

Clinical perspective of myths about oral health in patients visiting tertiary hospital in eastern Nepal: A descriptive cross-sectional study

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Abstract

Background: Nepalese population consists of people from different cultural backgrounds having strong influence of the various myths on health seeking behaviour. Myths are defined as stories shared by a group of people which are a part of their cultural identity. They have a strong influence in the life of individuals and their way of living including seeking treatment during illness.

Objectives: The objective of this study was to assess the prevalence of myths related to oral health.

Methods: A descriptive cross-sectional study was conducted in Nobel Medical College and Teaching hospital after obtaining ethical clearance from January 2021 to March 2021 using convenience sampling technique. Patients above 15 years visiting dental OPD were included and refused to participate were excluded. SPSS Statistics for Windows, version 21.0 was used for statistical analysis.

Results: There were total 250 participants: 103 (41.2%) male and 147 (58.8%) female with mean age 34.43 ± 10.75 years and ranging from 18 to 62 years. Among the participants, 178 (72.1%) regarded fomentation of swelling with hot water while 72 (21.9%) were against it. Among all the participants 36 (14.4%) supported that there was presence of worm in decayed tooth whereas 214 (85.6%) were against it.

Conclusion: The prevalence of myths about dentistry was high among study population which could be associated with poor early health seeking behaviour and poor compliance with treatment.

Key words: Myth; Nepal; Oral health.

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INTRODUCTION

Nepal, a developing country faces many challenges in rendering oral health needs. Majority of population resides in rural areas consisting of people from different cultural backgrounds having strong influence of the various myths on health seeking behaviour.¹ Myths are defined as stories shared by a group of people which are part of their cultural identity having strong influence in individuals' life and way of seeking treatment during illness.² Myths related to oral health are more prevalent in countries with poor socio-cultural determinants.³

Despite remarkable progress in field of health, people still living in isolation and unpolluted surroundings faraway from civilization with their traditional customs and beliefs.^{3,4} Cultural forces profoundly shape people lives⁵ with influence on health and sickness.⁴ Oral health is a product of socio-cultural determinants.⁶ As people's expectations of health care are rising dramatically,

understanding myths about oral diseases is important in providing excellent care and health education to individuals.⁷

Lack of education along with traditional beliefs and sociocultural factors leads to development of myths.^{2,8} Exploration of available literature revealed hardly any data. Therefore, this study is conducted to assess the prevalence of myths related to oral health in a sample population of Biratnagar, Morang, Nepal.

METHODOLOGY

A descriptive cross-sectional study was conducted to assess the myths related to oral health in Nobel Medical College and Teaching Hospital, Biratnagar, Morang from January 2021 to March 2021 using convenience sampling technique. All the patients aged more than 15 years visiting dental outpatient department for oral check-up were included in the study after giving written informed consent. Patients who refused to participate in the study were excluded. Ethical reference was obtained from Ethical review committee of Nobel Medical College (Ref. 385/2020).

The sample size was calculated by taking the prevalence of myths (81%)⁹ considering 95% CI, 5% absolute precision and 5% non-response rate, calculated sample size was 249. It was decided to include totally a sample of 250. Sample size was calculated using following formula [$(Z_{\alpha/2})^2 pq/L^2$].

A self-designed questionnaire was used for collection of data. The questionnaire was first prepared in English language and later translated to Nepali (local language). The Nepali version was later back translated into English to check for language reliability. These translations were done by language experts having some expertise in translation work. The questionnaire consists of 15 items.

After completion of the survey, data obtained was entered in Microsoft Excel Sheet version 2007 and analysed using SPSS Statistics for Windows, version 21.0 (SPSS Inc., Chicago Ill., USA). Descriptive statistics including the mean, percentage, standard deviations and interquartile range were computed.

RESULTS

There was total 250 participants 103 (41.2%) male and 147 (58.8%) female) who had completely filled the

questionnaires. The mean age of the participant was 34.43 ± 10.75 years and ranging from 18 to 62 years. Of all, 71 (28.4%) believed that placing cloves in tooth relieves pain while 179 (71.6%) denied the statement. Regarding swelling 178 (72.1%) subjects regarded fomentation of swelling with hot water while 72 (21.9%) were against it (Table 1).

Among all the participants 36 (14.4%) supported that there was presence of worm in decayed tooth whereas 214 (85.6%) were against it. On the other hand, 178 (72.1%) believed that eating sweets are reason for tooth decay while 72 (21.9%) didn't believe that eating sweets are reason for tooth decay (Table 2).

Among the participants 36 (14.4%) knew that brushing once daily is more than enough while 214 (85.6%) were not in favour of brushing once daily. On contrary to that every participant denied that hard toothbrush cleans tooth better than soft brushes. Similarly, all participants were not in favour of using charcoal with finger over toothbrush and tooth paste for cleansing of teeth. Among all the subjects 72 (28.8%) were in favour of using powdered salt cleans tooth better than paste while 178 (78.1%) denied the statement (Table 3).

Seventy-one (28.4%) of those participants believed that it is better not to brush while gum is bleeding while 179 (71.6%) believed that it is better to brush during bleeding. Among subjects 35 (14%) were in favour that harder you brush your teeth, more they become clean while 235 (86%) subjects did not relate the force of brushing with cleanliness of teeth. Likewise, 72 (28.8%) people believed that brushing teeth for longer time cleans teeth more but 178 (71.2%) people denied any relation between time taken for brushing and cleanliness of teeth. In relation to foul odour 71 (28.4%) pointed out poor cleanliness of tooth as a reason while 179 (71.6%) did not think it as only reason. Of all, 143 (57.2%) people also believed that betel quid chewing helps in removing foul odour from mouth while 107 (42.8%) people were against role of betel quid chewing in foul odour removing. Among the people participated, 35 (14%) believed that brushing can be done only before breakfast while 135 (86%) did not specify any time period for brushing. In relation to datun/chewing stick use for cleaning teeth, 178 (71.2%) regarded it as harmful for teeth while 72 (28.8%) did not regard it as harmful for teeth (Table 3).

Table 1: Myths related to dental pain and swelling , n (%)

Myths related to dental pain and swelling	Responses	Female	Male	Total
1. Placing clove in a decayed tooth always relieves pain.	Yes	42 (28.6)	29 (28.2)	71 (28.4)
	No	105 (71.4)	74 (71.8)	179 (71.6)
2. Swelling caused by painful tooth should be fomented with hot water.	Yes	105 (71.4)	73 (70.9)	178 (71.2)
	No	42 (28.6)	30 (29.1)	72 (28.8)

Table 2: Myths related to dental caries, n (%)

Myths related to dental caries	Responses	Female	Male	Total
1. Worm is there inside decayed tooth.	Yes	20 (13.6)	16 (15.5)	36 (14.4)
	No	127 (86.4)	87 (84.5)	214 (85.6)
2. Eating sweets causes tooth decay.	Yes	104 (70.7)	74 (71.8)	178 (71.2)
	No	43 (29.3)	29 (28.2)	72 (28.8)

Table 3: Myths related to oral hygiene practices n (%)

Myths related to oral hygiene practices	Responses	Female	Male	Total
1. Brushing once a day is more than enough	Yes	20 (13.6)	16 (15.5)	36 (14.4)
	No	127 (86.4)	87 (84.5)	214 (85.6)
2. Hard tooth brush cleans the teeth better than a soft toothbrush.	Yes	-	-	-
	No	147 (100)	103 (100)	250 (100)
3. Using finger with charcoal to clean the teeth is better than using toothbrush and toothpaste.	Yes	-	-	-
	No	147 (100)	103 (100)	250 (100)
4. Powdered salt can clean the teeth better than pastes.	Yes	43 (29.3)	29 (28.2)	72 (28.8)
	No	104 (70.7)	74 (71.8)	178 (71.2)
5. When the gums bleed it is better not to brush the teeth.	Yes	40 (27.2)	31 (30.1)	71 (28.4)
	No	107 (72.8)	72 (69.9)	179 (71.6)
6. Harder you brush your teeth, cleaner they get	Yes	22 (15.0)	13 (12.6)	35 (14.0)
	No	125 (85.0)	90 (87.4)	215 (86.0)
7. Longer you brush, more clean teeth get.	Yes	42 (28.6)	30 (29.1)	72 (28.8)
	No	105 (71.4)	73 (70.9)	178 (71.2)
8. Foul odour in the mouth is only because of poor cleanliness of teeth.	Yes	40 (27.2)	31 (30.1)	71 (28.4)
	No	107 (72.8)	72 (69.9)	179 (71.6)
9. Brushing of teeth should be done only before breakfast.	Yes	20 (13.6)	15 (14.6)	35 (14)
	No	127 (86.4)	88 (85.4)	215 (86)
10. Use of datun/chewing stick harms the teeth.	Yes	107 (72.8)	71 (68.9)	178 (71.2)
	No	40 (27.2)	32 (31.1)	72 (28.8)
11. Chewing betel-quid helps in removing foul odour from the mouth.	Yes	85 (57.8)	58 (56.3)	143 (57.2)
	No	62 (42.2)	45 (43.7)	107 (42.8)

DISCUSSION

In the late twentieth century, the world saw a transformation in both general health and oral health. Yet, despite the remarkable achievements in recent decades, millions of people worldwide have been excluded from the benefits of socio-economic development and the scientific advances that have

improved healthcare and quality of life. Inequalities in oral health persist worldwide, with affected mainly being the deprived population.⁹ Nepal has a low budget to meet the general populations' oral health treatment needs, a high disease burden and a low literacy rate. All these factors predispose the general population to poor oral healthcare, false treatment need assumptions,

and false beliefs.¹ This also increases the tendency to discover other measures in the form of home remedies rather than consulting a professional dentist. Very scanty epidemiological data is available in this connection, where village communities still comprise more than two-thirds of the country's citizens.¹

This study assesses the common myths prevalent in patients visiting Nobel Medical College, Biratnagar, Morang, Nepal. The most common myths related to dental pain and swelling was that swelling caused by painful tooth should be fomented with hot water similar to study done by Tiwari. in population of Bareilly district, India.² This is not true in reality because hot fomentation of swelling cause vasodilation and results in exaggeration of swelling, rather it is fomented with cold that cause vasoconstriction and decrease swelling.⁸ When it comes to dental caries most widely believed myths was eating sweets cause dental caries. It is not an absolute cause for dental caries, nature of sweets, time of consumption, frequency of consumption, and maintenance of oral hygiene after eating determine the progress of caries.⁷ In relation to myths related to oral hygiene practice, most of the people assumed that chewing betel-quid helps in removing foul odour from mouth. This is not true in real because betel quid chewing is itself deleterious to oral cavity as it may predispose to different oral lesion like oral submucous fibrosis (OSMF) and even oral malignancies. The essences and different flavouring agent used during making may mask the foul odour from mouth for some time.⁹

However, many of the participants denied the myths related to dental swelling, pain, caries, and oral hygiene practice. In contrary to Indian population,² most of the people did not agree that placing clove in mouth relieves tooth pain and there was worm in decayed tooth. When clove is placed in oral cavity, its stringent effect masks the pain due to caries. None of the people agreed that hard toothbrush cleans the teeth better than soft toothbrush and using charcoal with finger is better than toothbrush. This is not in accordance with study done by Vivek et al. which revealed that indigenous tooth cleaning systems

(charcoal) are still most commonly used practices among the Paniyan tribes of Kerala.² The cleaning action of toothbrush depends on method of brushing. Most of the respondents also agreed that duration of brushing is not related to cleanliness of teeth. In relation to frequency and timing of brushing, most respondents denied brushing once daily is sufficient and brushing before breakfast is good respectively. Many surveys in different part of the world have found brushing is the best way to maintain oral health. In order to prevent oral health problems, the American Dental Association (ADA) recommends tooth brushing at least once a day.¹⁰ Most of the respondents agreed that using chew stick/Datun harms the teeth. Using Datun may cause abrasion to teeth because of the force used during cleaning and the hardness of bristles. Similar results were found in study by Sharma and Basnet in marginalised population of Jhapa district¹³ and Singh et al. done in North Indian rural population.⁹

Myths can be prevalent in a population due to a variety of reasons like poor education, cultural beliefs, and social misconceptions. They are usually passed on from one generation to the next. It is difficult to break this chain as it is deep rooted in the society.⁵ It is important to know about these myths and misconceptions prevalent in the population as understanding them is essential to provide good care as well as health education to the people.

CONCLUSION

The prevalence of myths about dentistry was high among study population which could be associated with poor early health seeking behaviour and poor compliance with treatment. The lack of education about oral health at community level may played a greater role in believing myths in greater number of people. Based upon the present study, importance should be given for oral health education at individual as well as community level regarding the myths so that behavioural modification can increase the oral health awareness and dental care utilisation rate.

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