

Patient's perception and practices to combat dental pain- A KAP survey in North Indian population

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Abstract

Background: In the field of dentistry, various myths and misconceptions prevail among patients that hamper them from availing proper treatment from a dental professional. This leads to increase in use or misuse of drugs (painkillers or antibiotics) which are available over the counter or various home remedies which sometimes can be more debilitating for the patient’s general health.

Materials and Methods: A self-validated questionnaire study was conducted amongst 511 patients to evaluate their knowledge and attitude towards common dental presumptions and practices. Data analysis was done using the Chi-square and Mann-Whitney U tests.

Results: Various dental myths and false perceptions still lurk in the population's minds to discourage unhealthy practices. Females and middle age groups relied more on alternative therapies (drugs and home remedies) to combat dental pain such clove oil, aspirin, etc.

Conclusion: Alleviating pain & anxiety before dental procedure is an integral part of successful dental practice. People suffering from pain should be encouraged to seek dental help rather than self-medication which are very harmful for general health of the individual.

Keywords: Culture, Gender, Myths, Oral Health

Introduction

Before the age of modern dentistry, toothaches were subject to drastic remedies that were painful,

uncomfortable, and horrific to experience. Having a toothache in the Ancient or the Medieval World was like a curse. Some traditional remedies that floated in the air involved wearing fish bones around the neck, repeat a few chants, or maybe drop some pearls in the river. The advent of technology in modern dentistry and awareness among the public has swept away many bizarre superstitions.

Despite advances in modern dentistry, oral health remains a significant but frequently ignored part of general health and well-being in children and adults. Furthermore, many dental misconceptions are passed down through centuries through word of mouth. In certain cases, such myths seek to explain a number of phenomena for which no supporting data are available. These theories have become so embedded in the society and culture that separating between reality and fiction has become impossible.^[1]

By food, care-seeking action, or alternative treatments, the underlying cultural values and traditions affect oral conditions. All these remedies using these over-the-counter products or home remedies prevent people from getting the proper diagnosis and treatment.^[2]

In India, little research has been conducted on dental misconceptions among dental patients. As a result, the purpose of the survey was to assess the frequency of myths and misconceptions among patients regarding dental pain and patient's perceptions to combat dental pain by use/misuse of drugs or home remedies without seeking dental assistance, thereby suggesting possible measures to raise awareness regarding oral health.

Materials and Methods

The survey was conducted only after the Institutional Ethics Committee granted Ethical Clearance. Also, since the survey demanded the patients as the subjects, their prior approval in written consent was obtained after apprising them about the concerned study. Moreover, it was assured that any aversion or reluctance to be a part of

the survey would not be detrimental to their treatment in any manner.

For collating the sample size, an empirical methodology of research was adopted. In pursuance of the same, a cross-sectional survey, spread over two months, was performed on patients in the Outpatient Department of Conservative Dentistry and Endodontics.

The primary inclusion criteria were that the patient should be an adult, i.e., more than 18 years of age with no visual or hearing disablement. Additionally, it was made sure the patient participating should understand the questionnaire given by the principal investigator in English and regional language.

The survey was conducted by asking 22 questions to assess the predominance of dental myths in a group of patients (n = 511) pursuing dental treatment at the dental campus's OPD. A convenient sampling technique was used in this study. A sample size equation for calculating a particular proportion was used to determine the sample size ($\alpha = 0.05$, prevalence of dental myths obtained from previous literature-81%).^[3] The formula used was $n = \frac{pq}{L^2}$ where, P = 81% (prevalence obtained from the literature available).

$q = (1 - P) = (1 - 81\%) = 19\%$, L= allowable error which is kept at 3.5.

The minimum sample size estimated was 502, but more participants were included in case there was nonresponders.^[3]

The survey instrument was a self-designed questionnaire written in English and distributed to each research member. The questionnaire was also translated into regional language for the patients' benefit if they were not well-versed with the given language. The issues on myths were collated collectively from various sources, including, but not limited to, oral health pamphlets and brochures,

traditional folklore, and misconceptions related to oral health, oral hygiene, diet, etc.

The questionnaire was split into two parts. The first section of the questionnaire inquired for the general population's disdain for dental pain and numerous home remedies for dental pain. In the second segment, participants were asked about different dental pain remedies that are common among the general public, as well as several root canal therapy theories. The SPSS package version 15.0 was used to analyse the data (SPSS, Chicago, IL, USA). The Chi-square and Mann-Whitney U tests were used in this research, as well as descriptive statistical analysis. The internal reliability of the questionnaire was assessed using Cronbach's alpha, which was considered to be satisfactory.

Results

Table 1: Sociodemographic characteristics of the participants

Characteristic	Frequency (%)
Age (Years)	
18-29	125 (24.5%)
30-49	279 (54.5%)
>50	107 (20.9%)
Gender	
Female	248 (48.5%)
Male	263 (51.5%)
Educational Status	
No Qualification/Drop Out	314 (61.4%)
Upto High School	121 (23.6%)
Graduate	76 (14.8%)

The majority of the participants belonging to 30–49 years (54.5%) participated in the survey followed by 18-29

years (24.5%) and >50 years (20.9%). (Table-1) Male (51.5%) participants were more than the female (48.5%) participants. (Table-1) Educational statuses of the participants revealed that majority of the participants were dropouts (61.4%) while 23.6% was educated until high school and 14.8% completed graduation. (Table-1)

Response of participants to different myths showed that majority of the participants (72.8%) believed that occasional tooth ache can be ignored with (96.4%) believing that rubbing aspirin (51.8%) or camphor/strong spirit (49.1%) would relieve the dental pain (Table 2). Moreover many participants (92.9%) thought root canal procedures or clinical intervention played no role (83.9%) in contrast to home remedies/ homeopathic/Ayurveda /OTC drugs for healing. (Table 2) Majority of participants were of the notion that Root canal procedure can cause illness (92.9%) or cancer (43%) and 56.1% toothache subside only after extraction. (Table 2)

Among the various age groups and sexes, agree/disagree to all the myths pertaining to dental toothache showed non significant difference except myth that the occasional tooth ache can be ignored and root canal treatment can cause illness. Among the different educational status of the patient, agreement /disagreement to all the dental toothache myths showed significant difference except rubbing aspirin relieves tooth pain, root canal therapy causes cancer and pain gets subsided after removal of nerves in root canal therapy. (Table-3)

Among the different age groups and educational status of the participant's negligent attitude towards the different intensities of dental pain nonsignificant difference was seen whereas it was significant among the gender (Table-4)

Table 2: Response of participants to different myths

Question	Agree (%)	Disagree (%)
Occasional toothache can be ignored & not considered as an early sign	372 (72.8%)	139(27.2%)
Rubbing aspirin directly on the affected tooth will relieve toothache	493 (96.4%)	18 (3.5%)
Chewing on the other side than the affected side would relieve the pain ¬ worsen it	265 (51.8%)	246(48.1%)
Camphor/whisky/strong spirit will ease toothache by numbing the pain &killing the bacteria	251(49.1%)	260(50.8%)
Clinical intervention plays no role as long as pain, inflammation, etc. are healed using home remedies/homeopathic/Ayurveda /OTC drugs	429 (83.9%)	82 (16%)
Root canal procedure can cause illness or can contract a disease in future	475(92.9%)	36(7%)
Root canal procedures are major cause of cancer	220(43%)	291(56.9%)
Toothache means the tooth is lost i.e. extraction with no treatment possible to save it	287(56.1%)	224 (43.8%)
Pain is subsided as soon as tooth ‘s nerves are removed	358 (70%)	153 (29.94 %)

Table 3: Association of dental myths with different sociodemographic variables

Question	Age P Value	Gender P Value	Educational Status P Value
Occasional toothache can be ignored & not considered as an early sign major dental problem	>0.001	0.031	0.046
Rubbing aspirin directly on the affected tooth will relieve toothache	>0.001	0.254	0.052
Chewing on the other side than the affected side would relieve the pain ¬ worsen it	>0.001	0.366	<0.001
Camphor/whisky/strong spirit will ease toothache by numbing the pain &killing the bacteria	>0.001	0.267	<0.001
Clinical intervention plays no role as long as pain, inflammation, etc. are healed using home remedies/homeopathic/Ayurveda /OTC drugs	>0.001	0.213	0.034
Root canal procedure can cause illness or can contract a disease in future	>0.001	0.031	0.032
Root canal procedures are major cause of cancer	>0.001	0.305	0.065
Toothache means the tooth is lost i.e. extraction with no treatment possible to save it	>0.001	0.469	0.026
Pain is subsided as soon as tooth ‘s nerves are removed in root canal therapy	>0.001	0.342	0.078

Table 4: Negligence towards dental pain associated with Sociodemographic characteristics using one way Anova test

Type of Pain	Age					Gender				Educational Status			
	Mean	Std. Deviation	Std. Error	F value	P Value	Std. Deviation	Std. Error	F value	P Value	Std. Deviation	Std. Error	F value	P Value
Moderate Pain	40.08	11.111	0.907	3.975	0.002	0.501	0.041	0.632	0.675	9.151	0.907	2.124	0.003
Severe pain	36.96	10.718	0.858			0.502	0.040			8.534	0.858		
Moderate pain patients prolonging it for weeks	43.85	11.595	1.857			0.506	0.081			9.687	1.857		
Moderate pain patients prolonging it for months	36.29	10.644	2.845			0.519	0.139			9.543	2.845		
Severe pain patients prolonging it for weeks	37.56	11.820	1.672			0.490	0.069			9.755	1.672		
Severe pain patients prolonging it for months	36.05	9.832	1.210			0.504	0.062			7.556	1.210		

Discussion

In the ever-changing times, in Asian developing country like India with diversified culture and a vast population, people neglect their oral health. This can be attributed to the poor socioeconomic status of the people and lack of awareness and poor education. It seems that their oral health needs stand on the lowest pedestal compared to general well-being and precisely because visiting a dentist is often the last resort after trying out all the home remedies. Also, many cultural beliefs, myths and social misconceptions prevail in majority of the population regarding toothache and root canal therapy.

Studies on social and generational determinants have shown a clear correlation between toothache and low family socioeconomic status. [4]

Literature has reported that rural people still have their cultural beliefs and taboos, which make them, believe in home remedies instead of proper dental treatment by a dentist compared to urban populations.

This pattern was also observed in educated participants versus uneducated participants as the second category was ignorant about dental hygiene. The comparison was also evident in the younger generation, who had higher favourable recognition than the older demographic, indicating that they are more aware of oral health problems. Age played a significant role in the survey, as many older people in the study believed in misconceptions and had negative attitudes about oral health. The geriatric community also inherits deep cultural and traditional values, which have a long-term impact on their health

behaviour. Furthermore, self-medication is more common in the elderly than in the youth.² this population plays an influential role during the development of younger individuals.^[6] This study is a testament to the fact that education has a pivotal role in the success and development of a nation.^[5]

95% of patients believed home remedies used in patients with toothache are better & more popular than invasive dental approaches while 84% of patients thought proper diagnosis and treatment plan played no role. This type of misunderstanding is passed down through generations as a result of false, exaggerated knowledge spread by others who have had prior bad dental experiences.^[7] The current study found that the majority of respondents agree that home remedies are superior for dental care, which is consistent with the findings of Bhasin's report on Bhils in Rajasthan and Lee et al study's on the Chinese population.^[8]

The results of the present survey reported that alternative therapy to combat dental pain is comparatively less in males than females. This could be because women are busy doing household chores in the day time and, therefore, find it difficult to visit the dental college during the working hours to avail necessary dental treatment.^[9] This is consistent with the findings of a cross-sectional study conducted by Raina et al., among patients aged 18–65 years attending the OPD in Maharashtra, India, which discovered that the incidence of myths was higher in females than in males.^[10]

96 percent of the participants relieved pain temporarily by clove oil and aspirin, 72% ignoring occasional pain, and 51 percent chewing on the other side. This may be due to a lack of understanding, a lack of experience, fear, apprehension, and misconceptions about dental care that have become rooted in their minds.^[11]

Clove, which contains eugenol and phenyl propene and is widely used in medicine and dentistry as a local antiseptic and anaesthetic, was chosen by the majority of participants. Cloves can be chewed to numb and disinfect the infected region.^[12-14] Aspirin, also known as acetylsalicylic acid, can induce swelling of soft tissues such as gums in certain patients and may be swallowed to reach the bloodstream to produce analgesia rather than folklore recommending sticking an aspirin on a sore tooth.^[14]

In reference to a survey conducted by Sindhu et al., 51 percent of participants denied that dabbing alcohol decreased the severity of tooth pain. However, abusing alcohol for pain relief is not recommended.^[13,14]

About 93 percent of respondents accepted that oral hygiene is related to optimal health, while 57 percent denied that root canal procedures cause cancer. In comparison to a previous study conducted in Bareilly, India, this result was unexpected. It is in line with the World Health Organization's recommendation that the general public be made aware of the connection between oral health and general health.^[8] Most uneducated females and more than half of educated females believed there was no connection between general body health and oral health.^[15]

Although 57 percent of participants said root canal treatment isn't a source of cancer, in a survey by Ain et al., the majority (63.7 percent) of the subjects claimed they would not grow oral cancer because people who smoked more than them were already healthy. In another survey, several participants concluded that their relative drinks, cigarettes, and chews nicotine more than they do, but he does not have oral cancer, and they will not either. This is because the general public also thinks that if nothing bad happens to their loved ones, nothing bad can happen to them. This demonstrates their ignorance of the

susceptibility of various people, as well as their ignorance that the majority of families of patients with oral cancers are at the same risk for cancer as the general public. [2, 9]

Several respondents claimed that in order to ease tooth pain, it was best to remove the tooth rather than save it. It is due to their lack of awareness on certain care modalities for saving a tooth and their impatience with repeated appointments for root canal treatment. [9, 12]

Many people feel that root canal therapy is a particular option for extraction, and they are still apprehensive. Root canal therapy used to be excruciating, but the perception of root canals being traumatic started decades ago. Root canal therapy is no more unpleasant than getting a filling these days, thanks to modern technology and anaesthetics. Patients who have had root canal treatment are more likely to describe it as "painless" than patients who have not had root canal treatment, according to a new survey. [5]

70 percent of participants believed that pain subsides after their first visit when the tooth is treated, and the nerve responsible for this pain has been removed. They feel the pain and anxiety are finally gone with the first appointment, so they don't need to come in for the next consultation. [9]

Various dental myths and false perceptions still lurk in the population's minds to discourage unhealthy practices. It would be prudent to familiarise professionals with understanding these myths and beliefs as they act as barriers to seeking treatment. [12]

Every study has certain pitfalls. In the survey undertaken for this particular research, certain drawbacks are enunciated to counsel the community members and to witness a shift from lack of awareness to well-informed citizens. Since many of the misconceptions involved in this research lacked existing literature, it was focused on assumptions widely found in day-to-day life. An effort was made to ascertain their origins. Another limitation

was that this survey was restricted to a specific geographic location instead of spreading over a vast area for better results.

Oral health treatment has always stood last in the list of priorities of fellow individuals mainly in the developing nations like India. This cumulatively leads to poor oral health and general health. Hence it is recommended, the rural population should be targeted for dental awareness progressed with subsidized dental facilities.

Conclusion

Within the limitations of this survey, it was concluded that:

1. Females and middle age groups relied more on alternative therapies (drugs and home remedies) to combat dental pain.
2. Clove oil was the most commonly used medicament amongst home remedies.
3. Comparison between RCT and Extraction

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