

Original Article

A SURVEY ON MYTHS RELATED TO DISPOSAL OF DECIDUOUS TEETH AFTER SHEDDING AMONG RURAL POPULATION OF CENTRAL INDIA

Siddana Goud. R¹, Shoba Fernandes², Shrudha Potdar¹

¹Department of Public Health Dentistry, RKDF Dental College and Research Centre, Bhopal, Madhya Pradesh, ²Dept. of Pedodontics, Narasimhai Patel Dental College and Hospital, Visnagar, Gujarat, India.

Abstract:

Background: Myths form an integral part of the society, which could prove detrimental to the populaces. Several myths about dispensing primary teeth exist in India, which have not been researched. **Objective:** This survey was performed, to understand the beliefs and practices that prevail, associated with the disposal of primary teeth, at Bhopal, India. **Materials and Methods:** A cross-sectional survey was conducted among 326 mothers who were randomly chosen from rural areas of Bhopal city, with children in the 6-12 years age range. A questionnaire was designed by the authors regarding myths about disposing primary teeth. A structured face to face interview was conducted by a trained researcher. Data was collected, compiled and subjected to statistical analysis. **Results:** Overall 66.06% population of the mothers believed in some kind of myth/s related to disposal of exfoliated primary teeth. The level of education demonstrated a strong association with regard to the belief in myths ($p < 0.05$). There was also a significant difference between age group of mothers and their belief in myths ($p < 0.05$). **Conclusion:** Several myths regarding disposal of primary teeth, prevail in the central parts of India. Measures to curtail these myths, to prevent negative impact on society may be essential.

Key words: myths, primary teeth, rural, India

Corresponding Author: Dr. Shoba Fernandes, MDS, Professor and Head, Dept. of Pedodontics, Narasimhai Patel Dental College and Hospital, Visnagar, (PIN -384315) Gujarat, India. Email: vshobaf@gmail.com

This article may be cited as: R Goud S, Fernandes S, Potdar S. A Survey on Myths Related to Disposal of Deciduous teeth after Shedding among Rural Population of Central India. J Adv Med Dent Scie Res 2015;3(1):51-56.

INTRODUCTION:

Myths are stories that transform the unknown to the known in the absence of facts.¹ Myths when unrecognized prove to be most perilous. We are complacent in the belief that myths are restricted to uncultured people. The numerous rituals practiced by society seem to be sanctioned by the various values placed in myths. The conviction in

myths, paves the way for the practice of rituals in life situations. The grief involved in coping with a loss for any individual especially a child, whether that of a loved one or a body part, needs to be expressed. These rituals appear to provide closure, a way to work through the separation and to discharge fear and apprehension associated with the loss experienced.

A range of myths and rituals are associated with disposal of “milk teeth” or primary teeth which assume diverse forms in different parts of the world. In an effort to elaborate - the middle age European practice of burying baby teeth underground, Korean practice of burying the upper teeth beneath the floor and throwing of lower teeth on the roof, French fairy who turns into a mouse to save children’s teeth, or the salted tooth as preservative of Irish/English origin to cite a few examples, as the list is extensive.²

In India, general and oral health is embroiled in various myths and ritualistic practices.³ Awareness of these practices and rituals would aid the health professional to deter parents from implementing appalling practices. Consequently arrange a comfortable transition for the desolate child to deal with the alterations in their dentition.⁴ Familiarizing professionals in order to understand these myths and practices in order to assist the people, to attain behavioral modifications would be prudent. Unfortunately little epidemiological data is available for India where villages still comprise more than two-thirds of the country. A dearth of literature on this subject prompted this study, with an aim to understand the beliefs and practices regarding disposal of primary teeth that exist in this region.

MATERIALS AND METHODS:

A cross-sectional survey was carried out in the rural regions of Bhopal (Madhya Pradesh) in Central India. Bhopal district is divided into 2 tehsils (A tehsil consists of a town that serves as a headquarters, with authority over additional towns and a number of villages. As an entity of local government, it exercises certain fiscal and administrative powers over the villages and municipalities within its jurisdiction). Commencing each tehsil, 6 villages were chosen randomly so that a total of 12 villages were included in the

study. We limited the study exclusively to villages, which represent the rural population. Our aim was to understand the prevalent beliefs and practices with regard to disposal of primary teeth specifically among rural population. The ethical clearance to conduct this study was obtained from the regional Institutional review board. Permissions to conduct the study among concerned villages were obtained from the pertinent village panchayats.

The study populations comprised of mothers who had children of 6-12 years of age. A validated questionnaire applicable to study these aspects of oral health in India was unavailable. Hence, a pilot study was conducted among a small group of mothers to understand the most prevailing myths regarding disposal of exfoliated milk teeth. Consequently, a questionnaire was drafted based on this pilot study. Sample size calculation was also done based on the results obtained from the pilot study. Here 75% of the mothers believed in some kind of myth related to disposal of primary teeth after shedding. Considering a prevalence of 75%, the sample size was calculated by fixing $\alpha= 5\%$, $\beta=20\%$ and ‘L’ as allowable error which is 10% of prevalence. Although sample of 261 subjects was calculated to be satisfactory, in order to augment the validity of the study a sample size of 350 was adapted.

The finalized questionnaire was pre-tested among a group of thirty mothers in each of the two tehsils for meaning and clarity. The Cronbach’s α value for internal consistency of the questionnaire was 0.85 with a reliability coefficient $r = 0.78$ at $p<0.01$. The final version was administered twice to a group of respondents for reliability in terms of temporal stability with kappa values ranging from 0.80-1.0 indicating high temporal stability of the questionnaire.

Myths on disposal of deciduous teeth after shedding.

A structured face to face interview was conducted by a researcher who was trained with a benchmark. Kappa coefficient scores for inter-examiner and intra-examiner variability were 0.77 and 0.79 respectively. The interview schedule was originally constructed in English which was later translated into Hindi, the local language of Bhopal. On completion of interviews, it was reverted into English. The examiner was introduced to the family members, explained the aim of the visit and assured that the parents comprehended the aim of the study. Mothers were requested to participate in the study by responding to the questions posed by interviewer. Members were informed that they were free to participate/not participate. A written informed consent was obtained by the subjects who agreed to participate in the study.

This study was a house-to-house survey. Villages in Bhopal Tehsils are divided into small administrative units of 10–20 households called mohallas. Interviewer moved from house to house until all the mothers having children aged 6-12 years in a given street, who were present at the time of the study, were interviewed. After one street had been completed, interviewer moved to the next street. This process was continued until the required number of mothers in each village was interviewed. By the end of the study period, only 326 out of the targeted 350 respondents were interviewed correctly, giving a response rate of 93%. The data was numerically coded and entered into SPSS software (Version 11.5) and analyzed. The chi-square test was used to analyze the different categorical variables investigated in the study.

Questions asked by Interviewer about beliefs related to the shedding of deciduous teeth

Demographic Data:

- A) **Mother's Age:** 1.) <25, 2). 25-35, 3) 36-45, 4) >45
B) **Education:** 1) University, 2) High School, 3) primary, 4) Illiterate
C) **No. of Children:** 1) first child, 2) 2 3) 3 4) 4&>4

QUESTIONS:

A. **Do you believe in any kind of practice/myth for disposing exfoliated teeth of your children?**

- 1) Yes 2) No 3) Don't know

If Yes....

A1. **Do you believe in disposing exfoliated milk teeth on the roof ?**

- 1) Yes 2) No

A2. **Do you believe in disposing exfoliated milk teeth on the roof where a pregnant lady lives?**

- 1) Yes 2) No

A3. **Do you believe in disposing exfoliated milk teeth in a rat's burrow?**

- 1) Yes 2) No

A4. **Do you believe in disposing exfoliated milk teeth by burying it in soil ?**

- 1) Yes 2) No

A5. **Do you believe in disposing exfoliated milk teeth near a Tulsi plant?**

- 1) Yes 2) No

A6. **Do you believe in disposing exfoliated milk teeth in a river/pond?**

- 1) Yes 2) No.

A7. **Do you believe in any other Practices?**

RESULTS:

A total of 327 mothers who had at least one child aged between 6-12years were interviewed about their practices related to the disposal of exfoliated primary teeth. The proportions of respondents by demographic characteristics are summarized in Table 1. The analysis of demographic data showed that, of all the respondents, majority were in the 25-30 years age group (35.47%). 42.2% had three or more children followed by 38.6 % having two children.

Overall 66.06% mothers believed in some kind of myth related to disposal of exfoliated primary teeth. The different kinds of myths that prevailed and the proportion of the population believed in these myths are presented in table 2.

The level of education demonstrated strong association with regard to the belief in myths. Around 83.72 % of the illiterate mothers believed in some or other kind of myth, followed by 67.50% of primary school educated mothers (Table 3).

Table 1: Demographic Data:

Demographic variables (N=327)		
	N(%)	
Age:	<25yrs	46 (14.07)
	25-35yrs	85(25.99)
	36-45yrs	116 (35.47)
	>45yrs	80 (24.46)
Education level	University	27 (8.25)
	High school	51 (15.59)
	Primary	120 (36.69)
	Illiterates	129 (39.44)
No. of children	First child	63 (19.2)
	Two children	126 (38.6)
	≥ Three children	138 (42.2)

Table 2: Mothers beliefs regarding Disposal of primary teeth during shedding

Different kinds of myths related to Disposal of exfoliated milk teeth	Belief in myths		Total
	Yes N (%)	No N (%)	
On the roof	49 (14.98)	278 (85.02)	327
On the roof where a pregnant lady lives	162 (49.54)	165 (50.46)	327
In a rat's burrow	09 (02.76)	318 (97.24)	327
Burying it in soil	40 (12.46)	287 (87.54)	327
Near a Tulsi plant	12 (03.67)	315 (96.33)	327
In a river/pond	22 (06.73)	305 (93.27)	327

Table 3: Association between education level and belief in myths

Education	Belief in myths		Total N
	YES N (100%)	NO N (100%)	
University	6 (22.22 %)	21 (77.78 %)	27
High school	21 (41.18%)	30 (58.82%)	51
Primary	81 (67.50%)	39 (32.50%)	120
Illiterate	108 (83.72%)	21 (16.28%)	129
Total	216 (66.06%)	111 (33.94%)	327

Chi-square = 55.28 df=3 p<0.001. N=No. of sample,

Table 4: Association between mother’s age and belief in myths

Mother’s Age	Belief in myths		
	YES N (%)	NO N (%)	N
<25 years	15 (33.30%)	31 (66.70%)	46
25 to 35 years	52 (60.70%)	33 (39.30%)	85
36 to 45 years	85 (73.70%)	31 (26.30%)	116
>45 years	64 (80.80%)	16 (19.20%)	80
	216	111	327

Chi-square =33.48 df=3 p<0.001. N=No. of sample,

There was a statistically significant difference between age group of mothers and their belief in myth (chi-square=33.48, df=3, p<0.01). Belief in myths is greater among the older age groups as compared to the younger generation of mothers.

DISCUSSION:

Several myths prevail in the society towards oral health which may act as barriers towards seeking treatment from doctors. Some common myths prevail in the populations towards teething with traditional treatment modalities which are very unscientific and can prove to be life threatening.⁵ Similarly myths are also associated with disposal of deciduous teeth during shedding.

In India around 70% of the population resides in the rural areas. The health care and educational facilities provided are extremely inadequate.⁶ Thus lack of awareness about general and oral health maintenance pervades. Hence, we conducted this study among the rural populace, to focus on the prevailing myths towards disposal of primary teeth after shedding and to discover the possible reasons for the existence and sustenance of such myths. A common belief among majority of the population is that deciduous teeth are lost eventually. Hence low precedence is given to healthy deciduous teeth (free from dental caries, periodontal problems). Particularly in rural areas people neglect their children’s oral health.⁷ The two most predominant myths encountered were,

her child. It is one of the most prevalent myths among the rural areas of India. It is an unhygienic and unscientific practice and the parents have to be educated suitably regarding the disposal of exfoliated deciduous teeth as well as the normal eruption pattern of permanent teeth. Percentage of mothers who believed in myths gradually increased in our study as their age group increased. Conversely less percentage of young mothers believed in these myths. This observation is perhaps the result of better awareness, exposure to media and the educational levels of the younger population as compared to older groups. Those mothers who are more than 35 years of age may have firm belief in their cultural and traditional taboos. Some practices may be scientifically acceptable, like burying in the soil is a good way of disposal but throwing on the roof of pregnant woman’s house is a myth that may cause contamination and is a detrimental practice. Disposing deciduous teeth in a rats burrow might be dangerous sometimes, or throwing in water bodies is not a good practice as it contaminates the water. Good practices supported by scientific evidence could be encouraged while others should be discouraged with proper education. In the present study we observed that majority of the believers in myths were either illiterate or were educated only up to primary school. Those who are well educated refrain from such beliefs and practices. So it is very clear

that education plays a major role in overcoming these myths among the population.⁸

Inadequate knowledge of the etiology, course, and outcome of disorders and disease states makes it difficult to initiate health behavioral changes. The distrust in the health-care system has led to the lack of utilization. The impact on health-related myths is due to the lack of communication with health-care professionals.⁹ Attempts to understand their appeal may be important in a global endeavor to deliver more effective healthcare, since their consistency and longevity suggests, levels of meaning and functionality as yet unfathomed by social science.

Limitations of our study: Subjects involving very large and diverse population could be included in future studies so that the results could be generalized for the whole population. Some biases might have crept in to the present study which includes maturation bias, social desirability bias and response bias. Exploration of research, to know other myths prevailing in the society is necessary. Insufficient data in this regard poses a constraint for arriving at concrete conclusions. Hence, further studies are recommended in the future which plan to circumvent the limitations of the current study and more research is needed to validate the results of this study.

REFERENCES:

1. Sauvageau A. Current reports on autoerotic deaths-five persistent myths. *Curr Psychiatry Rep.* 2014;16(1):430.
2. Don't tell the kids: The real history of the tooth fairy; http://www.salon.com/2014/02/09/dont_tell_the_kids_the_real_histories_of_the_tooth_fairy/, accessed on 09/02/2014
3. Singh SV, Akbar Z, Tripathi A, Chandra S, Tripathi A. Dental myths, oral hygiene methods and nicotine habits in an ageing rural population: an Indian study. *Indian J Dent Res.* 2013;24(2):242-4.
4. Sobel EH, Clark LC Jr, Fox RP, Robinow M. Rickets, deficiency of alkaline phosphatase activity and premature loss of teeth in childhood. *Pediatrics.* 1953;11(4):309-22.
5. Ige OO, Olubukola PB. Teething myths among nursing mothers in a Nigerian community. *Niger Med J* 2013;54:107-10.
6. <http://www.censusindia.gov.in/> accessed on 09/02/2014
7. Kuppaswamy VL, Murthy S, Sharma S, Surapaneni KM, Grover A, Joshi A. Oral Hygiene Status, Knowledge, Perceptions and Practices among School Settings in rural South India. *Oral Health Dent Manag.* 2014;13(1):146-54.
8. Kumar S, Kroon J, Lalloo R. A systematic review of the impact of parental socio-economic status and home environment characteristics on children's oral health related quality of life. *Health Qual Life Outcomes.* 2014;12(1):41.
9. Horner RD, Salazar W, Geiger HJ, Bullock K, Corbie-Smith G, Cornog M, Flores G; Working Group on Changing Health Care Professionals' Behavior. Changing healthcare professionals' behaviors to eliminate disparities in healthcare: What do we know? How might we proceed? *Am J Manag Care.* 2004;10 Spec No:SP12-9.

Source of funding: Nil

Conflict of interest: None declared