

Enculturation, Myths and Misconceptions Regarding Oral Health Care Practices among Rural Female Folk of Rajasthan

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ABSTRACT Utilization of dental services is hampered by multiple barriers which include culturally influenced factors, misconceptions regarding oral health care, low education and health literacy level. The purpose of the study was to uncover the cultural and ritual practices and their effect on the oral cavity and the utilization of dental services. A cross-sectional door to door survey was conducted in Bhanpur Kalan village, Jaipur in which 600 females were surveyed using a pilot tested, structured 14-item, close-ended, self-administered questionnaire. Chi-square test was employed for inter group comparison of variables. It was revealed that myths and misconceptions associated with dental treatment and ritual practices were significantly higher among uneducated females as compared to educated females ($p < 0.005$). Cultural beliefs act as access barriers for the utilization of dental services. Co-ordinated efforts by dentists and other health professionals are required to impart dental health education and improve knowledge about oral health and oral hygiene practices.

INTRODUCTION

Culture is defined as a learned behaviour which is socially acquired. It is transmitted from one group to another through learning process (Hasnain 2002). The beliefs and attitudes towards health practices are affected by the culture. Culture is transmitted, learned shared and represents a way of life. It plays a major role in socialization process. Blum (1991) delineates the role of culture in influencing the illness behaviour. He states "once a person has decided that he is ill, usually his next step is to consider ways of regaining health. His thinking is influenced by the prevailing beliefs about causes of illness and proper methods of cure (Mathur 2004). Every culture has its particular explanation for ill health. Culture provides people with ways of thinking that are simultaneously models of and models for reality. Frake in 1961 described sickness as a vehicle for purchasing others interests. In contrast culture has also developed a system of medicine, which stands an enduring

and shared relationship to existing world view (Mathur 2004).

It is generally presumed that rural population in India tend to be healthy, as they do live in unpolluted surroundings away from the stresses and strains of modern living. This no longer holds good as evident from the numerous health reports. Rajasthan is a diverse state, with a total of 33,837 villages, and population of 6, 86, 21, 012. It is one of the most educationally backward states in the country. Literacy rate of urban females (7 years and above) is 67 percent, where as that of rural females is 46.25 percent (Census of India 2011).

Village was chosen as a unit of study because it is the most manageable functional unit in which a pattern of culture and structure of society could be premeditated. It is often alleged that rural population are steeped in superstition, that they will not utilize any modern dental facility. It is important to identify processes by which rural population recognize sickness and the ways to counteract it.

Particular attention has been paid to health problems of rural females as they differ from females of other areas due to their geographical location, historical background, and processes of social change. The status of women is comparatively lower than men. It is deteriorated as a result of social change and consequential changes in social stratification. Utilization of

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dental services is influenced by the availability, quality and cost of services it does not necessarily mean that if dental services are operational in an area, all women are expected to avail the facility. Twenty-five percent of women reported a need for dental care, of which 33 % did not receive dental care despite their perceived need. Despite reported needs and existing recommendations to include oral health as a component of prenatal care, less than half of pregnant women have a dental visit and one-third of women with a dental problem did not have a dental visit highlighting the unmet need for dental care during pregnancy (Singhal et al. 2013).

The present study deals not so much with the religious aspects but with the cultural beliefs and taboos. This study at hand focuses on oral health and therapy from the point of view of rural females of Rajasthan. It takes into account the socio-cultural basis of indigenous (herbal and cultural) practices as a part of health care among rural population. It documents the cultural beliefs, role of healers and their form of treatment and traditional practices.

METHODOLOGY

The present cross-sectional questionnaire study was a door to door survey. The aim of the study was to assess the effects of cultural and ritual practices on oral health. Before beginning the study, Jaipur was geographically divided into four zones and information on the total number of villages was obtained from the Panchayati Raj Department, Government of Rajasthan. One zone was randomly selected and out of that zone, Bhanpur Kalan village was selected using Lottery method. Bhanpur Kalan is a village which is situated in tehsil Amer, district Jaipur, the capital of Rajasthan, India (Latitude: 26.93619 and Longitude: 75.76184) with a population of 6000. The first house was identified from the list of current voters and using systematic random sampling technique, every third house in the village was visited, which was physically nearest to the second house and so on until all the houses were covered and thus a total of 600 females between 18-60 years, who were co-operative and concurred to participate in the study were surveyed. The field work for study was conducted during morning hours and lasted for a period of six weeks, in Bhanpur Kalan village. When a completed questionnaire was returned, it was considered as consent. Ethical clearance was obtained from

the Institutional ethical committee of Jaipur Dental College.

Prior to being finalized, the questionnaire was pilot tested on a group of thirty females who had reported for dental treatment in the Department of Public Health Dentistry of Jaipur Dental College to ensure clarity and validity of the questionnaire. The patients were requested to fill and return the questionnaire then and there itself in order to avoid bias. Certain questions which were found to be irrelevant were deleted and those questions which were incomprehensive were modified/ rephrased to suit the comprehension level of survey subjects. The data was collected using a structured, self-administered, close ended questionnaire, consisting of 14 questions seeking information about traditional beliefs, myths and misconceptions regarding oral health and dental care practices. The questionnaire was drafted in English language and translated to their local dialect due to colloquial differences between two languages. It was demystified for the convenience of the participants. The questionnaire was self-designed referring to other studies in the literature. The Kappa co-efficient with respect to the contents of the questionnaire was found to be 0.85. The values reflected high degree of conformity in observation. The first section of the questionnaire was designed to collect general information of the subjects in the survey which included personal data and socio demographic profile. A variety of question formats were based on Guttman scale including "Yes" and "No" options. The questionnaire was designed to take approximately 5 minutes to complete. The subjects were requested to mark the appropriate answer.

Data was entered and analyzed using MedCalc v12.2.1.0. Descriptive statistics were obtained and percentage distributions of responses to questions were calculated. Chi square (χ^2) test was employed for inter group comparison of variables. For all tests a p-value of 0.05 or less was used for statistical significance

RESULTS

A total of 600 females were surveyed to assess the cultural and ritual practices and their effect on the oral cavity among rural female population of Rajasthan. The participants were divided into 3 different groups on the basis of

their age. Group A comprised of 134 females <20 yrs, Group B consisted of 301 females between 20-40 yrs and Group C comprised of 165 females above 40 years of age. The study population was analyzed based on their age, literacy and level of education. The results have shown that cultural beliefs were more in uneducated females than in educated females.

Table 1: Distribution of study participants-based on age and education

Groups	Group A (<20yrs)	Group B (20-40yrs)	Group C (>40yrs)
Age	22.3	50.1	27.5
Level of Education			
Graduates	19.4	1.9	-
Higher secondary	42.5	44.1	23.6
Secondary	7.4	6.3	11.5
Primary	5.9	7.3	3.6
Uneducated	24.6	40.1	61.2

All figures are percentages to corresponding sample.

The results have shown that 90 percent of the uneducated females, and 42 percent of edu-

cated females preferred home remedies ($p < 0.0001$) (Table 2, Fig. 1). Trying self care like heat therapy for swelling was preferred by 92 percent of uneducated females and 62 percent of educated females ($p < 0.0001$). A taboo among many people, that removal of the upper teeth affects vision was found in 79 percent of uneducated females and 52 percent of the educated females ($p < 0.0001$). In contrast 65 percent of the females above 40 yrs age group and those who had completed higher secondary and less than that also showed the same belief (Fig. 3)

With regard to professional cleaning of teeth, 66 percent of uneducated females and 47 percent of the educated females ($p < 0.0001$) (Table 2, Figure 1) reported a belief that it causes loosening of the teeth and the same was observed in 56 percent of the females above 40 yrs age group as compared to other two groups (A, B) ($p < 0.0001$) (Fig. 2) and 67 percent of females with primary school education showed the same belief. ($p < 0.0020$) (Fig. 3). It was found that 57 percent of uneducated females and 36 percent of the educated females ($p < 0.0001$) believed,

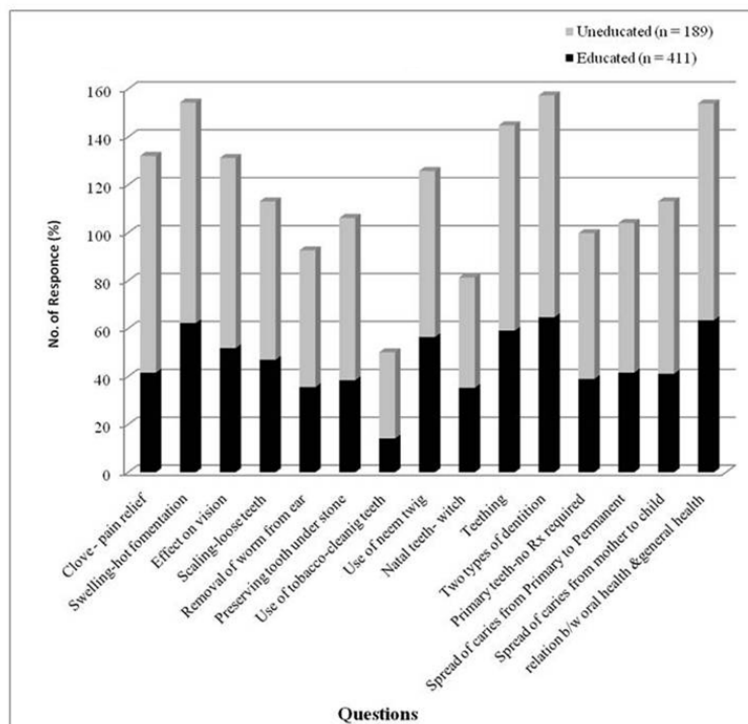
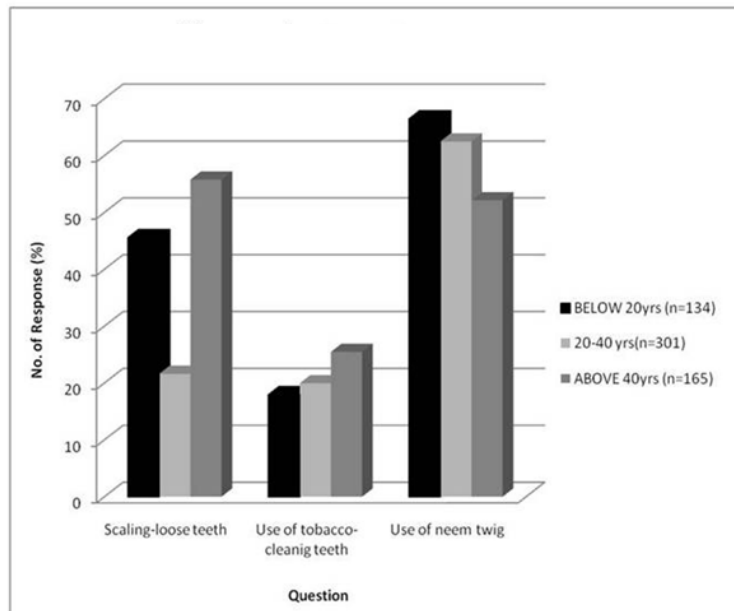


Fig.1. Education wise response

Table 2: Responses to questions by the participants

Questions	Responses	Educated (n=411)	Uneducated (n=189)	p value*
1. Do you prefer using clove when you have tooth ache?	Yes	171 (41%)	179 (90%)	<0.001
2. Do you think that swelling can be reduced by application of hot fomentation?	Yes	256 (62%)	179 (92%)	<0.001
3. Do you believe that removal of upper tooth affects vision?	Yes	213 (52%)	150 (79%)	<0.001
4. Do you believe that professional cleaning/ scaling makes the teeth loosened?	Yes	193 (47%)	125 (66%)	<0.001
5. Do you think the worm that causes tooth decay can be removed from ear?	Yes	146 (36%)	108 (57%)	<0.001
6. Do you believe that teeth become stronger by preserving the lost tooth?	Yes	158 (38%)	128 (68%)	<0.001
7. What do you prefer for cleaning teeth?	Tobacco Neem twig	58 (14%) 232 (56%)	68 (35%) 131 (69%)	<0.001 <0.0002
8. Do you think that child will become a witch if born with teeth?	Yes	145 (35%)	87 (46%)	<0.001
9. Do you believe that teething causes fever?	Yes	243 (59%)	162 (86%)	<0.001
10. Do you know that there are two types of teeth?	Yes	266 (65%)	175 (93%)	<0.001
11. Do you think that decayed deciduous teeth would shed on its own?	Yes	160 (39%)	115 (61%)	<0.001
12. Do you think that caries can spread from deciduous to permanent teeth?	Yes	171 (42%)	118 (62%)	<0.001
13. Can the microorganisms spread from mother to child?	Yes	169 (41%)	136 (72%)	<0.001
14. Is there any relation between general body health and oral health	Yes	261 (61%)	171 (90%)	<0.001

*Chi square (χ^2) test**Fig. 2. Age wise response**

that the worm which causes tooth decay can be removed from the ear.

To get stronger teeth, a belief that the lost tooth should be preserved under a stone after extraction/ exfoliation was found in 68 percent of uneducated females and 38% of the educated females ($p < 0.0001$) (Table 2, Fig. 1) and those who had completed higher secondary and less than that when compared with graduates. ($p < 0.0007$) (Fig. 3). There was also a widely held belief in 36 percent of uneducated females and 14 percent of the educated females ($p < 0.0001$) (Table 2, Fig. 1) that, chewing neem twigs strengthened teeth and gums. Statistical significance was found when compared between the age groups ($p < 0.0001$) (Fig. 2). A belief that the child will bring misfortune to the family and will become a witch when born with teeth present at birth/ presence of neo-natal teeth was found in 46 percent of uneducated females and 35 percent of the educated females ($p < 0.0001$) (Table 2, Fig. 1) and those who had completed higher secondary and less than that when compared with graduates ($p < 0.003$) (Fig. 3).

A misconception that teething causes fever was found in 86 percent of uneducated females and 59 percent of the educated females (p

< 0.0001) (Table 2, Fig. 1) and those who had completed higher secondary and less than that when compared with graduates ($p < 0.016$) (Fig. 3). It was found that 93 percent of the uneducated females were unaware of the fact that there are two types of dentition, deciduous and permanent and 62 percent of them were aware that caries can spread from deciduous to permanent teeth.

Highly statistical significant difference ($p < 0.0001$) was found where 61 percent of the uneducated females and 39 percent of educated females thought that decayed deciduous tooth would shed on its own and there was no need for any treatment. It was found among 72 percent of the uneducated females and 41 percent of the educated females that microorganisms cannot spread from mother to the child ($p < 0.0001$)

It was revealed that 90 percent of the uneducated females and 64 percent of the educated females thought that there was no relation between general body health and oral health ($p < 0.0001$) and those who had completed higher secondary school education and less than that when compared with graduates, showed same belief ($p < 0.019$) (Fig. 3).

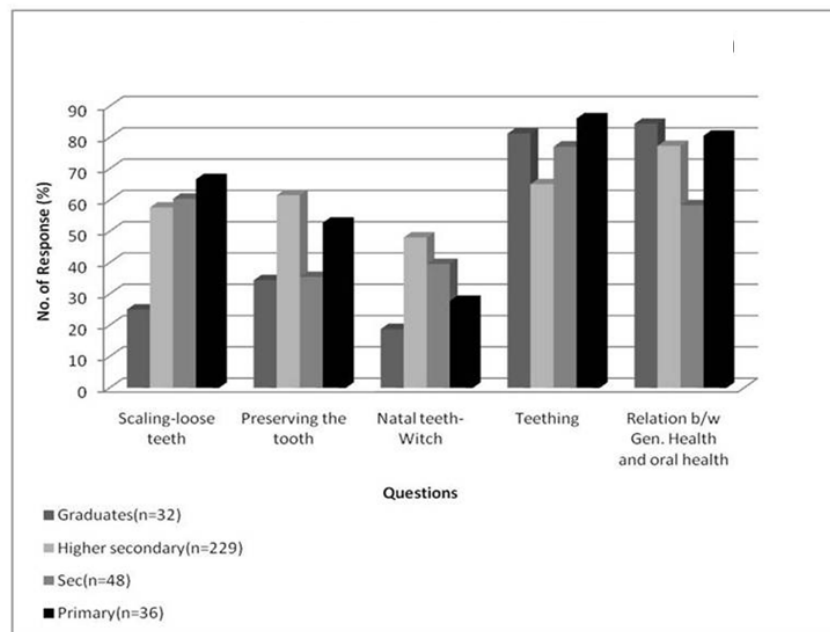


Fig. 3. Analysis based on level of education

DISCUSSION

The present study specifically focuses on the beliefs and practices followed by rural women regarding the oral health that are likely to have an influence on general health. In particular rural women had less knowledge about oral health and more cultural beliefs and they follow traditional practices that do not promote good oral health. It is a fact that cultural beliefs are still affecting the oral health of the population. These cultural beliefs seem to be implacable as they have a hale impact on the females as the beliefs hail from the ancestors. The reasons for these cultural beliefs and traditional practices are complex and multifactorial. They may reflect a combination of limited knowledge regarding the importance of oral health. Hitherto literature shows that many studies have been conducted to access cultural beliefs in parents regarding oral health of their children.

The key finding in this study was that the participants who were uneducated preferred trying self-care or home remedies. This may be due to the fact that they consider dental diseases as non-life threatening (Garcha et al. 2010). The specialists in home remedies are elderly people (Joshi 1984) who do not consider themselves as healers but in case of any kind of ailments related to the tooth such as toothache, they suggest plant remedies such as application of clove oil. Traditional methods and techniques of dental care among rural population comprises of the use of local materials for cleaning teeth such as neem twigs and hot fomentation method for reducing the swelling. These health behaviours include all activities undertaken individually or collectively for the purpose of prevention of diseases.

Various myths related to dental treatment such as professional cleaning causes loosening of teeth and extraction of upper teeth leads to loss of vision were significantly observed in uneducated females. This kind of misconception is inherited due to false exaggerated information promulgated by those who had previous personal negative dental experiences (Chhabra and Chhabra 2012). This might be attributed to lack of awareness, low educational levels, anxiety, apprehension and myths about dental treatment entrenched in their minds (Peter 2003). A belief that worms, that cause dental caries can be removed from the ears, was found in majority of the uneducated females. A set of practitio-

ners are ritual cure practitioners known as Bhopas and Devalas most commonly found in the villages of Rajasthan. When a person approaches these Bhopas for their tooth ache, with some amount of spiritual authority he shows them that he had removed the worm from their ear, which is responsible for tooth ache, which is often more reflective and convincing to the patient (Jain and Aggarwal 2005).

A myth that when the tooth is shed out if placed under a stone/ rock would result in the eruption of stronger tooth was found among elderly uneducated females. This kind of behaviour can be attributed from the family members, especially grandparents, who exerted a considerable influence on the family especially the younger generation.

The presence of natal teeth was related with supernatural powers, ill-luck and most of them believed that the child would bring misfortune to the family and would become a witch. These kinds of beliefs are considered to be carried out from the ancestors, most often to the females of the family. Babies born with teeth have been recorded since the Roman and Ancient Greek eras and the phenomenon is steeped in superstition, folklore and hearsay. Misconceptions surrounding natal and neonatal teeth vary from beliefs of them being very positive, heralding exceptional favour, and at the other extreme, evil and bearing grave misfortune. These are descriptions of Ural-Altaic tribes stating that children born with teeth would become witches and sorcerers (Sothinathan and Shakib 2011). One more belief that teething causes fever was found in most of the uneducated females, which shows a common lack of knowledge about teething. Results were similar to a study, where majority of the parents had false beliefs or myths regarding the signs and symptoms of teething such as fever (Owais et al. 2010).

In the present study it was found that majority of the uneducated females were unaware that there are two types of dentition, deciduous and permanent teeth. This may be due to lack of awareness and low educational levels among most of the females. Most of the uneducated females thought that carious deciduous teeth would shed on its own, as they believed that primary teeth would remain in the mouth for only a short period of time and would be replaced ultimately (Chhabra and Chhabra 2012). Most of them responded that there was no connection

between the presence of caries in the primary teeth and subsequent caries in the permanent teeth. A quantitative survey of Vietnamese carers of pre-school children in Canada suggested a lack of parental belief in the importance of primary teeth (Harrison and Wong 2003). In a study of carers in Saipan, it was reported that the low value attributed to baby teeth was an obstacle to developing effective prevention programs (Riedy et al. 2001).

The practice of kissing their child and sharing foods and utensils by adults has been associated with early colonization and infection with *Streptococcus mutans* in infants (Sakai et al. 2008). In the present study it was surprising to find, that majority of the both uneducated and educated females thought that microorganisms could not spread from mother to the child and the fact that it could increase the risk and severity of caries among very young children. The findings of the present study were similar to a study conducted on the parents/ care takers knowledge and attitudes towards transmissibility of caries disease (Sakai et al. 2008). Majority of the uneducated females thought that there was no relation between general health and oral health. The reasons for this misconception may be complex and reflect a combination of limited knowledge regarding the link between oral health and well-being of the body.

The Government's orientation is towards institutional and hospital based service delivery, which by its very nature was distant from the community. Access to these centres was difficult for women in remote areas. The inability of biomedicine to reach the unreached meant the continuation and proliferation of folk medicine and ritual healing for health care. In 1980, health infrastructure was expanded to four-tier in rural areas. Even this was not up to the mark. Though the village, Bhanpur has got a Sub-Centre and a nearby Primary Health Centre (PHC), there is no dental wing connected to it. The private health sector is profit oriented, the expansion and operations of private health providers are outside the purview of any quality bench mark, this is the reason the population are not utilizing the services provided by the Private Dental Colleges and associated Hospitals situated near by the village.

CONCLUSION

Myths and misconceptions associated with dental treatment and ritual practices were sig-

nificantly higher among uneducated females as compared to educated females. The cultural beliefs are due to illiteracy and lack of knowledge and they act as access barriers for the utilization of dental services. Co-ordinated efforts by dentists, Public Health Specialists, Non Government Organisations (NGO's) and grass root level workers are needed to impart dental health education that can be effectively incorporated in developmental programmes in promoting the prevention of diseases and dental care targeted to the rural population.

RECOMMENDATIONS

This study could not assess lack of knowledge with the presence or absence of oral disease and this being a questionnaire study has got certain limitations. Every population group has variations in beliefs and practices by socio-economic status, education level, religion, etc. Also data reported in this study cannot be generalized to the entire Indian population. Further quantitative and qualitative research studies on a larger sample and for a longer period are essential for the better understanding of the knowledge, attitudes and awareness about oral health and the various factors that influence them.

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