

**Knowledge of Oral Health Among the People of Rural Nepal
(Cases from Lalitpur District)**

Amit Kumar Sakha

PhD Scholar (MUR1403028), Mewar University, Chittorgarh, Rajasthan, India

Prof. Dr. S. L. Menariya

Research Supervisor, Mewar University, Chittorgarh, Rajasthan, India

Corresponding Author

Amit Kumar Sakha

Email: amitkshakha@gmail.com

Received: June 07, 2021; Revised & Accepted: July 23, 2021; Published: July 31, 2021

© Copyright: Sakha (2021).



This work is licensed under a [Creative Commons Attribution-Non Commercial 4.0 International License](https://creativecommons.org/licenses/by-nc/4.0/).

Abstract

Good oral health is the condition of free of illnesses that empowers to perform ordinary capacities. It is accounted for that there is a cozy connection between oral illnesses and other foundational diseases like diabetes, digestive disease, stroke, cardiovascular disease, metabolic syndrome, adverse pregnancy outcomes, obesity, et al. So, it is important to maintain good oral health and one must have knowledge of oral health and how to maintain dental and oral hygiene. The main objective of this study is to identify the knowledge of oral health among 35 to 45-year people of Rural Nepal. the study had adopted the mixed design (method) – both quantitative and qualitative tools were used to collect the data. It was a cross-sectional study. The study was conducted in four Rural Municipalities of Lalitpur district: Gotikhel, Chaughare, Malta and Bhardah. The data was collected from 369 respondents by using the structured survey questionnaire. The majority of people (68%) reported that they had heard of oral disease. Though, still, 32% had no knowledge of oral health. There was a significant association between the literate and illiterate on the basis of hearing about the oral disease because of $p = .000$ which is lesser than .05 significant level. Radio and Television were the main source of getting knowledge of oral health. All the household may not have equal access

on the Radio and Television program so there was a need to organize the awareness campaign in rural society to aware the people.

Keywords: Knowledge, Oral health, Nepal, Rural

Introduction

Oral health problem directly affects in the oral organs: mouth, teeth, tongue etc. and also affects in day-to-day communication, and respiration. Oral health may be defined as “*a standard of health of the oral and related tissues which enables an individual to eat, speak and socialize without active disease, discomfort and embarrassment and which contributes to general well-being*” (Kay, 1997). Good Oral health is condition of free of illnesses that empowers to perform ordinary capacities. In 2016, the Federal Dental International (FDI) Dental World Federation re-imagined the oral health completely, perceiving that oral health was multifaceted furthermore, included the capacity to smell, contact, taste, bite, swallow, grin, talk, and pass on a ton of feelings through outward appearances with certainty and without inconvenience, torment, and infection of the craniofacial locale (Glick, 2017). Oral health assumes a significant job in by and large health and is an essential piece of general health (Sheiham, 2005; Baiju, 2017). It is accounted for that there is a cozy connection between oral illnesses and other foundational diseases like diabetes, digestive disease, stroke, cardiovascular disease, metabolic syndrome, adverse pregnancy outcomes, obesity, et al (Nazir, 2017; Le Bars, 2017).

Various distinctive oral health camps have been propelled in Nepal so as to give oral medicinal services to the most disengaged and least fortunate rural communities recently. These oral health camps have positive effect to advance oral health mindfulness in certain zones where the specialists can feel simple to proceed to serve them. Dental camps were arrangement in five towns in Sindupalchowk, Kavre, Bhaktapur and Kathmandu locale of Nepal during 2018 January to December. Towns where dental camp were directed: Sipaghat in Sindupalchowk, Panauti in Kavre, Nagarkot and Bode in Bhaktapur and Narayanthan Budhanilkantha in Kathmandu. In view of a requirements evaluation performed by Kathmandu Medical School in 2017, towns were picked because of their rustic area what's more; possibly neglected oral human service's needs. The towns were 1.5 - 7 hours' drive from the capital city Kathmandu, crosswise over various territories. The oral wellbeing camps were directed essentially in inferred rural and remote zones where medical problems like dental caries, periodontal issues alongside healthful issues were pervasive (Pokhrel & Pokhrel, 2019). The 2004 National Pathfinder Survey shows that 58% of 5–6 – year-old schoolchildren suffer from dental caries (Yee & Mishra, 2006). With the caries commonness of 58%, dental caries is more pervasive than malnutrition that influences 49% of kid populace (Ministry of Health, 2011). An investigation directed in Central and Western Nepal among 5–multi year old schoolchildren, reported 67% of children were influenced by dental caries (Yee & McDonald, 2002). Experience of oral pain was high with 31% of school children reporting experiencing dental torment. Another examination directed in Nepal among 9–11 years of age schoolchildren had

reported that 45% of children experienced tooth pain (Yee, McDonald, & Walker, 2003). Oral health advancement through schools is suggested by the World Health Organization (WHO) for improving information, mentality, and conduct identified with oral health and for counteractive action also, control of dental ailments among students (Mehta & Kaur, 2012).

Most of the oral health related study conducted in Nepal was focused on the school students. But the problem of oral health is prevalent among the adult people basically living in the rural area also. So, the main objective of this study is to identify the knowledge of oral health problem among the people living in rural Nepal.

Materials & Methods

The study is based on the descriptive design which has described the knowledge of oral health among the people living in rural area. The final sample size of this study was 369. The study was conducted in four Rural Municipalities of Lalitpur district: Gotikhel, Chaughare, Malta and Bhardah. The primary respondents of this study were person having the oral health problems. The rural people of aged 35-45 were the main respondents of this study. The study had used the purposive sampling technique to select the respondent who had met the following criteria:

1. Respondent should be age group of 35-45 years,
2. Respondents should have problem of oral health in any time (either in past or present) so that they could share their experience of oral health problems, and its treatment.
3. Respondents should be able to speak, understands and share their problem easily with the researcher.

The study had collected the quantitative data from the structured questionnaire survey so statistical analysis was done from the statistical software (SPSS v. 20) and presented the data in tabular form.

Results & Discussions

Oral health is an integral part of our overall health and wellbeing, lack of proper oral health care leads to various problems such as dental cavities and gum disease, it can also cause other diseases and even cancer.

It is important to maintain good oral health and for that one must be familiar with the knowledge of oral health and how to maintain dental and oral hygiene. The basic knowledge of oral health is provided to the students in the school from an early age, encouraging the children to take good care of their oral health by brushing twice a day, using a mouth wash, flossing the teeth, visiting the dentist regularly, consuming less amount of sugary food and drinks, eating fresh fruits and vegetables.

This knowledge needs to be spread out not just in schools, but also in the community through various ads and campaigns to make people more aware about their oral health.

There are also other facts that one should know about the oral health and they are as follows:

- Nearly every adult has at least one cavity
- Almost, 30% people in the world aged between 65 to 80 do not have any natural teeth left
- More than 50% of the school children have at least one cavity

Having oral knowledge also means that one can detect the various symptoms of oral problems and those symptoms are as follows:

- Chronic bad breath
- Receding gums
- Breaking of tooth
- Toothache
- Loose tooth
- Swelling in the face or gums
- Sensitive teeth

There are also various causes of these symptoms and those causes are as follows:

- Consuming products containing nicotine
- Lack of proper brushing
- Acid reflux
- Hormonal changes
- Eating sugary treats or drinks
- Using toothpaste with no fluoride etc.

Heard about oral disease

Oral disease are the diseases that occur in the mouth of a person and can be caused because of various factors like smoking, acid reflux, using nicotine etc. The data in the Table 1 represents the data collected based on the responses of the participants of the survey regarding if they know about oral disease.

The data showed that, based on the education level, the literate people (77%) along with the illiterate people (56%) had heard of oral disease. On the basis of occupation, all the workers, agriculture workers (66%), government workers (68%), labor (61%) and business men (70%) knew know about the oral disease. Also, on the basis of monthly income, all three income ranges had similar responses, less than 10K per month (60%), 10-20K per month (76%) and more than 20K (62%), knew about the oral disease.

In the overall analysis, majority of people (68%) that took part in the survey, reported that they had heard of oral disease. This data may infer that majority of the respondents had general knowledge of oral disease. Whereas 32% had not heard about the oral disease so it is important to educate that minority about oral health and oral disease. To ensure the development of socio-economic aspect of the community, campaigns and ads are a must that encourage the people of the community.

Table 1: Heard about oral disease

	Education		Primary Occupation of family				Monthly income			Total	
	Illiterate	Literate	Agriculture worker	Government Job	Laborer	Business/shop	Less than 10000	10000-20000	More than 20000		
Yes	55.6%	77.3%	65.9%	68.0%	60.9%	69.9%	60.4%	76.3%	62.3%	66.7%	
No	44.4%	22.7%	34.1%	32.0%	39.1%	30.1%	39.6%	23.7%	37.7%	33.3%	
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	
Chi-Square Tests											
Pearson Chi-Square	Value	df	Asymp. Sig. (2-sided)	Pearson Chi-Square	Value	Df	Asymp. Sig. (2-sided)	Pearson Chi-Square	Value	df	Asymp. Sig. (2-sided)
	19.186 ^a	1	.000		.807 ^a	3	.848		9.050 ^a	2	.011

Source: Field Survey, 2019

The statistical analysis of Chi-Square Test showed that there was significant association between the literate and illiterate on the basis of hearing about the oral disease because $p = .000$ which is lesser than .05 significant level. Similarly, the statistical analysis of Chi-Square Test was run to check the association between the primary occupation groups. It showed that there was no significant association among the three, primary occupation of the family on the basis of hearing about the oral disease because $p = .848$ which is greater than .05 significant level. The statistical analysis of Chi-Square Test between the income groups showed that there was a significant association among the three, monthly income on the basis of hearing about the oral disease because $p = .011$ which is lesser than .05 significant level.

The result of Chi-square test shows that the illiterate and literate people have a significant difference which means that fewer illiterate people had heard of oral disease than compared to the literate people. The reason behind might be that illiterate people had fewer chances of being exposed to such kind of knowledge in everyday life unlike educated people who might be learned about it from school and other institutions. One previous study also reported that oral problems are significantly associated with socioeconomic status. The oral health status is observed different in different social classes. As well as in gender and the education level of the parents is also associated with dental caries (Taani, 2002).

The test also shows that people of lower income range had lesser chance to know about the oral disease compared to those who earn more. This maybe because the people from poor background do not have the opportunity to access the good quality of education. Health seeking

behavior has been associated with the socio-economic status of people (Kroeger, 1983). Financial costs, especially in a poor country like Nepal, is a significant barrier to accessing dental care. The effect of the annual income not only affects the individual but the entire family's dental attendance pattern. When affordability of dental care is combined with socio-economic status (SES), it appears that those from lower SES access care less often and admit to being less satisfied with treatment they received compared to others (Freeman, 1999). So, it is important to educate and encourage the people from poor background and illiterate people, to improve the standard of life in the community.

If 'Yes', source of getting information

There are various forms of communication that allow us to collect and share information from one person to another like tv, radio, banners, newspapers, person to person communication, health post etc. where we can get information regarding the oral health and oral disease. The data in the table 2 represents the information collected based on the responses of the respondents of the survey regarding how they got knowledge about the oral disease.

The data shows us that in education sector, both literate (59%) and the illiterate (71%) accessed the information through the radio about the oral disease. On the basis of the primary occupation of the family, agriculture workers (71%), labor (83%) and business/shop owners (54%) got access to the information regarding oral disease from the radio. On the other hand, majority of the government workers (53%) got the information from TV. This may infer that government workers have higher chances of getting information through the TV as they can afford television easily than compared to the other working-class people. On the basis of income, people earning less than 10K per month (61%), earning between 10-20K (68%) and earning more that 20K per month (63%).

Table 2: If ‘Yes’, source of getting information

	Education		Primary Occupation of family				Monthly income			Total
	Illiterate	Literate	Agricultur e worker	Govemme nt Job	Labour	Business/s hop	Less than 10000	10000- 20000	More than 20000	
T V	19.6%	30.7%	21.7%	52.6%	16.7%	30.8%	29.7%	21.2%	29.2%	26.0%
Radio	71.4%	59.3%	70.5%	36.8%	83.3%	53.8%	61.4%	68.1%	62.5%	64.5%
Banner s	1.8%	1.3%	1.2%			3.1%	2.0%	1.8%		1.5%
News Paper		4.0%	2.4%			3.1%	2.0%	3.5%		2.3%
Friend circle	5.4%	2.0%	3.0%	10.5%		3.1%	3.0%	1.8%	8.3%	3.4%
Health post	1.8%	1.3%	1.2%			3.1%	2.0%	1.8%		1.5%
Others		1.3%				3.1%		1.8%		.8%
Total	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

Source: Field Survey, 2019

In general, over (65%) respondents got access to the information on the oral disease through radio. Radio is most affordable and convenient of getting information through a wide range of landscape. Most people in the village areas or areas with less accessibility to television, have radio as their means of one-way communication. Similarly, second largest number (26%) respondents had got the information of oral health problem from Television. Television facility is comparatively expensive devise and it also needs the regular electricity so it was not accessible and affordable for all.

The data shows that there is a difference between the literate and illiterate on the method of getting information about the source of the information regarding the oral disease. Higher percentage of literate people access this information through TV than compared to the illiterate people. The reason behind this can be poor financial background of the illiterate people.

Preference of types of brush

There are different types of toothbrush found in the market, some are with a big head and hard bristle, some big head with soft bristle, small head and hard bristle etc. According to the dentists, the best kind of toothbrush is one with a small head and soft bristle which can reach every corner of the mouth and the bristles are not too hard on the gums and teeth.

The data in the Table 3 represents the type of brush that the respondents prefer to use. Based on the education, illiterate people (48%) use big head and hard bristle brushes whereas the literate people (49%) prefer to use big head and small bristle. On the basis of primary occupation of the family, government employees (37%) were using big head and hard bristle, along with labor (48%) and the business/shop owners (45%). While more agriculture workers

(44%) used big head and soft bristle brushes. On the basis of monthly income, people earning less than 10K per month (36%) used big head and soft bristle brush, whereas people earning between 10-20K (44%) used both soft and hard bristle big head brush. On the other hand, people who earned more than 20K per month (44%) used big head and hard bristle brush. This data showed that the majority used big head, hard bristle brush (39%) and big head soft bristle brush (39%). This may infer that most of the respondents are less concerned in this context as this isn't seen as a major part of oral health care.

Table 3: Preference of types of brush

	Education		Primary Occupation of family				Monthly income			Total
	Illiterate	Literate	Agricultur e worker	Goverme nt Job	Labour	Business/s hop	Less than 10000	10000- 20000	More than 20000	
Big head, hard bristle	47.8%	30.7%	36.4%	37.0%	47.8%	44.6%	32.5%	44.4%	43.7%	39.0%
Big head soft bristle	28.3%	49.2%	43.6%	37.0%	34.8%	27.7%	36.2%	44.4%	35.2%	39.0%
Small head, hard bristles	18.3%	16.4%	14.4%	22.2%	17.4%	24.1%	23.9%	8.1%	19.7%	17.3%
Small head, soft bristles	3.9%	3.2%	3.8%	3.7%		3.6%	4.9%	3.0%	1.4%	3.5%
Any brush	1.7%	.5%	1.7%				2.5%			1.1%
Total	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

Source: Field Survey, 2019

The data shows that there is a significant association between the literate and the illiterate based on the type of brush that they use. Higher number of illiterate people use big head and hard bristle to brush their teeth than compared to the literate people who prefer to use big head and soft bristle brush. Illiterate people are more likely to be unaware about the negative impact of the using a hard bristle brush.

Conclusion & Recommendation

The main objective of this study was to identify the knowledge of oral health problem among the rural people. Majority of people (68%) that took part in the survey, reported that they had

heard of oral disease. Though, still 32% people had not heard about the oral disease so it is important to educate that minority about oral health and oral disease. As a source of information, majority of (65%) respondents got access to the information on the oral disease through radio. Radio is most affordable and convenient of getting information through a wide range of landscape. Most people in the village areas or areas with less accessibility to television, have radio as their means of one-way communication. Similarly, second largest number (26%) respondents had got the information of oral health problem from Television. Television facility is comparatively expensive device and it also needs the regular electricity so it was not accessible and affordable for all. All the household may not have equal access on the Radio and Television program due to various reasons so there was a need to organize the awareness campaign in rural society to aware the people.

References

- Baiju, R. (2017). Oral health and quality of life: current concepts. *JCDR - Journal of Clinical and Diagnostic Research*, 11(6), ZE21-ZE6.
- Freeman. (1999). barriers to Accessing Dental Care: Patient factors. *British Dental Journal*, 187.
- Glick, M. (2017). A new definition for oral health developed by the FDI world dental federation opens the door to a universal definition of oral health. *Journal of Public Health Dentistry*, 77(1), 3-5.
- Kay, E. a. (1997). Effectiveness of Oral Health Promotion:A review. *London: Health Education Authority*.
- Kroeger, A. (1983). Anthropological and Socio-medical Health Care Research in Developing Countries. *Social Science and Medicine*, 17, 147-161.
- Le Bars, P. (2017). The oral cavity microbiota: between health oral disease, and cancers of the aerodigestive tract. *Canadian Journal of Microbiology*, 63, 475-492.
- Mehta, A., & Kaur, G. (2012). Oral health-related knowledge, attitude, and practices among 12-year-old schoolchildren studying in rural areas of Panchkula, India. *Indian Journal of Dental Research*, 23, 293.
- Ministry of Health. (2011). *Department of Health Services Annual Report 2066/2067(2009/2010)*. Kathmandu: Government of Nepal, Ministry of Health.
- Nazir, M. (2017). Prevalence of periodontal disease, its association with systemic diseases and prevention. *International Journal of Health Sciences*, 11(2), 72-80.

Nepal Journal of Multidisciplinary Research (NJMR)

Vol. 4, No. 2, June 2021. Pages: 106-115

ISSN: 2645-8470 (Print), ISSN: 2705-4691 (Online)

DOI: <https://doi.org/10.3126/njmr.v4i2.39399>

- Pandve, H. (2009). Recent advances in oral health care in India. *Indian Journal of Dental Research*, 20, 129-130.
- Pokhrel, P., & Pokhrel, K. P. (2019). Rural Health Awareness and Incidence of Oral Diseases in Rural Communities of Nepal. *ACTA SCIENTIFIC NUTRITIONAL HEALTH*, 3(4), 34-40.
- Sheiham, A. (2005). Oral health, general health and quality of life. *Bulletin of the World Health Organization*, 83, 644.
- Taani, D. (2002). Relationship of socio-economic background to oral hygiene, gingival status, and dental caries in children. *Quintessence International*, 33(5), 195-198.
- World Health Organization. (1988). *Oral health global indicators for 2000*. Geneva: World Health Organization.
- Yee, R., & McDonald, N. (2002). Caries experience of 5-6-year-old and 12-13-year-old schoolchildren in central and western Nepal. *International Dental Journal*, 52, 7-10.
- Yee, R., & Mishra, P. (2006). Nepal oral National Pathfinder Survey 2004. *Int Dent J*, 56, 196-202.
- Yee, R., McDonald, N., & Walker, D. (2003). An advocacy project to fluoride toothpastes in Nepal. *Int Dent J*, 53, 220-230.