Cultural factors in Health and Oral health

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INTRODUCTION

Culture is defined as learned behavior which has been socially acquired and in other words “it is the shared and organized body of customs, skills, ideas and values, transmitted socially from one generation to other.” Culture plays an important role in human societies. It lays down norms of behavior and provides mechanisms which secure for an individual, his personal and social survival. Culture includes everything which one generation can tell, convey or hand down to the next. Culture has three parts. It is an experience that is learned, shared and transmitted.

Acculturation refers to culture contact. There are various ways by which the acculturation can occur, like in the way of trade and commerce, industrialization, propagation of religion, education and conquest to name some. An Indian is said to be the next best Englishman as the Britishers brought their culture to India through conquest.

Cultural factors in health and disease have engaged the attention of medical scientists and sociologists. Every culture has its own customs which may have significant influence on health and oral health. The increased incidence of lung cancer because smoking, cirrhosis because of alcoholism in many developed countries, the surge in the incidence of oral cancer in India due to pan chewing habits are some classical examples to demonstrate the influence of culture on health and oral health. It is now fairly established that the cultural factors are deeply involved in the whole way of life, like in the matters of nutrition, immunization, personal hygiene, family planning, child rearing, seeking early medical care, disposal of solid wastes and human excreta etc. All cultural practices are not harmful. The inclination to get into the habits of smoking, alcoholism, drug addiction in the name of civilization among the younger generation needs to be countered at the earliest, otherwise, it may have a huge deleterious impact on the health status of the generation to come. We have to identify the cultural factors that are deleterious and discourage these practices through intensive health education. The primary health workers and school teachers can play a vital role in creating the awareness on the adverse effects of deleterious cultural practices among the general population and students.

Key words: Culture, nuclear family, food habits, smoking, pan-chewing, alcoholism, drug addiction.
family planning, child rearing, seeking early medical care, disposal of solid wastes and human excreta etc. All cultural practices are not harmful. Every human has the culturally ingrained habit of cleaning or brushing the teeth early in the morning. The use of soap for personal hygiene, oil massaging, exposure of the new born to sunlight etc are some cultural practices that needs to be encouraged. The inclination to get into the habits of smoking, alcoholism, drug addiction in the name of civilization among the younger generation needs to be countered at the earliest, otherwise, it may have a huge deleterious impact on the health status of the generation to come. Keeping in mind, the very significant role, the culture plays on health and oral health, this paper is an attempt to review the effects of key cultural factors on health and oral health.

**Role of family:** Family is the primary unit in all societies. It is a group of biologically related individuals living under the same roof and eating from the common kitchen. Family as a cultural unit reflects the culture of the wider society of which it is a part and determines the attitude and behavior of its members. Joint family system is commonly seen in Asia, Africa, the Far East and Middle East countries, more so, in the rural areas than in urban places. The presence of parents, grand parents, uncles, aunts, and other near relatives plays a vital role in child rearing as well as in shaping the attitude and behavior of the child. Nuclear family systems seen predominantly in most of the western countries and urban areas in developing countries, place a greater burden on the parents in bringing up the child due to the absence of other members in the family. This problem is magnified especially if both the parents are earning members. The lack of parental attention in the nuclear families and peer pressure may provoke the child into deleterious habits like smoking, alcoholism, drug addiction, dating etc at an early age (a common practice seen in most developed countries). These adverse cultural practices in turn increase the incidence of oral cancers, venereal diseases and mental illnesses.

**Beliefs in the family:** The rural folk in a developing country like India have many misconceptions related to the family size and structure. Many believe that children are god’s gifts, the number of children in the family is determined by god, children are poor man’s wealth, and the family is not complete without the birth of a male child. These misconceptions may lead to large families which has a significant impact on the economic status and there by, on health as well as oral health of an individual. The close birth intervals here may result in maternal malnutrition, nutritional anemia, low birth weight and increased maternal and infant mortality rates.¹

**Sex and marriage:** Sexual customs vary among different religious and ethnic groups. Muslims have religious restrictions on oro-genital sex and intercourse during menstruation. Similarly, orthodox Jews are forbidden to have intercourse for seven days after menstruation ceases. This may have an influence on oral health and family planning.⁵ The practices of polygamy (marrying of one man to several women) and polyandry (marrying of one woman to several men) seen in many tribal communities of the country (Todas of Nilgiri hills, Nayars of Malabar coast, the inhabitants of Jaunsar Bhawar in Uttar Pradesh) attribute to the high rate of venereal diseases and affect the oral health.¹ United States of America is termed as the genetic melting pot due to excessive racial mixing. This may result in high frequencies of jaw and tooth size discrepancies leading to malocclusion. This may be the cause for high rate of malocclusion in U S A compared to any other primitive population lacking racial mixing.

**Maternal and child health:** Mother and child health (MCH) is surrounded by a wide range of customs and beliefs all over the world. The various customs in the field of MCH have been classified as good, bad, unimportant and uncertain. Prolonged breast feeding, oil bath, massage and exposure to sun are among the good customs. The avoidance of foods such as papaya, milk, fish, meat, egg and leafy vegetables among pregnant women in some parts of the country, more so in Tamil Nadu and Pondicherry, with the misconception that they may induce heat in the body, which may have an adverse influence on the fetus are amongst the bad customs. Punching of ear and nose, application of oil or turmeric on the anterior fontanel of the fetus are
some unimportant customs. The application of kajal or black soot mixed with oil to the eyelids partly for beautification and partly for warding off of the evil eye are amongst the uncertain habits.  

**Adverse practices in child rearing:** The deliveries conducted by untrained dais, who have very minimal knowledge on asepsis and sterilization, and whom the villagers trust more than the trained health care workers in many rural areas of the country may increase the incidence of maternal and infant mortality. The child is not put into breast feeding in the first three days after birth in some rural parts of the country (Gwalior region of Madhya Pradesh) due to the misconception that colostrum is harmful. Here instead, the child is put on water. This may prevent the transfer of maternal antibodies and there by increase the risk for many opportunistic infections in the infant. Adulteration of milk, delay in the start of weaning foods are other misconceptions related to child rearing that may result in protein energy malnutrition and adversely affect the child’s health and oral health. There are some beliefs that diarrhea among children is common during teething and does not need to be taken care of. They also believe that diarrhea will take off the heat from the body and hence the child should not be fed milk and other liquids. This result in dehydration.  

**Food habits:** Food habits are amongst the most deeply entrenched habits in any culture having deep psychological roots, religious influence and influence of the local conditions in the form of climate and soil. The family plays a vital role in shaping the food habits and this runs in the families from generation to generation.

Ariboflavinosis due to deficiency of riboflavin is common among the population whose staple diet is rice, seen predominantly in the eastern and southern parts of the country.  
Pellagra due to niacin deficiency is more in the population (Telangana region of Andhra Pradesh) whose staple diet is maize or jowar. This occurs because of the amino acid imbalance caused by excess lecine among jowar and maize eaters. The high concentration of molybdenum in jowar facilitates retention of fluoride in the body, and there by, may increase the severity of fluorosis among the population whose staple diet is jowar than in the population whose staple diet is rice, especially in an endemic fluoride belt.  

Vegetarianism is given a place of honor in Hindu religion. Orthodox Hindus are pure vegetarians and hence may not take any foods of animal origin including the milk. This may result in Vitamin B12 deficiency leading to Moeller’s glossitis.  

Adulteration of milk, though is done with the motive of economic gain, there are some disbeliefs that if the pure milk is boiled, it may dry the secretion in the donor animal. This results in over dilution of the milk, there by reducing its nutritive value which may result in protein energy malnutrition among the consumers.  

Adverse cultural practice in the cooking and preparation of foods such as discarding the cooking water from cereals, which is commonly seen in the rural areas of the country, reduces the nutritive value of food.  

**Religious restrictions in food habits:** Hindus don’t eat beef, thinking it is a sacred animal and Muslims don’t eat pork, thinking it is a scavenging animal that feeds on human excreta and garbage. These habits are protective as they prevent the occurrence of taeniasis caused by an adult form of Taenia Saginata and cystecercosis which manifest as edematous oral ulcers, gingival bleeding and lesions mimicking muccocles.  

**Dietary habits:** Tribal and primitive populations have diet patterns which are coarse and fibrous in nature and free from refined carbohydrates. This may reduce the risk for dental caries and also facilitate adequate stimulation of the jaws, jaw muscles and teeth eruption which may reduce the risk for malocclusion to some extent. The western diet on the other hand consists of refined foods which increase the risk for caries as well as malocclusion due to inadequate stimulation of jaw and jaw musculature. Scandinavian food habits mainly include variety of fishes, cheese etc which may offer some anticaries benefit. Similarly, the Caribbean food habits in the form of local fruits and vegetables, cassava (a starchy root) and great deal of fishes offer them some protection against dental caries. The trona salt is used extensively as a preservative,
tenderizer, flavoring agent in food as well as for medicinal purposes (in the treatment of dyspepsia) by Africans. This salt contains high concentration of fluoride (as high as 7900 PPM) and it may increase the risk for dental fluorosis. 23

Fasting is a frequent practice among orthodox Hindus. Muslims do fast during the time of Ramzan. Excessive fasting leads to gastritis, peptic ulcer, malnutrition, nutritional anemia, and loss of weight, which may have deleterious impact on health and oral health. 1

Men eat first and women last and poorly, in many rural families. This leads to maternal malnutrition, leading to high maternal and infant mortality rates. 1

Excessive consumption of spicy food in the form of green chilies is commonly seen in some regions of Andhra Pradesh and Northern Karnataka. This may predispose to the occurrence of peptic ulcer, oral sub mucous fibrosis and oral malignancies as well. 24

Personal hygiene: Majority of the people in the rural areas use open fields for defecation. The villagers are averse to the idea of latrines due to the misbelief that the latrines are meant for city dwellers where they lack open fields. They are often ignorant about the ill effects of improper disposal of human excreta which may result in water, food, soil contamination, favor the breeding of mosquitoes and flies. Villagers allow the solid wastes to accumulate and decompose in the vicinity of their houses. This also may result in food and water contamination as well as favor the breeding of flies and mosquitoes. The well water is the major source of drinking water for a large segment of the Indian population in rural areas along with tanks and ponds to some extent. These sources are notoriously subject to contamination due to human activities like bathing, washing of clothes and utensils. These are often the places where animals also are given a bath and drink which contaminates the water. Some rivers are considered to be holy. People go on pilgrimage, carry samples of holy water in bottles, preserve them for long duration and carry them over long distances to be distributed among the relatives and friends. This is also cause for epidemics of cholera and gastroenteritis. The rural houses are usually damp, ill-lighted and ill ventilated with lack of separate kitchen, latrine, and proper drainage. Animal keeping is common practice in the villages. All these may increase the risk for most of the communicable diseases among them. 1

ORAL HYGIENE PRACTICES

Hindu Brahmins and priests, especially in the region of Varanasi (Uttar Pradesh, India) clean their teeth using cherry wood for an hour, facing the rising sun. This may promote oral health if it is done appropriately. Orthodox Jains clean their teeth using fingers and without using the brush. This may have a negative impact on their oral health. Muslims offer prayer in the form of namaz, five times in a day. During each namaz, as part of the ritual, they use miswack stick, tooth picks and do gum massaging. This may promote the oral health. 6, 24

Use of chewing twigs: The rural folk in Udupi region of Karnataka use the twigs from mango or cashew tree. Neem and Banyan twigs are commonly used in the rural areas of Tamil Nadu, coconut twigs in the rural areas of Kerala. Datun is used in North India. In African countries, twigs from Salvadora Persicca are used for cleaning the teeth. The twigs offer mechanical cleaning action and some twigs may have antimicrobial properties. The salvadora persicca twig has high concentration of fluoride, which may offer antacaries benefit. The use of chewing twigs can be recommended in lower class people who can not afford the brush and paste. These twigs have to be properly used and the method should be taught to them, otherwise, improper use may lead to gingival and periodontal trauma over a period of time. 6, 24

Dentifrices: The rural people use brick, charcoal, rangoli powder, mud, salt, ash etc for cleaning the teeth. This may result in gingival recession, abrasion and dentin sensitivity. 5

PERSONAL HABITS:

Purdah system: Practiced among Muslims and high caste Hindus has beneficial as well as detrimental effects. The practice protects against the exposure to harmful sunrays and there by prevents the
occurrence of Basal cell carcinoma. The lack of exposure to sunlight may result in decreased synthesis of vitamin D, leading to hypoplasia of the teeth. There is evidence that the frequency of droplet infections like tuberculosis and diphtheria to be relatively high among people who practice purdah system.  

**Smoking and alcoholism:** The habit of alcoholism is prohibited among Muslims and high caste Hindus. This may promote the oral health. The younger generation and the population in the western world consider the habits of smoking, alcoholism etc as a reward, status symbol or something glamorous. This may have an adverse consequence on the health as well as oral health. The habits of smoking and alcoholism, are culturally acceptable among some tribal population. Here, males and females have almost the equal frequency of these habits. The habit of reverse smoking is highly prevalent among the fishing communities in the districts of Srikakulam and Vishakhapatnam in Andhra Pradesh. This increases the risk of palatal malignancies.

**Pan chewing as a custom:** Offering pan having betel leaf, slaked slime, areca nut, and catechu is a way of welcoming the guests in North Indian states like Rajasthan, Uttar Pradesh, Maharashtra and West Bengal. Rejecting pan is taken as an insult. This may encourage the people to get into the habit of chewing pan, which is a proven risk factor for periodontal diseases, oral sub mucous fibrosis and oral malignancies.

**Drug addiction:** Hindu sadhus have the habit of incorporating charas, bhang and ganja into the cigarettes. This habit is spreading into the younger generation in India and is a common practice in western culture (U S A). The use of these, results in physical and psychological dependence, which may be deleterious to health and oral health.

**Sedentary life style:** Lack of physical exercises among the upper class people is the main cause for obesity, which in turn predispose the person for many cardiovascular diseases, diabetes mellitus etc. These diseases have deleterious impact on oral health. 

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**Cola and Khat chewing:** These habits are widely seen in African countries. The cola has tannin, Theobromine, and Caffeine. This may facilitate healing of oral mucosal lesions where as Khat chewing causes dry mouth, thirst, pain, buccal keratosis and clicking in the temporomandibular joint region.

**Alum rinsing and fomentation:** Alum rinsing done with the belief that it may make the gingiva stronger may have an adverse effect in the long run. Fomentation for reducing the pain associated with a decayed tooth may not worsen the pain at times, but it may result in cellulitis.

**SOCIAL CLASS DIFFERENCES**

The level of education, per capita income and occupation determine the overall socio-economic status of an individual. The lack of preventive awareness and affordability for sophisticated dental procedures may predispose the people in the lower classes for higher frequency of oral diseases. Caste system is more rigid in rural areas. The lower class people are considered as untouchables and will not be allowed to fetch water from the place where upper class people do. They will not be allowed to utilize the health care services. Though, caste system has diminished in the recent times, it is still seen in some rural communities.

**TOOTH AND SOFT TISSUE MUTILATIONS**

These may be in the form of tooth avulsion, alteration in the shape of the crown by filing and chipping, lacquering and staining of teeth, decorative crowns and inlays, tattooing, facial scarring and uvullectomy. They are practiced in the primitive population in different parts of the world as a sign of tribal identification, sign of bravery, marriageable age in females, ceremonial sacrifice, ceremonial rebirth, to ensure life after death, for esthetics and fashion, differentiation of sexes etc. whatever may be the reasons for these habits, they definitely will have harmful effects on the oral tissues and hence have to be discouraged.
CONCLUSION:

Health is a consequence of an individual’s lifestyle as well as a factor in determining it. Every one of us, have our own beliefs and practices concerning health and disease irrespective of the area of residence (whether residing in urban or rural areas). Not all cultural practices are harmful. Some of these practices like adequate nutrition, good sleep, regular physical exercise etc are based on centuries of trial and error and have positive values. Achievement of optimum health demands adoption of healthy lifestyles. We have to identify the cultural factors that are deleterious and beneficial. We, the health professionals have to discourage the unhealthy practices through intensive health education and promote the adoption of healthy practices. The primary health workers and school teachers can a play a vital role in creating the awareness on the adverse effects of deleterious cultural practices among the general population and students. The mass media in the form of radio, television, newspapers, health exhibitions, role plays etc go a long way in changing the attitude and behavior of the people and this demands more patience as well as persistence from the health care workers, as the cultural practices are deep rooted and requires a very long time to change or modify.

REFERENCES


