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Original Research Article

Attitude and Perception towards Problems Related to third Molars and their Extraction; A Survey among Saudi General Public

Hassan Al-Subaie[1], Wala'a Al-Mubarak[2]*, Loai Al-Mubarak[3] and Sara Al-Mubarak[4]

[1]Dentist, AlHassa Specialist Dental Center, AlHassa, Saudi Arabia.
[2]Dentist, Hussain AlAli Hospital, AlHassa, Saudi Arabia.
[3]Dentist, Smile 32 Dental Clinics, AlHassa, Saudi Arabia.
[4]5th Year Dental Student, Riyadh Elm University, Riyadh, Saudi Arabia.

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Introduction: **Many researchers have explained the causes and reasons for the extraction of the third molars, mostly amongst patients showing up at the dental outpatient department. These statistics do not show data of patients forwarded for third molar extraction however not offering to oral surgery offices, or the original reason given by the referring dentist.** ***Materials and methods:*** **This is a cross-sectional study which used a closed-ended questionnaire to assess the attitude of the general public towards third molar extractions. Google forms were used to construct the online survey and the link was distributed using social media and Whatsapp groups.** ***Results:*** **When we inquired from the patients if their decision of extraction influenced by family/friends; 21% said yes, 58% said no and 20% not sure. We asked the patients if there was a better option than extraction; 42% said yes, 33% said no and 25% were not sure.** ***Conclusion:*** **General public's attitude towards extraction of the third molar was found to be positive among participants having a third molar history.**

Keywords: Third molars, Public perception, Extraction, General public, Attitudes.

INTRODUCTION

In the United States, the dental surgical procedure being carried out in highest percentage is the extraction of the third molars which are also called wisdom tooth. According to statistics, 95% population owning insurance aged 16 to 21 years undergoes extraction of the third molar. Approximately 5 million people in the United States spend a total of $3 billion each year to remove 10 million wisdom teeth. Extraction of asymptomatic third molars is recommended by the dentist to avoid the possibility of future pathology and to decrease operative and postoperative risks. Although in majority of the people, the eruption of the third molar is asymptomatic (Townend, 1995).

Much morbidity is related to the removal of the third molar, for example, pain, swelling, bleeding, infection and paresthesia. The probability of complication ranges from 4.6% and 21%. Therefore, it is suggested that to keep and observe the asymptomatic third molar is a good option (Lopes et al., 1995).

Many researchers have explained the causes and reasons for the extraction of the third molars, mostly amongst patients showing up at the dental outpatient department. These statistics do not show data of patients forwarded for third molar extraction however not offering to oral surgery offices, or the original reason given by the referring dentist (Kim, Kim, and Myoung, 2010).

There is a difference in point of view from general dentists and oral surgeons; where surgeons highly suggest that third molar should be extracted. Still, researches are thoroughly being studied to find out the reason for third molar extraction during the surgery, it is of little significance right now about the dynamics that general dentists think at the time of referring patients (Gümrükçü, 2018).

The other important reason for this custom of third molar extraction is the obedience to the dentist's advice. A large number of general dentists or orthodontists do prescribe their patients third molar extraction but researches are mostly emphasized on patients showing up to oral surgery offices. Hence, these specimens are selective for different causes (Alkadi and Stassen, 2018).

The outlines for patients being referred and obedience to advice for third molar management in general dental offices is yet ambiguous. Young patients and their parents are not sure

**Corresponding Author: Wala'a Al-Mubarak. Dentist, HussainAlAli Hospital, AlHassa, Saudi Arabia. Email: Walaa.f.almubark@student.riyadh.edu.sa*

whether to pursue or not the advice given by the dentist about the management of third molar (Radu, Fleckenstein and Horan, 2016).

We took a sample population age ranging from 16 to 22 years coming to the general dentists with both symptomatic and asymptomatic third molars to assess the decision-making capacity about management of third molars by patients as well as dentist. Our goals to carry out this was to explore (1) the explanation stated by the dentist for the management of the third molar, (2) the option that patient chose to go forward during follow up whether to remove or retain the third molar, and (3) other dynamics ruling the conclusion made, for example, current symptoms, socioeconomic factors, and patient preferences. Another article is also present that states the clinical results of third molar management after the starting 2-year period (Verma, 2018).

In the oral and maxillofacial region, the third most common surgery being carried out is the surgical removal of impacted third molars. For the management of symptomatic impacted third molar, a general consensus has been reached that the teeth should be removed. Whereas, management of asymptomatic impacted third molar is yet a contentious topic. The extraction of the teeth is carried out by the surgeons but the management of the third molar is usually advised by the orthodontists because a large bulk of patients have asymptomatic impacted third molar but others are advised the extraction because of orthodontic causes. We will now be going thoroughly through the possible possibilities affiliated with the management of asymptomatic impacted third molars and analyze the orthodontic signs and inspections for their extraction by means of decreasing dangers and increasing patient wellbeing (Stadnitzkaya, 2008).

MATERIALS AND METHODS

This is a cross-sectional study which used a closed-ended questionnaire to assess the attitude of the general public towards third molar extractions. Google forms were used to construct the online survey and the link was distributed using social media and Whatsapp groups. A total of 500 participants were targeted to fill the survey. Collected data was subjected to statistical analysis using SPSS version 19. Descriptive as well as inferential statistics was done using frequencies and Chi-square test, where the value of significance was kept under 0.05.

RESULTS

We took a sample size to evaluate the authenticity of our research. Figure 1 shows the gender ratio of the sample size; 53% were females whereas 47% were males. The participants belonged to different age groups. Around 76% participants belonged to age 18-30 years, 19% participants belonged to age 31-45 years and 5% belonged to 45-60 years. We also inquired how many of them have previously undergone third molar extraction; 34% said yes and 66% said no.

When we inquired from the patients if their decision of extraction influenced by family/friends; 21% said yes, 58% said no and 20% not sure. We asked the patients if there was a better option than extraction; 42% said yes, 33% said no and 25% were not sure. We also asked patients if they thought that their third molars were functionally important; 25% said yes, 52% said no and 23% had no idea. We inquired if they ever had pain in their third molars; 51% said yes, 43% said no and 6% were not sure.

DISCUSSION

When the patient complains of pain, discomfort, or dental caries, extraction of the third molar is recommended and if the extraction had been advised because of pericoronitis, the probability to obey the extraction advice. Still, pathologies failed to be one of the leading cause for the removal of the third molar or for obeying such advice. Out of every 6 patients, only 1 would receive the advice to get their third molars extracted due to the incidence of pericoronitis or dental caries, and fifty percent of them complain of pain or already occurring pathology as a cause for obeying the advice (Dalton, Illing and Hampal, 2012).

A large number of patients stated that they did not undergo the removal of the third molars as per dentists' advice since the pain has gone away on its own. Hence, it can be comprehended that the existence of symptoms is affiliated with extraction and obedience, but it is not a definitive reason for any of it. Our study was verified by other articles which stated that pericoronitis, cysts, dental caries, or pain was mentioned by less than 15% of patients going for third molar extraction (Moss and Wake, 1997).

In a difference with the statistics from other countries, majority of the extraction of the third molars were conducted due to pathologies like pericoronitis and dental caries whereas according to our study the majority of the patients were asymptomatic. Generaldentist advise extraction to avoid any future complication. in recent times, Cochrane Collaboration performed a systemic review that no randomized controlled study backs or disproves systemic extraction of asymptomatic third molars(Eccles et al., 2005).

Of all the other significant causes that lead to the advice for extraction, were the general dentists' understanding that the tooth was not on its desired location or that the chances for its eruption were unlikely; these were the common causes stated by the patients. Though the percentage of eruption of the tooth in later life was large when the third molars were thought to be impacted in young adults. Whereas, understanding that the third molars will erupt because it had its advantageous location or enough space or that it had previously erupted does highly motivate general dentists' advice to keep or monitor third molars(Muir Gray, 1998).

General dentists plan to advice more extraction if the third molars have not erupted (both soft tissue or bony impaction) but patients are more expected to obey these advices if they had a soft tissue other than a bony impaction. This shows that the soft tissue impaction alters the quality of life, but deep impaction is not that problematic (Abamecha, Girma and Godesso, 2013).

General dentists were motivated to advise to keep or monitor their molars because they had time to make the decision. Different researches, as well as, the one performed by National Health Service in the United Kingdom concluded that careful monitoring was the best option in the management of the third molars. In future, if any pathology or symptoms develop, the right management can benefit the patient (Kaur et al., 2017).

It is still unknown what will the dentist of the patient present in the sample who decided that it was too early to extract an asymptomatic third molar will recommend it in the future or not. The probability is very high when we look at the high frequency of extraction advice we see and the impact of the dentist's ideology according to third molar removal or retention on extraction references.

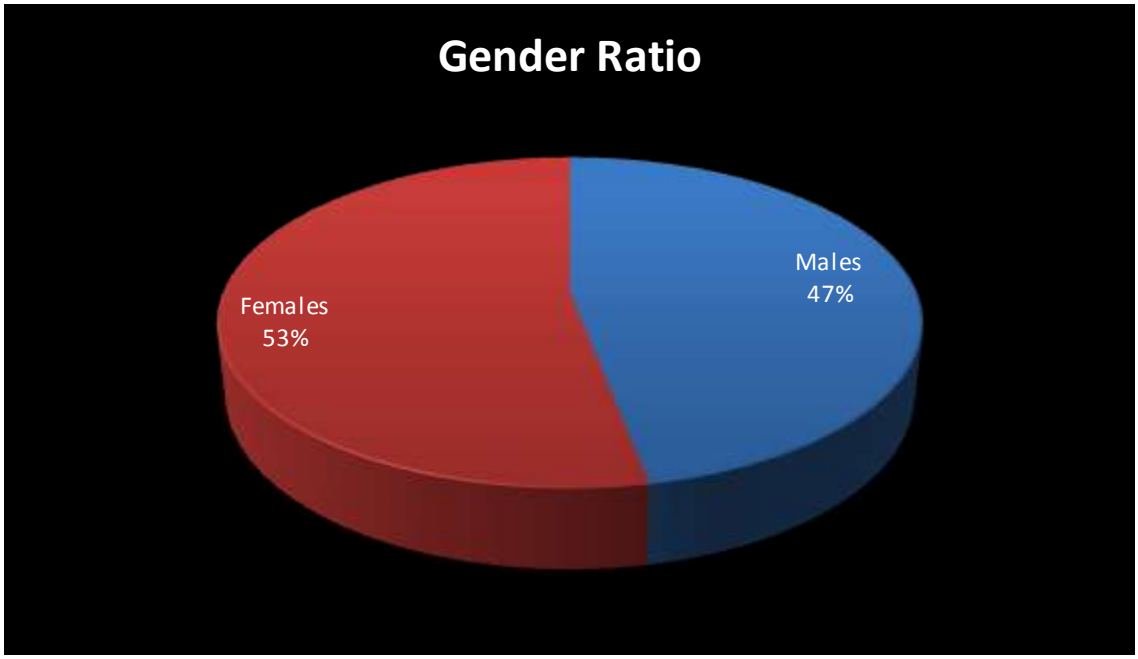

Figure 1: Gender ratio of the study participants

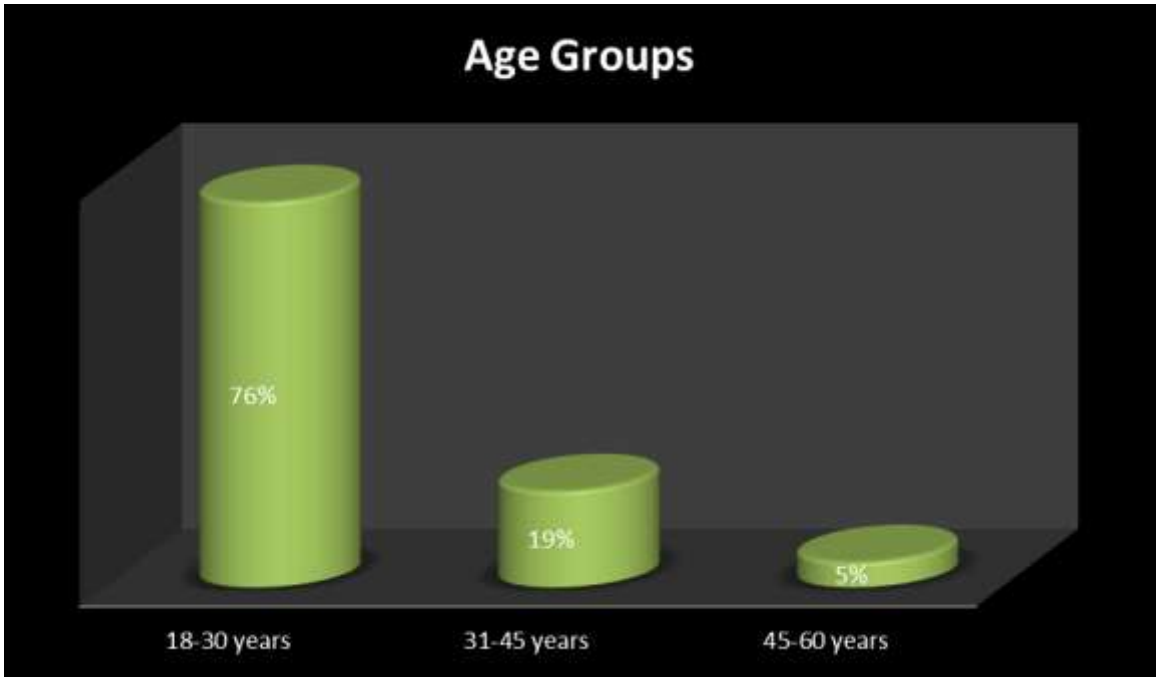

Figure 2: Age groups of the study participants

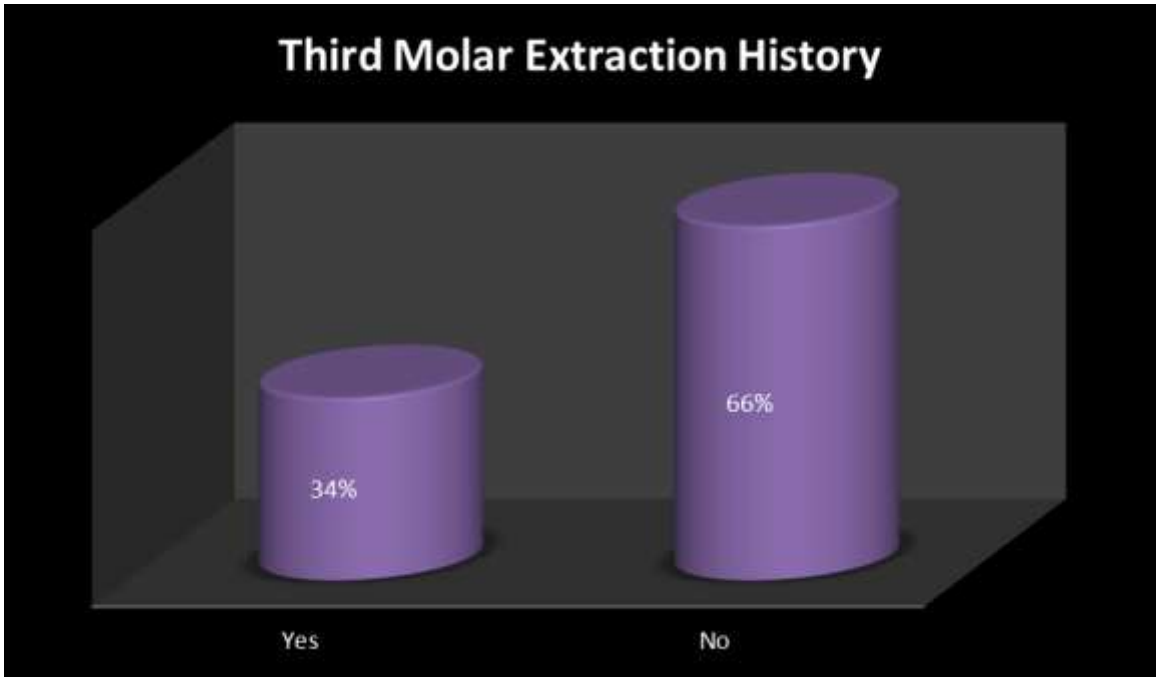

Figure 3: Percentage of participants with/without third molar extraction history

Survey Item	History of 3rd Molar Extraction	No history of 3rd Molar Extraction	Overall Response %	P-value
Decision of extraction influenced by family/friends?	Yes: 24% No: 71% Not sure: 5%	N/A	Yes: 21% No: 58% Not sure: 20%	-
Is there a better option than extraction?	Yes: 34% No: 47% Not sure: 19%	Yes: 64% No: 26% Not sure: 10%	Yes: 42% No: 33% Not sure: 25%	0.000
3rd molar is important for functioning?	Yes: 23% No: 57% Not sure: 20%	Yes: 26% No: 49% Not sure: 25%	Yes: 25% No: 52% Not sure: 23%	0.225
Ever felt pain in 3rd molar?	Yes: 84% No: 15% Not sure: 1%	Yes: 34% No: 56% Not sure: 10%	Yes: 51% No: 43% Not sure: 6%	0.000
Experienced following problems?	Food impaction: 26% Bleeding: 7% Swollen gums: 67%	Food impaction: 54% Bleeding: 10% Swollen gums: 36%	Food impaction: 44% Bleeding: 9% Swollen gums: 47%	0.000
Dentist informed about 3rd molar problems?	Yes: 53% No: 31% Don't remember: 16%	Yes: 23% No: 61% Don't remember: 16%	Yes: 33% No: 51% Don't remember: 16%	0.000
When should 3rd molar be extracted?	During pain: 64% For prevention: 23% Other: 13%	During pain: 55% For prevention: 28% Other: 18%	During pain: 58% For prevention: 26% Other: 16%	0.138
3rd molar extraction is difficult than other teeth?	Yes: 80% No: 17% Not sure: 3%	Yes: 77% No: 15% Not sure: 8%	Yes: 77% No: 16% Not sure: 7%	0.251
3rd molar extraction affects general health	Yes: 17% No: 70% Not sure: 13%	Yes: 19% No: 63% Not sure: 18%	Yes: 18% No: 65% Not sure: 17%	0.230
Complications occur after 3rdmolar extraction?	Yes: 47% No: 41% Not sure: 12%	Yes: 40% No: 34% Not sure: 26%	Yes: 42% No: 36% Not sure: 22%	0.002

Of all the dentists involved in our study, only 3 came with the mentality of advising an extraction just in the case of asymptomatic third molar or a presence of a pathology (Maclean and Saloner, 2017).

Even when the dentists recommended the patients to retain their third molars, they are very keen to follow up their patients to avoid any complications even though the patients aren't that concerned. Generally, the extraction of third molars is thought to be the ritual which marks the transformation from adolescence to adulthood, but from patient's point of view, it's a prophylactic measurement as well as a way to utilize their parents' insurance. The coverage of dental services played an important role in our research: it was the most important cause due to which patients were obeying the dentist's advice, but it was of very little significance for dentists for third molar extractions. When we verified our statistics against other researches, it stated that almost half the population by the age of 20 owning insurances had their third molars extracted (Kandasamy, Rinchuse and Rinchuse, 2009).

Majority of the patients followed their dentist's advice for third molar management that was either removal or retention and observed their third molars. More than 50% of the patients we have been following went through the procedure of removal of the third molar as advised by the dentist. The percentage would have been higher because the second most shared explanation was for not going through the procedure was the lack of availability of time. On the other hand, 84% of the patients obeyed the dentist's advice to keep their third molars and stated that the sole reason behind it was that the dentist suggested it. The advice provided by the dentist plays an important role in the management of the third molars hence, general dentists should be provided with the most updated options for the patients' benefit (Macgregor, 1992).

After the recent researches for the third molar management, there has been a great decline in the prophylactic extraction in the molar removal and increase in incidence in symptomatic management as well as the age of the patients at the age of extraction is more. Altering referral patterns remains a challenge but evidence-based guidelines and clinical algorithms help widen the ideology and treatment options of the patients (Khaleelahmed, Alqahtani, and Desai, 2017).

The research carries data obtained from the primary care clinical and variety of practices, which helped us explore the third molar management from a sample of patients of great variety in general dentistry practices, which was a better option than self-selecting a sample population from oral surgery office. These factors help strengthen the outcomes of our research. Some of the drawbacks include short duration of patients' follow-ups and loss of around 35% patients (Brickley, Heald and Shepherd, 1990).

The study to help long term decision-making practice can be improved if we follow the patients for a longer duration, i.e., more than 2 years. Even after a great deal of hard work, we lost track of many patients. They reported with the same clinical symptoms but belonged to lower financial status (Uslu-Akçam and Gökalp, 2015).

The correct decision for the asymptomatic third molar management is yet controversial, the dentist in our research preferred removal of asymptomatic third molars. The only incentive behind this decision about the asymptomatic third molar eruption was the concern about any future complication or decision whether the third molar will never erupt. But if we consider retaining and following up the asymptomatic third molars, it is a very economical strategy (Dobson et al., 2018).

CONCLUSIONS

- General public's attitude towards extraction of the third molar was found to be positive among participants having a third molar history.
- Majority of the participants believed that third molar extraction should be done if there is pain.

CONFLICT OF INTEREST

There is no conflict of interest declared by any of the authors.

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