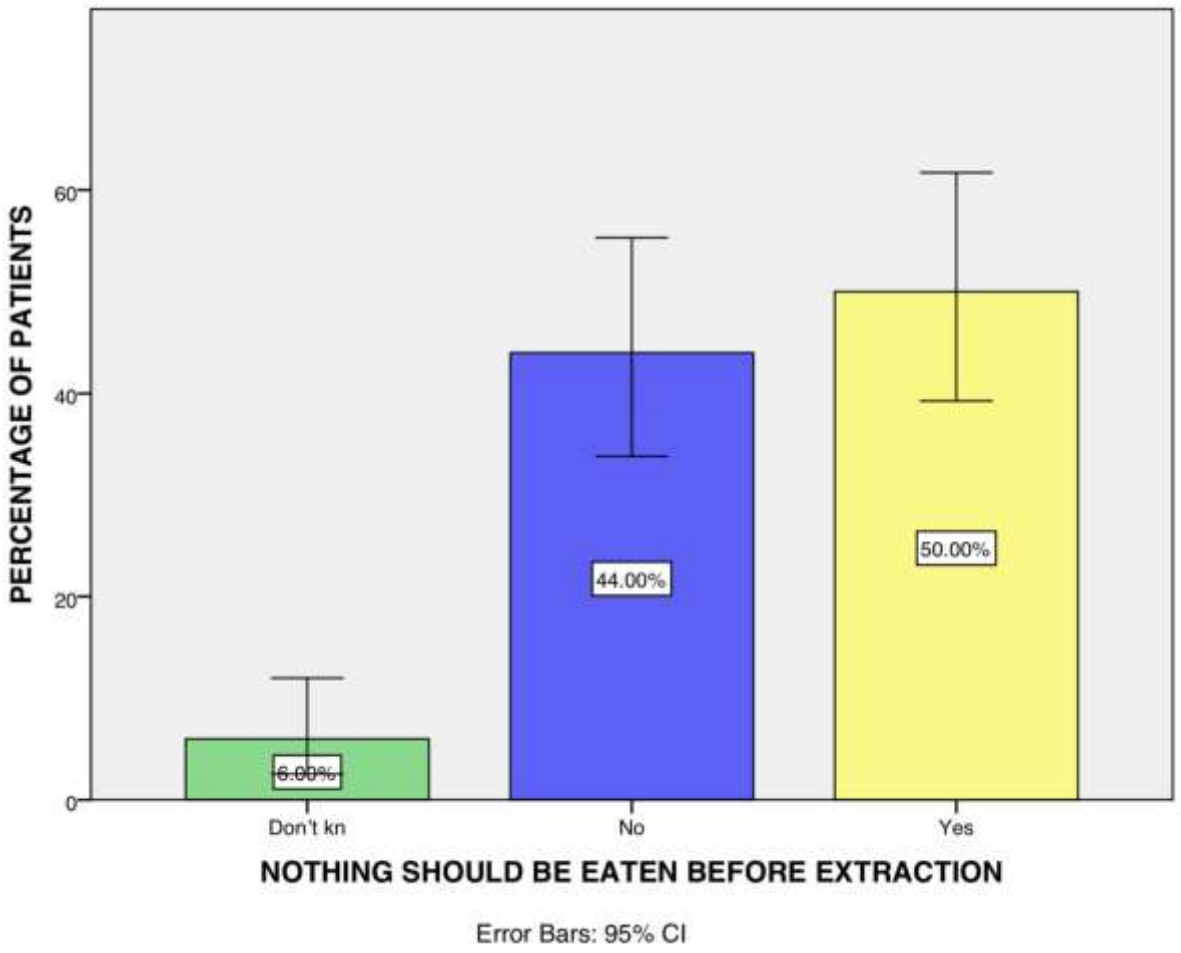

FIGURE 5 : The bar chart represents the response of the patients regarding their belief whether nothing should be eaten before extraction. Yellow represents the patient's belief nothing should be eaten before extraction which is 50% and blue represents nothing should be eaten before extraction which is 44% and the green color represents 6 % of the participants who do not know about before extraction nothing should be eaten.

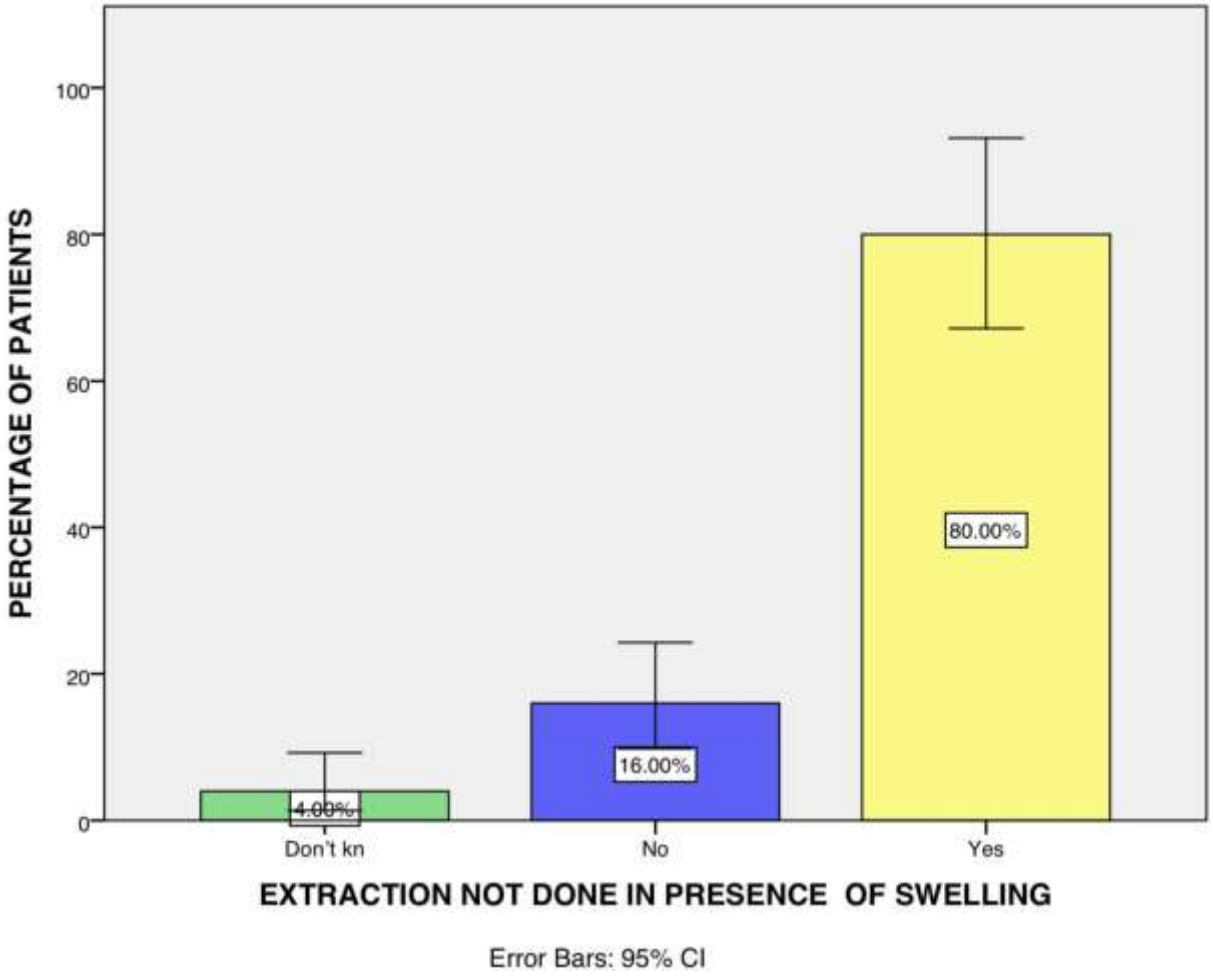

FIGURE 6 : The bar chart represents the responses of the patients regarding their belief whether extraction should not be done in the presence of swelling. Yellow represents the patient's belief extraction should not be done in the presence of swelling which is 80% and blue represents extraction done in the presence of swelling which is 16% and the green color represents 4% of the participants who do not know about before extraction should not be done in the presence of swelling. .

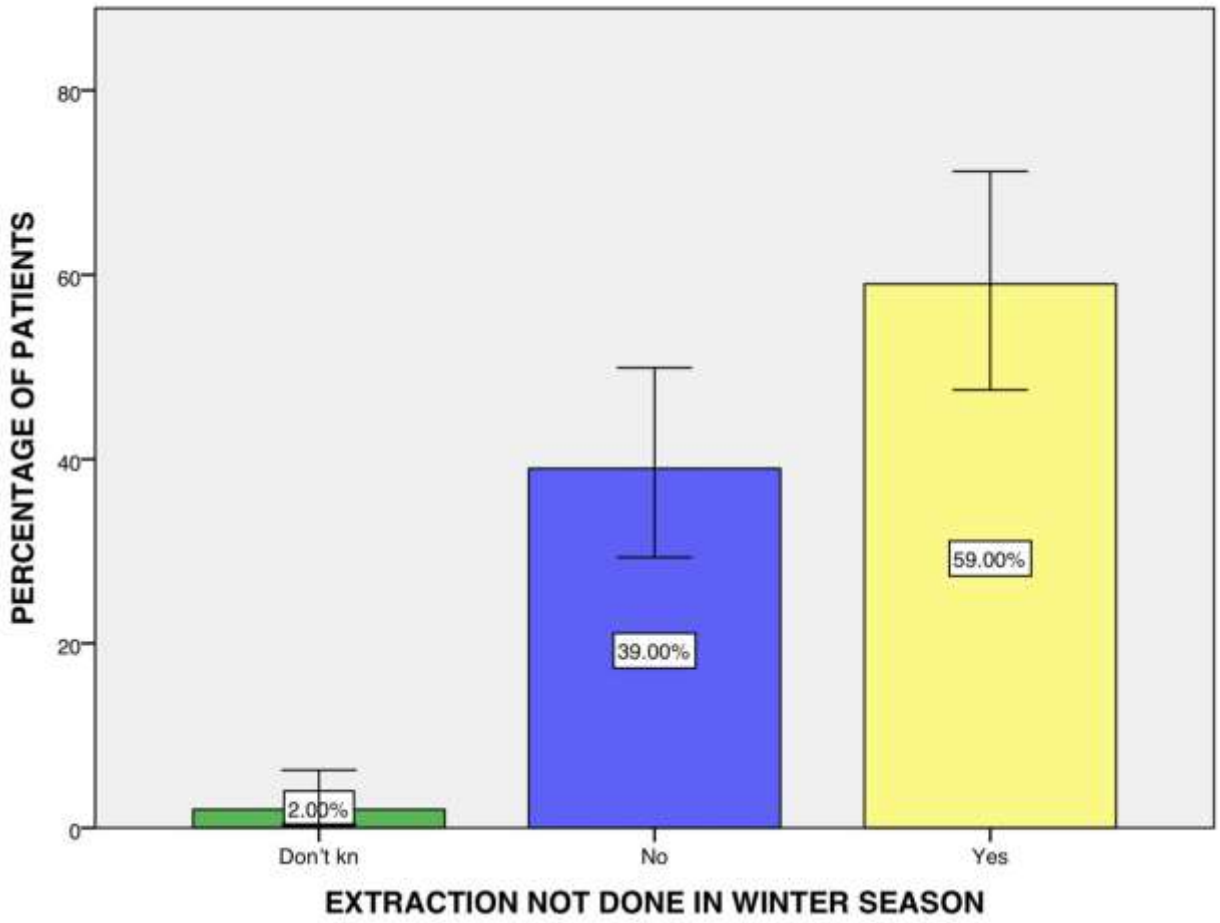

FIGURE 7: The bar chart represents the response of the patients regarding their belief whether extraction should not be done in the winter season. Yellow represents the patient's belief extraction should not be done in the winter season which is 59% and blue represents extraction should be done in the winter season which is 39% and the green color represents 2% of the participants who do not know about the extraction should not be done in the winter season. .

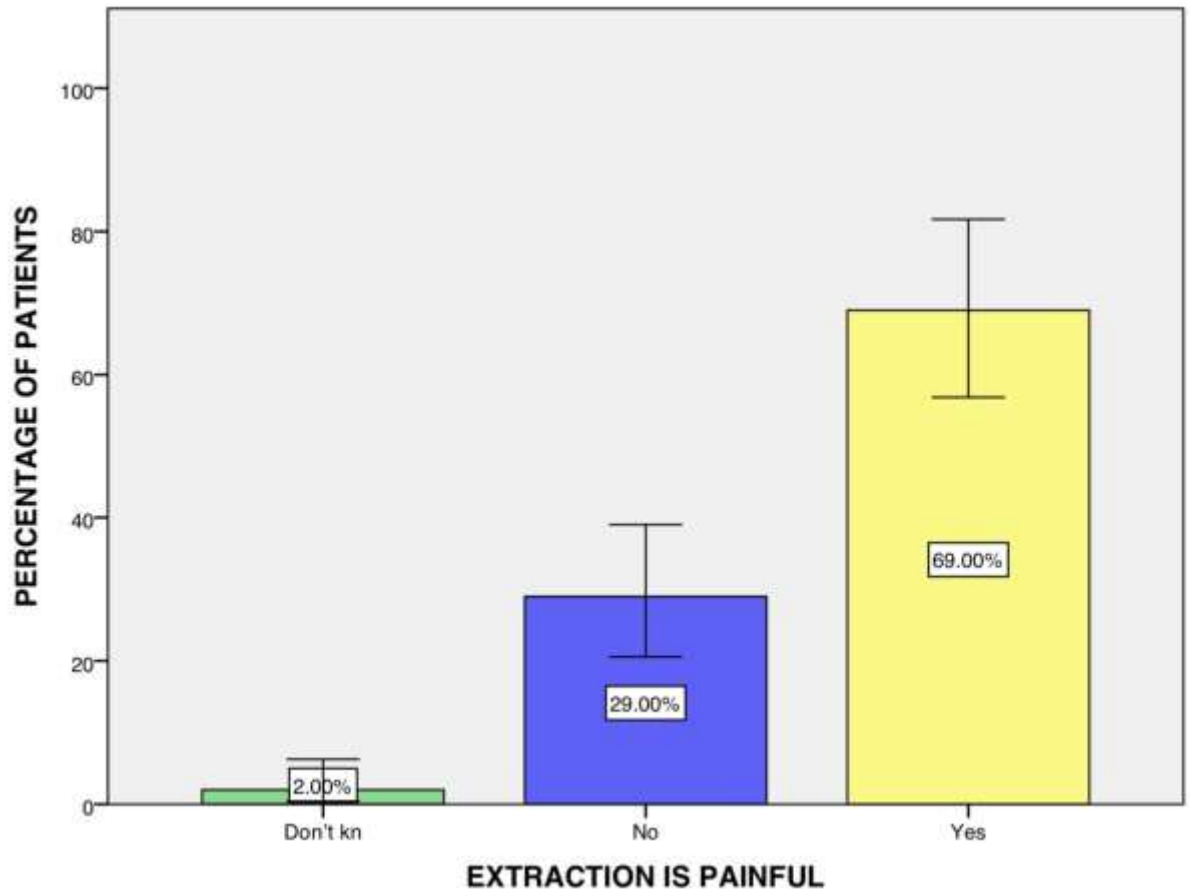

FIGURE 8 : The bar chart represents the response of the patients regarding their belief if extraction is a painful procedure. Yellow represents the patient's belief extraction is a painful procedure which is 69% and blue represents extraction is not a painful procedure which is 29% and the green color represents 2% of the participants who do not know extraction is painful.

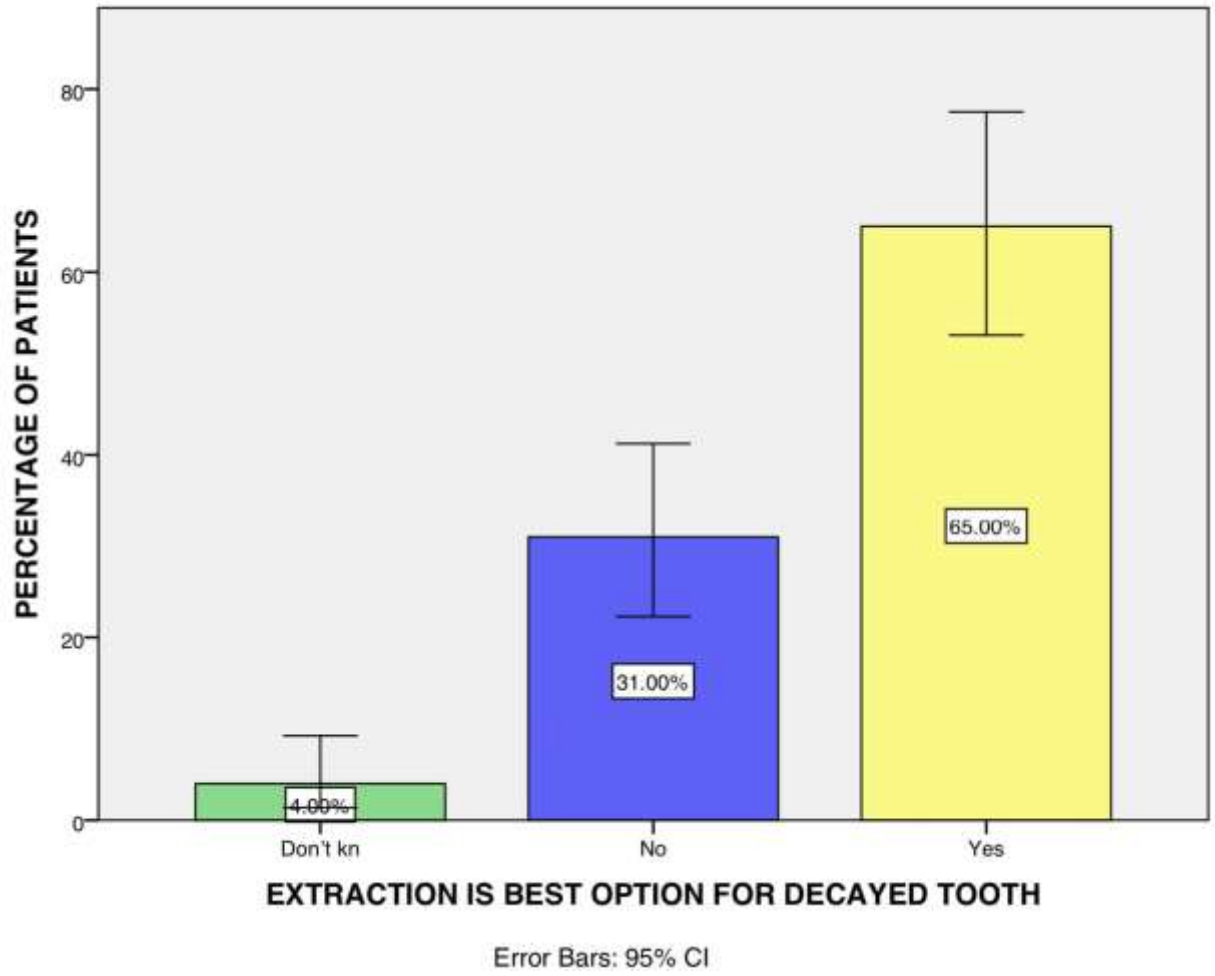

FIGURE 9: The bar chart represents the response of the patients regarding their belief if extraction is the best option for decayed teeth. Yellow represents the patient's belief extraction is a best option for decayed teeth which is 65% and blue represents extraction is not a best option for decayed teeth which

is 31% and the green color represents 4% not knowing extraction is the best option.

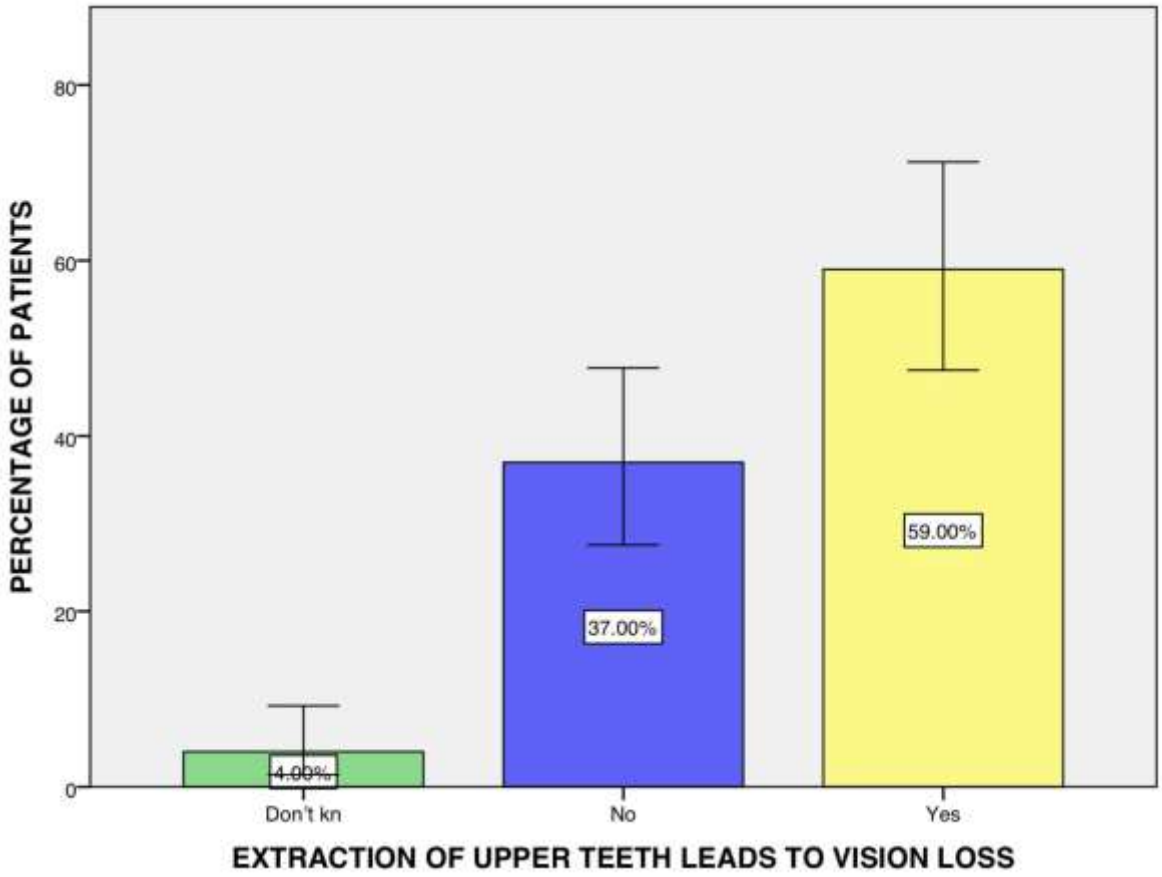

FIGURE 10: The bar chart represents the response of the patients regarding their belief if extraction of upper teeth leads to loss of eye vision. Yellow represents the patient's belief that extraction of tooth affects eye vision which is 59% and blue represents extraction does not affect eye vision which is 37% and the green color represents 4% who do not know about extraction affects eye vision. .

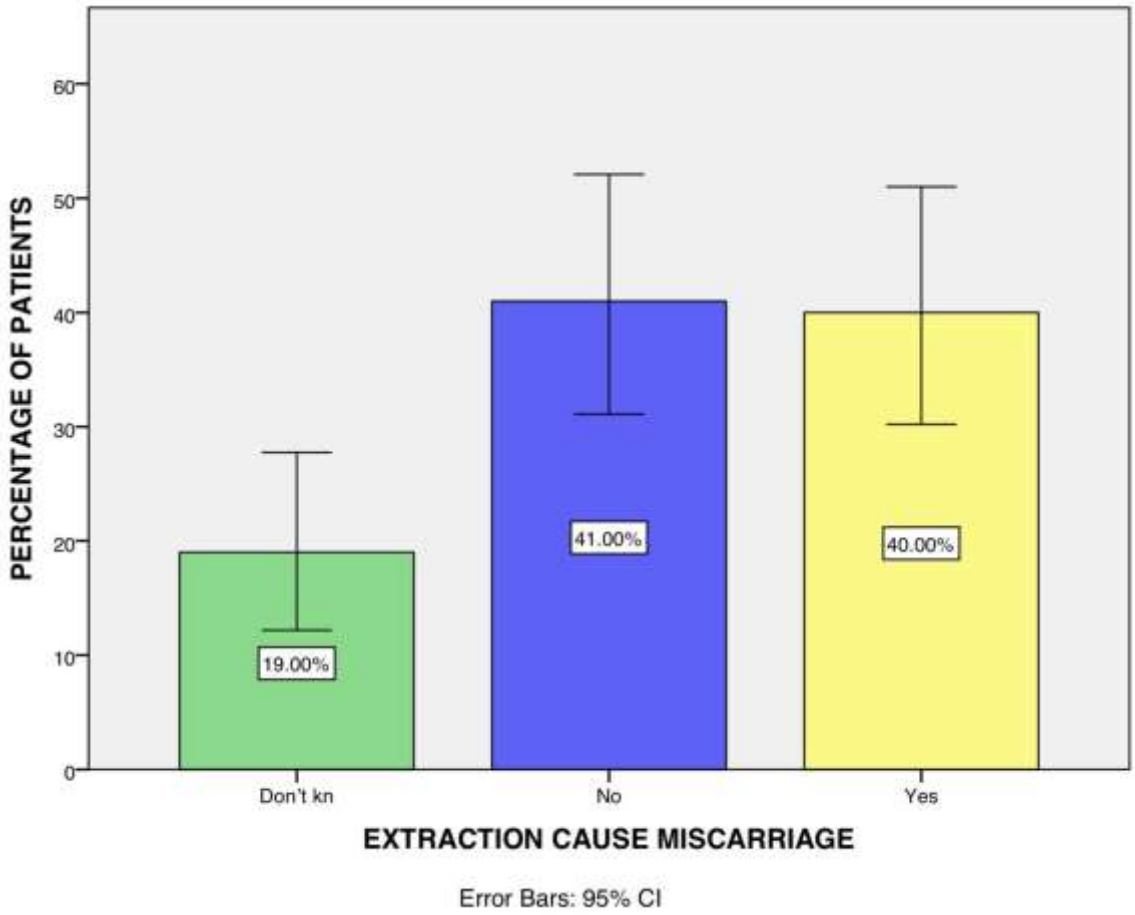

FIGURE 11: The bar chart represents the response of the patients regarding their belief if extraction of teeth causes miscarriage. Yellow represents the patient's belief that extraction of the tooth causes miscarriage which is 40% and blue represents extraction does not cause miscarriage which is 41% and the green color represents 19% of the participants who do not know extraction causes miscarriage.

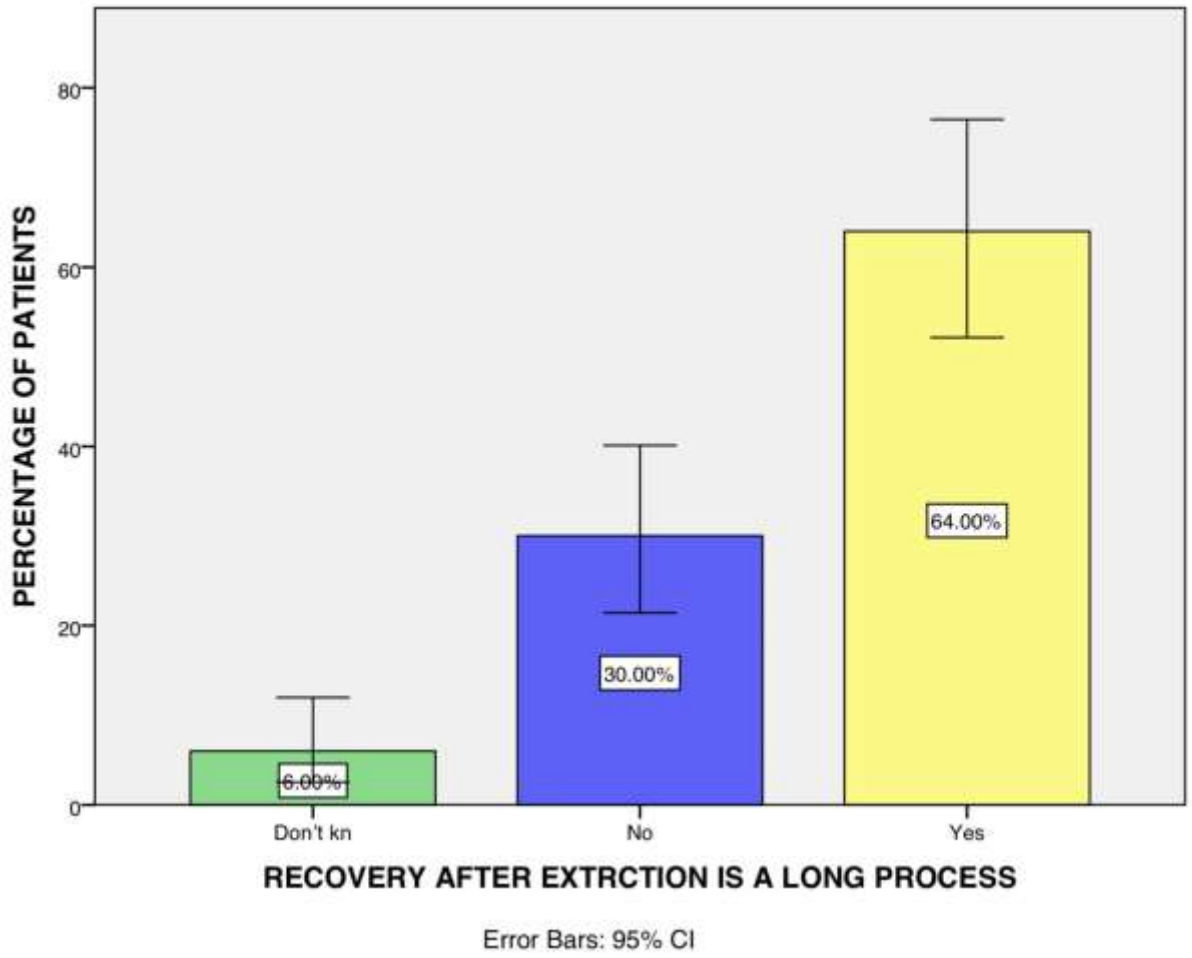

FIGURE 12: The bar chart represents the response of the patients regarding their belief that recovery from extraction is a long process. Yellow represents the patient's belief that recovery after extraction is a long process which is 64% and blue represents recovery after extraction which is not a long process which is 30% and the green color represents 6% of the participants who do not know about the recovery after extraction is a long process .

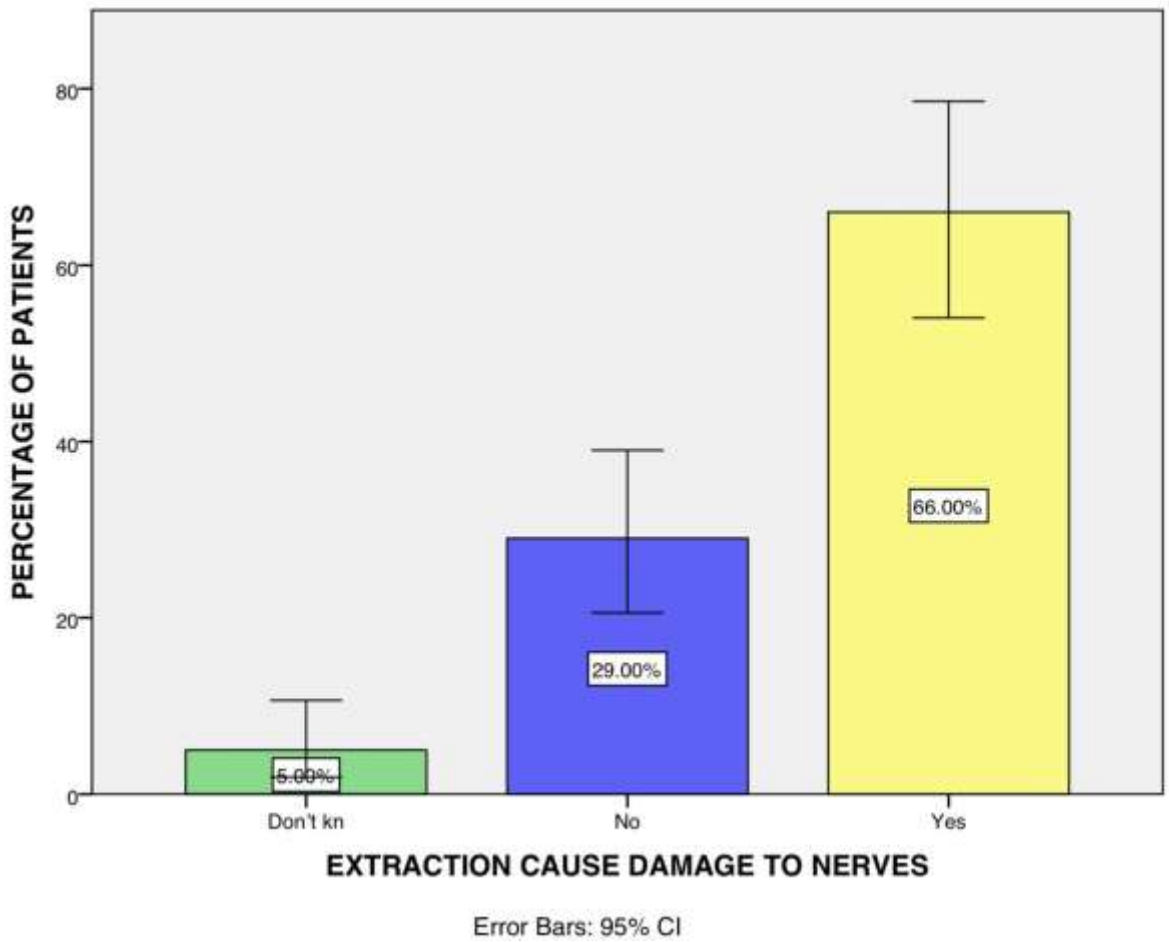

FIGURE 13: The bar chart represents the response of the patients regarding their belief if extraction of teeth causes damage to nerves. Yellow represents the patient's belief that extraction of the tooth causes damage to nerves which is 66% and blue represents extraction does not affect nerves which is 29% and the green color represents 5% of the participants who do not know extraction causes damage to the nerves.

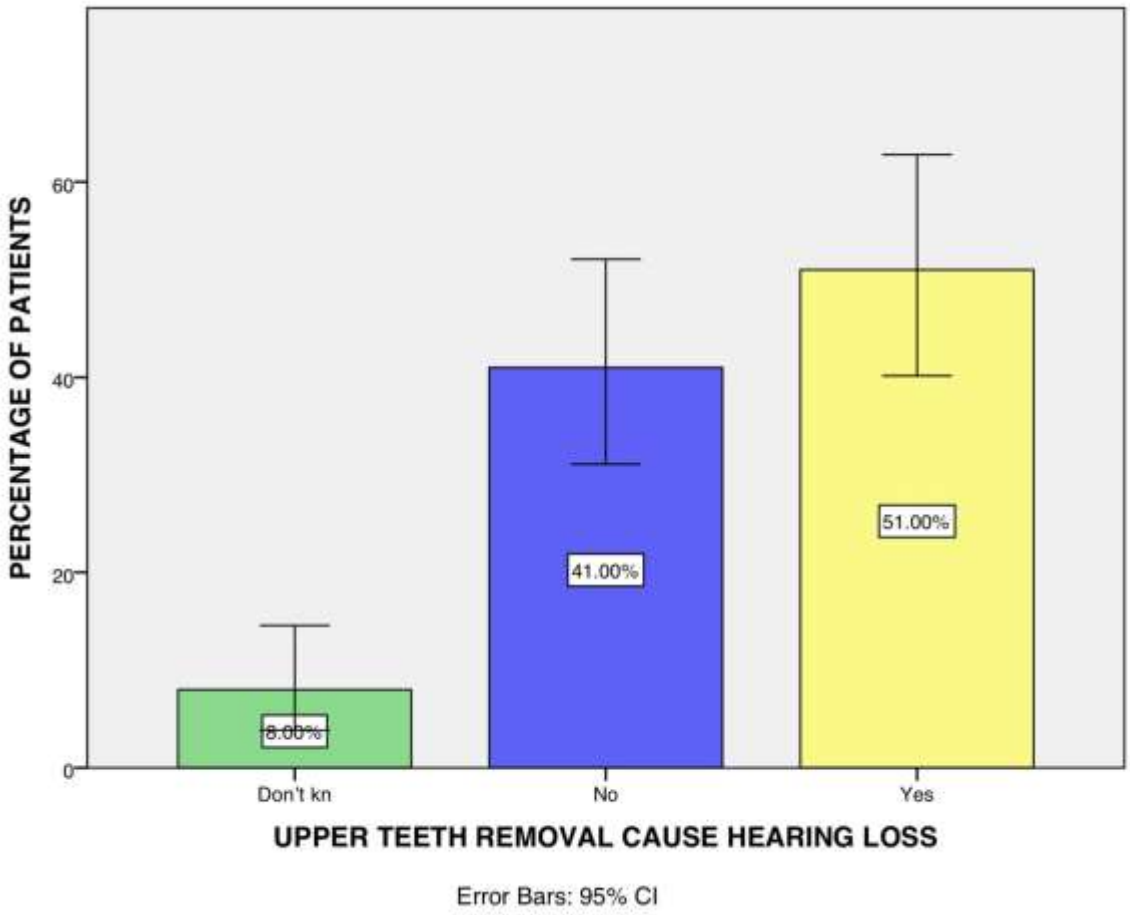

FIGURE 14 :The bar chart represents the response of the patients regarding their belief if extraction of tooth causes hearing loss. The bar chart represents the percentage of the patients who believe extraction of a tooth causes hearing loss. Yellow represents the patient's belief that extraction of tooth causes hearing loss which is 51 % and blue represents extraction does not affect the hearing which is 41% and the green color represents 8% of the participants who do not know extraction causes hearing loss.

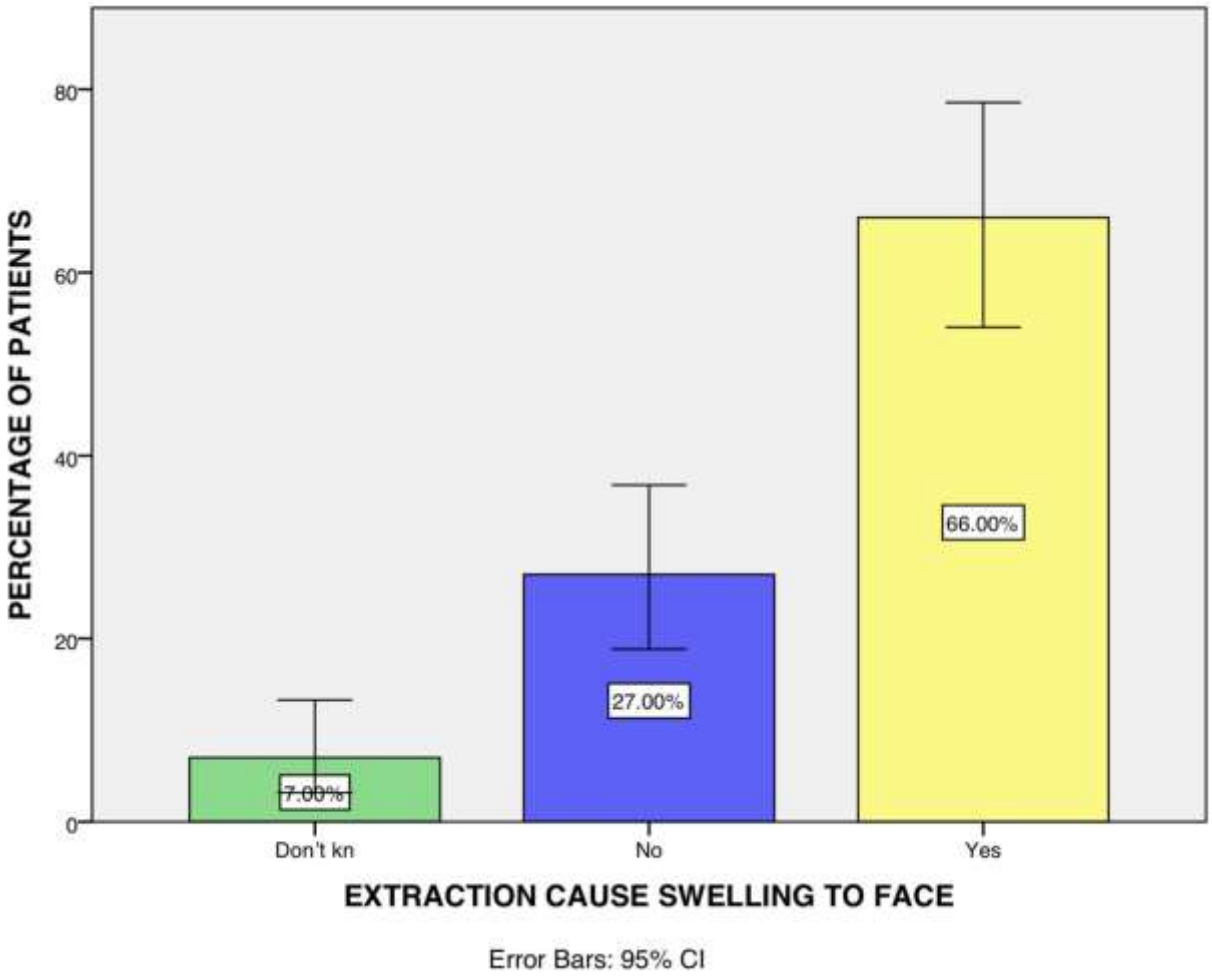

FIGURE 15 : The bar chart represents the response of the patients regarding their belief if extraction causes swelling to face. Yellow represents the patient's belief that tooth extraction causes swelling to face which is 66 % and blue represents extraction does not cause swelling to face which is 27% and the green color represents 7% of the participants who do not know extraction causes swelling to face.

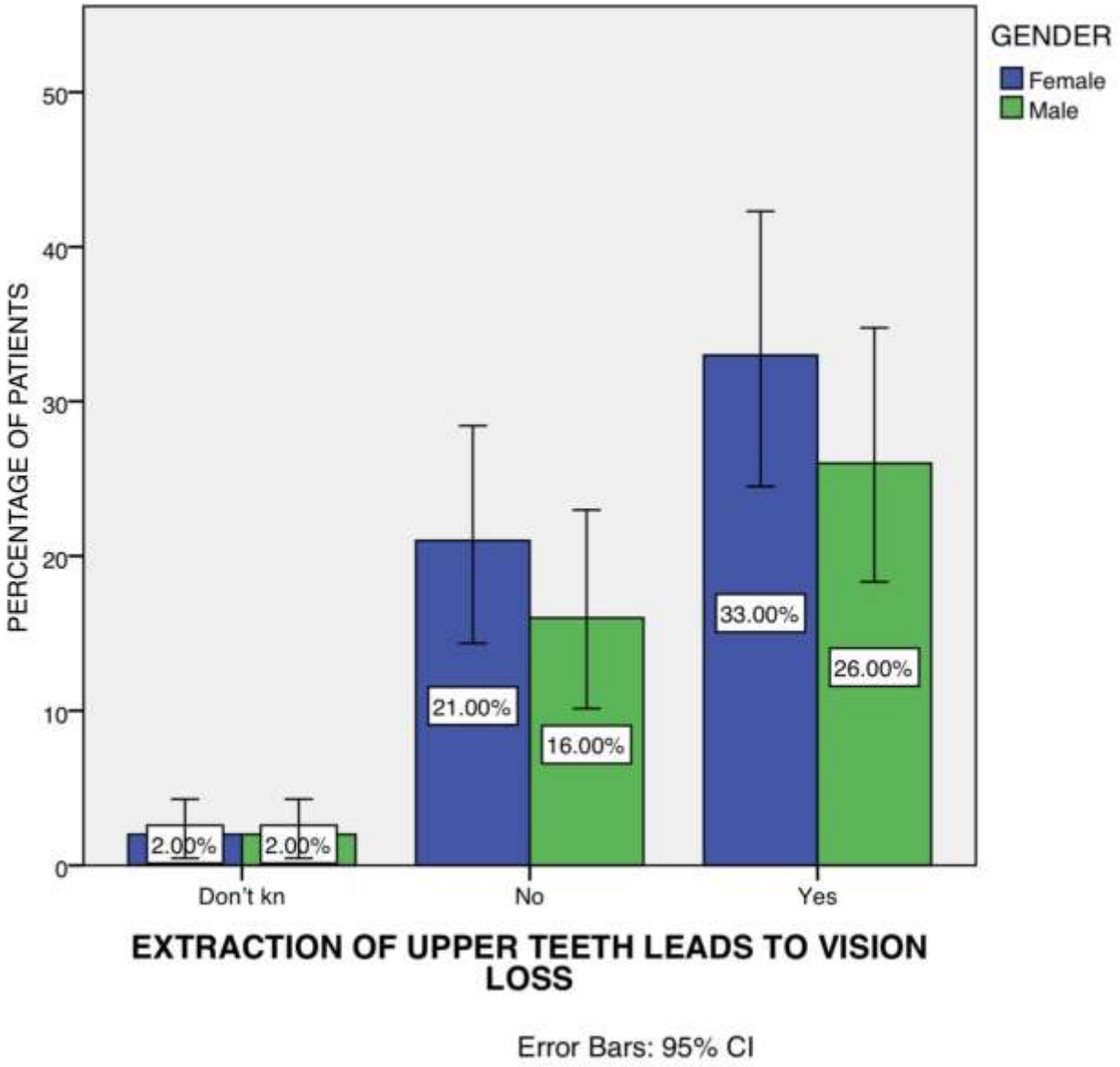

Figure 16 : The bar graph represents the association between gender and the myths of patients. The X-axis represents the responses of participants regarding myths of extraction and Y-axis represents the percentage of responses based on gender. Chi-square test was performed and the association was statistically not significant (p-value =0.839, >0.05). Most of the participants believe the extraction of upper teeth leads to loss of eye vision.

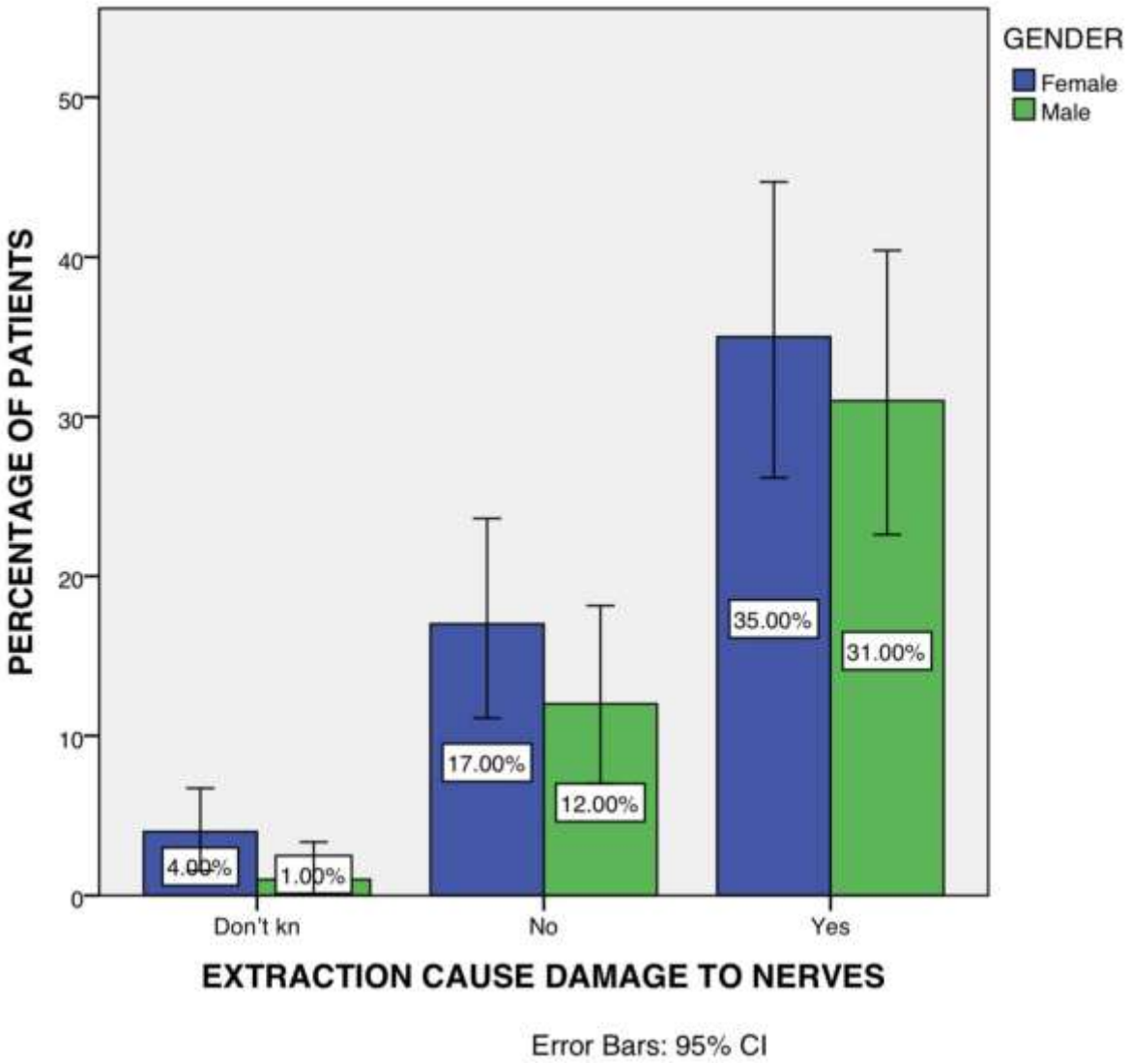

Figure 17: The bar graph represents the association between gender and the myths of patients. The X-axis represents the responses of participants regarding myths of extraction and Y-axis represents the percentage of responses based on gender. Chi-square test was performed and the association was statistically not significant (p-value =0.614, >0.05). Most of the participants believed that extraction causes nerve damage.

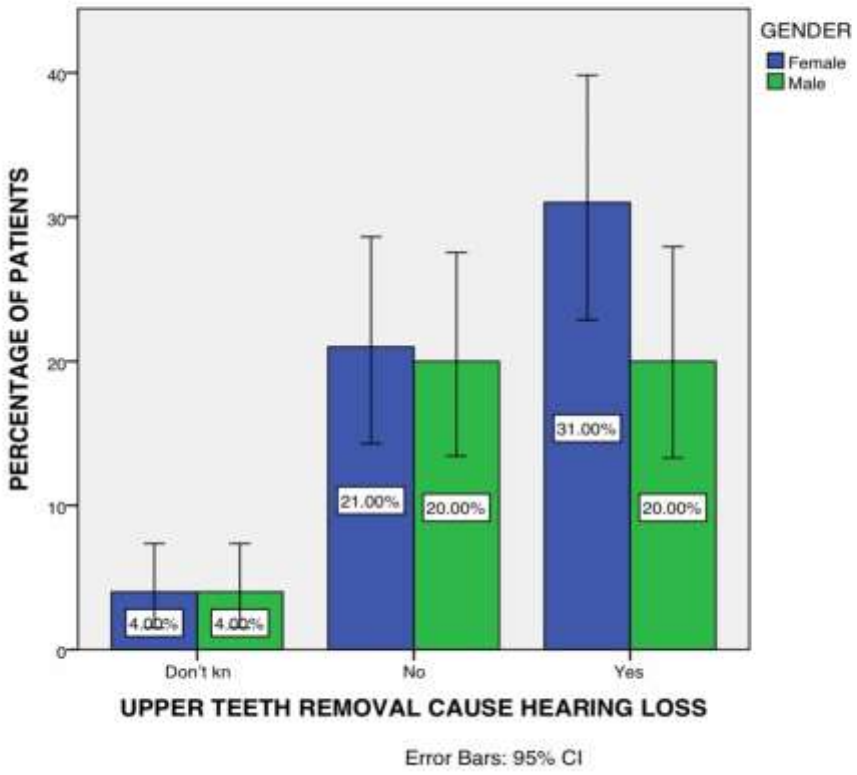

Figure 18: The bar graph represents the association between gender and the myths of patients. The X-axis represents the responses of participants regarding myths of extraction and Y-axis represents the percentage of responses based on gender. Chi-square test was performed and the association was statistically not significant (p-value =0.754, >0.05). Most of the participants believed that the extraction of upper teeth causes hearing loss.

DISCUSSION :

The total number of participants involved in this study was 100 among the study sample; the number of male participants was 44% and the number of female participants was 56%. Kan et al reported 71.8 % of females believe more in myths and misconceptions than males (31). Among the participants of the survey, 60% of the middle-class category, 21% of the participants are the lower class, and 19 % of the participants are upper class. The total cost of oral care and dental care would exceed the health care budget in many low-income countries of the developing world. Patient's belief extraction affects the brain which is 64 % and the extraction does not affect the brain which is 28 %, 8 % of the participants who do not know extraction affects the brain. Sudarsan et al reported 52 % believed that extraction of the upper back tooth affects nerves connected to the brain (32).

Most of the participants believe that tooth extraction affects eye vision which is 59% and extraction does not affect eye vision which is 37% and 4% of the participants who do not know extraction affects the eye vision. The results are similar to the studies done by Saravanan and Thirineervannan where 20% believed in the myth (33). Patients believe that tooth extraction causes hearing loss which is 51 % and extraction does not affect the hearing which is 41% and 8% of the participants who do not know extraction causes hearing loss. Singh SV et al reported where 26% participants believed in the myth that extraction of the tooth causes hearing loss . The fact being that there is no relationship between hearing and extraction of the upper front tooth.

Most of the patient's believe that recovery after extraction is a long process which is 64% and the recovery after extraction which is not a long process which is 30% and 6% of the participants who do not know about the recovery after extraction is a long process. 66% of the patients believe that extraction of the tooth causes damage to nerves and the extraction does not affect nerves which are 29% and 6% of the participants who do not know extraction causes damage to the nerves and Ain TS et al showing 59% agreed to this fact.40% of the patients believe that extraction of the tooth causes miscarriage and the extraction does not cause miscarriage which is 41% and the 19% of the participants who do not know extraction causes miscarriage, while 56.8% were of that opinion in an earlier study by Vignesh et al (34).

Awareness should be created regarding the oral foci of infection, which when untreated can lead to a baby with preterm low birth weight. Myths and misconceptions are due to a variety of reasons like poor education, socioeconomic status, cultural beliefs, and social misconceptions. India is a developing country and struggling to provide the necessary general and oral health to its population(35),(36). Education of an individual provides the means of empowerment and the freedom to promote creative thinking and imagination, this promotes positivity towards general as well as oral health. In our study the prevalence of myths and misconceptions regarding dental extractions was more among females than males.
A large number of myths and misconceptions regarding oral health had adversely affected the community's dental health(37). The limitations of the study include, it cannot be applied to a larger population. Furthermore, qualitative and quantitative research regarding the prevalence of myths and misconceptions about dental extraction on a larger sample and the longer period of time in different regions and the different populations is necessary to validate the results of this study. Another limitation is that a convenience sample was chosen, limited sample size, online platform for conducting the survey than direct interviews. The future scope would be for the general population to have more knowledge and awareness about dental extraction.

CONCLUSION :

The study population has significant belief in one or more myths and misconceptions regarding dental extraction. The myths are due to illiteracy and lack of knowledge about dental extraction and they act as barriers to the utilization of dental services. There is a need to educate people about the facts of dentistry. The dentist should also maintain a friendly relationship with the patient so that the patient openly tells about the beliefs and gets a clearer idea. It is our responsibility to explain the harmful dental myths and promote the truth. In addition, measures to achieve the utilization of dental services in rural and urban

localities should be taken by the government authorities. Coordinated efforts by health care professionals, dental care professionals, and public health personnel are needed to impart health education regarding the prevailing and hence to provide dental care to the needy population.

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CONFLICT OF INTEREST:

The authors declare no potential conflict of interest .

REFERENCES :

1. Nagaraj A.: Enculturation, Myths and Misconceptions Regarding Oral Health Care Practices among Rural Female Folk of Rajasthan.: STUDIES ON ETHNO-MEDICINE 08 (2014)
2. Newadkar U.R. et al.: Myths and misconceptions in general public toward ocular complications followed by the removal of upper teeth.: J Family Med Prim Care 5. 785–788 (2016)
3. Yousif M.K.: Mothers' false beliefs and myths associated with teething.: Qatar Med J 2020. 32 (2020)
4. Fine D.H. et al.: () Under the Radar: Myths and Misunderstandings of and Its Role in Aggressive Periodontitis.: Front. Immunol. 10. 728 (2019)
5. Martin R.E.: Retiring some myths about aging and oral health.: J. Gt. Houst. Dent. Soc. 66. 12–5; quiz 16 (1994)
6. Singh S.V. et al.: Prevalence of dental myths, oral hygiene methods and tobacco habits in an ageing North Indian rural population.: Gerodontology 29. e53–e56 (2012)
7. Singh S. et al.: Dental myths, oral hygiene methods and nicotine habits in an ageing rural population: An Indian study.: Indian Journal of Dental Research 24. 242 (2013)
8. Sathya S. et al.: An in vitro study on hexavalent chromium [Cr(VI)] remediation using iron oxide nanoparticles based beads.: Environmental Nanotechnology, Monitoring & Management 14. 100333 (2020)
9. Gambhir R. et al.: Myths regarding oral health among patients visiting a dental school in North India: A cross-sectional survey.: International Journal of Oral Health Sciences 5. 9 (2015)
10. Wang H. et al.: Phyllanthin inhibits MOLT-4 leukemic cancer cell growth and induces apoptosis through

the inhibition of AKT and JNK signaling pathway.: J. Biochem. Mol. Toxicol. 35. 1–10 (2021)
11. Li S. et al.: Restorative Effect of Fucoxanthin in an Ovalbumin-Induced Allergic Rhinitis Animal Model through NF-κB p65 and STAT3 Signaling.: J. Environ. Pathol. Toxicol. Oncol. 38. 365–375 (2019)
12. Ma Y. et al.: Sesame Inhibits Cell Proliferation and Induces Apoptosis through Inhibition of STAT-3 Translocation in Thyroid Cancer Cell Lines (FTC-133).: Biotechnol. Bioprocess Eng. 24. 646–652 (2019)
13. Bishir M. et al.: Sleep Deprivation and Neurological Disorders.: Biomed Res. Int. 2020. 5764017 (2020)
14. Fan Y. et al.: Tomentosin Reduces Behavior Deficits and Neuroinflammatory Response in MPTP-Induced Parkinson's Disease in Mice.: J. Environ. Pathol. Toxicol. Oncol. 40. 75–84 (2021)
15. Zhang C. et al.: Vicenin-2 Treatment Attenuated the Diethylnitrosamine-Induced Liver Carcinoma and Oxidative Stress through Increased Apoptotic Protein Expression in Experimental Rats.: J. Environ. Pathol. Toxicol. Oncol. 39. 113–123 (2020)
16. Gan H. et al.: Zingerone induced caspase-dependent apoptosis in MCF-7 cells and prevents 7,12-dimethylbenz(a)anthracene-induced mammary carcinogenesis in experimental rats.: J. Biochem. Mol. Toxicol. 33. e22387 (2019)
17. Saravanakumar K. et al.: Chemical composition, antioxidant, and anti-diabetic activities of ethyl acetate fraction of Stachys riederi var. japonica (Miq.) in streptozotocin-induced type 2 diabetic mice.: Food Chem. Toxicol. 155. 112374 (2021)
18. Veeraraghavan V.P. et al.: A Comprehensive and Critical Review on Ethnopharmacological Importance of Desert Truffles: Terfezia claveryi, Terfezia boudieri, and Tirmania nivea.: Food Rev. Int. 1–20 (2021)
19. Wei W. et al.: Amelioration of oxidative stress, inflammation and tumor promotion by Tin oxide-Sodium alginate-Polyethylene glycol-Allyl isothiocyanate nanocomposites on the 1,2-Dimethylhydrazine induced colon carcinogenesis in rats.: Arabian Journal of Chemistry 14. 103238 (2021)
20. Mythri H., R. Kumar: Perceived myths about oral health in India.: Indian Journal of Dental Research 26. 333 (2015)
21. Jain L. et al.: Prevalence of myths regarding oral health among pregnant women in North India.: International Journal of Dental Hygiene 19. 127–134 (2021)
22. Wahab P.U.A. et al.: Scalpel Versus Diathermy in Wound Healing After Mucosal Incisions: A Split-Mouth Study.: Journal of Oral and Maxillofacial Surgery 76. 1160–1164 (2018)
23. Mudigonda S.K. et al.: Non-suturing microvascular anastomosis in maxillofacial reconstruction- a comparative study.: Journal of Cranio-Maxillofacial Surgery 48. 599–606 (2020)
24. Narayanasamy R.K. et al.: Lower pretreatment hemoglobin status and treatment breaks in locally advanced head and neck squamous cell carcinoma during concurrent chemoradiation.: Indian J. Cancer 58. 62–68 (2021)
25. Narayan D.P.: Assessment of Oral Health Status Using WHO Basic Oral Health Survey Form.: Clinical Manual for Public Health Dentistry and Practical Record Book. 260–260 (2015)
26. Chandrasekar R. et al.: Development and validation of a formula for objective assessment of cervical vertebral bone age.: Prog. Orthod. 21. 38 (2020)
27. Ramakrishnan M. et al.: Survival rate of different fixed posterior space maintainers used in Paediatric Dentistry – A systematic review.: The Saudi Dental Journal 31. 165–172 (2019)
28. Felicita A.S., A. Sumathi Felicita: Orthodontic extrusion of Ellis Class VIII fracture of maxillary lateral incisor – The sling shot method.: The Saudi Dental Journal 30. 265–269 (2018)

29. Farrag N., S. Awad: PREVALENCE OF ORAL HABITS AMONG A GROUP OF EGYPTIAN SCHOOL CHILDREN, AND THEIR KNOWLEDGE REGARDING ITS BAD EFFECT ON ORAL HEALTH.: Egyptian Dental Journal 62. 1349–1355 (2016)
30. J P.C. et al.: Prevalence and measurement of anterior loop of the mandibular canal using CBCT: A cross sectional study.: Clinical Implant Dentistry and Related Research 20. 531–534 (2018)
31. Khan S.A. et al.: Perceptions and myths regarding oral health care amongst strata of low socio economic community in Karachi, Pakistan.: J. Pak. Med. Assoc. 62. 1198–1203 (2012)
32. Sudarssan S.G., P.U. Abdul Wahab: Prevalence of Myths and Misconceptions about Dental Extractions among Outpatients of a Private Dental College Hospital.: Indian Journal of Public Health Research & Development 10. 333 (2019)
33. Mahajan R. et al.: Assessment of preventive dental care among dental students and dental professionals in India: A knowledge, attitude, and practice study.: The Saint's International Dental Journal 1. 105 (2015)
34. Vignesh R., I. Priyadarshni: Assessment of the prevalence of myths regarding oral health among general population in Maduravoyal, Chennai.: Journal of Education and Ethics in Dentistry 2. 85 (2012)
35. Pengpid S., K. Peltzer: Prevalence and correlates of dental service utilisation among a national general adult population sample in Sudan.: BMC Oral Health 21 (2021)
36. Chhabra N., A. Chhabra: Parental knowledge, attitudes and cultural beliefs regarding oral health and dental care of preschool.: European Archives of Paediatric Dentistry 13. 76–82 (2012)
37. Petersen P.E.: Global policy for improvement of oral health in the 21st century--implications to oral health research of World Health Assembly 2007, World Health Organization.: Community Dent. Oral Epidemiol. 37. 1–8 (2009)