

Research Article

# Awareness of Oral Cancer in a Community of Tarahara, Sunsari, Nepal

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## ABSTRACT

**Background and Objectives:** Oral cancer is one of the highly prevalent cancers worldwide and a leading cause of mortality in certain regions like South-Central Asia and a major public health problem. According to National Health Policy, oral cancer is the most common form of cancer in men and the third most common cancer in females in Nepal. Several studies have shown that public is not well aware of risk factors associated with oral cancer. The objective of this study was to assess the awareness of oral cancer among people of Tarahara-20.

**Material and Methods:** A cross-sectional descriptive study was conducted among people of age group 18-65 years in 2019. Data were collected from 128 respondents through face to face interview using Semi – structured interview schedule with non-probability purposive sampling method. Data entry and analysis was done in SPSS version 17. Descriptive statistics i.e. frequency, percentage, mean and standard deviation was used to assess the level of knowledge and inferential statistics i.e. chi square was used to find the association between awareness of oral cancer and selected demographic variables.

**Results:** Total findings of the study showed that More than half (52.3%) of respondents were known about treatment modalities of Oral cancer whereas two third, 78.9% of respondents stated out movement is best for physical rehabilitation. Likewise, more than half (65.6%) had moderate level of awareness and 28.1% of the respondents had inadequate level of awareness regarding oral cancer. The result showed there was no association between level of awareness of oral cancer and selected demographic variables.

**Conclusion:** The study concluded that awareness regarding oral cancer is moderate among community people of Tarhara. It reflects that efforts should be made to increase the awareness regarding oral cancer. Health education regarding oral cancer and its risk factors with periodic reinforcement will play an important role in creating awareness.

**Keywords:** Awareness, Oral cancer, community study

## INTRODUCTION

Oral cancer is the cancer of the oral cavity. It is a type of head and neck cancer and is often treated

similarly to other head and neck cancers. It includes a large group of malignant neoplasms, of which squamous cell carcinoma is the most common form accounting for 95% of oral cancers. Risk factors for oral cancer include smoking,

smokeless tobacco use, alcohol drinking and HPV (Human Papilloma Virus) infections [1]. Oral cancer can be life-threatening if not diagnosed and treated early. But, as it develops without any signs and symptoms and generally discovered in the late stage when it has been metastasized to another location mostly lymph nodes of neck. The death rate associated with oral cancer is high due to its poor prognosis [2]. Oral cancer is one of the highly prevalent cancers worldwide and a leading cause of mortality in certain regions like South-Central Asia and is a major public health problem. A changing trend in incidence and prevalence of oral cancer has been observed with more women and youngsters being affected by oral cancer [3]. The estimated incidence, mortality and 5-year survival due to lip, oral cavity cancer in world 2.1%, 1.8% and 2.2% respectively. The population-attributable risks of smoking and alcohol consumption have been estimated to 80% for males, 61% for females, and 74% [4].

Today, oral cancer is one of the leading causes of mortality and morbidity in Nepal. It is the most common form of cancer in men and the third most common cancer in females in Nepal [5]. Notably, the incidence and mortality rates as a result of oral cancer are higher in developing countries as compared to the developed world. Most of oral cancer cases have been reported from countries like India, Bangladesh, Europe, South America and Oceania [6].

According to the research carried out by Nepal Health Research Council in 2017, 41.8 % of people have no idea about oral cancer whereas only 38.60 per cent people have heard of oral cancer. Among the people who have heard of oral cancer, 30.10 % knew about the disease through media, 10.80 % through dentists, friends and family, 5.30 % through health camps and 4.70 % through physicians [7]. Despite the high prevalence of tobacco use and the increasing in incidence and high mortality rates of oral cancer,

there is a dearth of literature regarding knowledge and awareness of the oral cancer. Lack of public awareness is a potent barrier for the early detection, diagnosis and treatment of oral cancer, especially for high-risk populations. Hence, this study will assess the level of awareness about oral cancer among a selected community.

## **MATERIALS AND METHODS**

A cross-sectional descriptive study was conducted to assess awareness of oral cancer in a community People of Tarahara-20 in 2019. The study populations were community people of age group 18-65 years. Non probability purposive sampling was used collect information from 128 respondents through face to face interview using Semi – structured interview schedule. Tools were divided into 3 distinct parts Part I: Socio-demographic information, Part II: Knowledge of Oral cancer and Part III: Perception of Oral Cancer. Validity of tool was maintained by logical analysis, reviewing with peer groups by extensive literatures review & consulting with subject expertise. Before conducting the study, approval was taken from Research Management Committee of Biratnagar Nursing Campus. Permission to conduct the study was taken from selected ward office. Written informed consent was taken from each respondent. Privacy, confidentiality of information of all the respondents was maintained throughout the study. Data collection was done by researchers themselves. Only one respondent was chosen from each household.

Data processing was done by using Computer Statistical Package for the Social Science (SPSS) version 17. Descriptive analysis i.e. frequency, percentage, mean and standard deviation was used. In inferential analysis test of significance like chi-square was used to find the association between awareness of oral cancer and selected

demographic variables. P-value of <0.05 was considered to indicate statistical significance at level of significance of 5%.

**RESULTS**

This study showed that among 128 respondents, 57% were female, 41.4% were (21-30) years, likewise, 74.2% were married, 69.5% of respondents had completed their secondary level, and 30.5% of respondents were homemaker. Oral Health related Habits of respondents are presented in table 1.

**Table 1: Oral Health related Habits of Respondents n=128**

Habits	Frequency (f)	Percent (%)
<b>Dental visit</b>		
Never	64	50
Occasionally in life only	25	19.5
When it hurts	25	19.5
≥ one per year	14	10.9
<b>Brushing teeth</b>		
Once in a day	62	48.4
≥ 2 times per day	66	51.6
<b>Smoking status</b>		
Non-smoker	101	78.9
Ex-smoker	17	13.3
Active smoker	10	7.8
<b>Alcohol intake</b>		
Yes	26	20.3
No	102	79.7
<b>Betel quid chewer</b>		
Yes	12	9.4
No	116	90.6
<b>Smokeless tobacco chewer</b>		
Yes	16	12.5
No	112	87.5

More than half (59.4%) had heard of oral cancer regarding the source of information, 71.1% had stated that media (TV, radio, newspaper, magazines) has been the major source of information regarding oral cancer.

All of the respondents (100%) had awareness about risk factors of oral cancer that recognized

habit of smoking or chewing paan, gutkha as the chief risk factor in causing oral cancer.

**Table 2: Knowledge on Oral Cancer among Respondents n=128**

Variables	Frequency (f)	Percent (%)
<b>Heard about cancer*</b>		
Cervix	76	59.4
Oral	76	59.4
Breast	72	56.3
Blood	66	51.6
Lung	61	47.7
Colon/rectum	46	35.9
Skin	39	30.5
Stomach	38	29.7
Thyroid	28	21.9
Prostate	15	11.7
<b>Source of information</b>		
Media (TV ,radio, newspaper, magazine)	91	71.1
Friends	56	43.8
School /college(teacher, lecture, books)	48	37.5
Health personnel	45	35.2
Family members	38	29.7
Others	13	10.2
<b>Meaning of Oral cancer</b>		
Cancer that occurs in any part of oral cavity	84	65.6
Cancer that occurs only on tongue and cheek	31	24.2
Cancer that only occurs on lips	7	5.5
Cancer that can occur on the teeth	6	4.7
<b>Oral cancer common in</b>		
Male	36	28.1
Female	17	13.3
Equally in both sex	75	58.6
<b>Vulnerable age group</b>		
15-30	9	7
31-45	55	43
≥45	64	50

\*Multiple responses (each response is considered as 100%) Majority (89%) said oral cancer was not contagious. Almost all (89.8%) of the respondents mentioned Oral cancer preventing measure is by avoiding smoking, tobacco, alcohol. Similarly, most of the respondents (68.8%) said consumption of fruits and vegetables prevent

Oral cancer and (75%) of the participants said prognosis of oral cancer is poor.

**Table 3: Knowledge on Risk Factors & Clinical Manifestation of Oral Cancer n=128**

Variables	Frequency (f)	Percent (%)
<b>Risk factors of oral cancer *</b>		
Habit of smoking or chewing paan, gutkha	128	100
Poor oral hygiene	81	63.3
Excessive consumption of alcohol	74	57.8
Family history of cancer	41	32
Excessive sun exposure	9	7
<b>Oral cancer occurs only in tobacco users</b>		
Yes	28	21.9
No	91	71.1
Do not know	9	7.0
<b>OC increases with advancing age among tobacco consumers</b>		
Yes	91	71.1
No	23	18.0
Do not know	14	10.9
<b>Common site for oral cancer*</b>		
Lips	43	33.6
Gums	83	64.8
Tongue	59	46.1
Inner lining of the cheeks	94	73.4
Roof of the mouth	34	26.6
Floor of the mouth (under the tongue)	57	44.5
<b>Most common signs &amp; symptoms of oral cancer*</b>		
A lip or mouth sore that doesn't heal	113	88.3
A white or reddish patch on the inside of mouth	62	48.4
Loose teeth	28	21.9
A growth or lump inside mouth	94	73.4
Mouth pain	55	43
Difficult or painful swallowing	81	63.3
Ear pain	27	21.1
<b>Chronic facial sun exposure is related to cancer of</b>		
Cheek	79	61.7
Lip	20	15.6
Nose	19	14.8
Tongue	10	7.8

\*Multiple responses (each response is considered as 100%)

**Table 4: Awareness regarding Prevention of Oral Cancer n=128**

Variables	Frequency (f)	Percent (%)
<b>OC can be prevented if detected earlier stage</b>		
Yes	111	86.7
No	5	3.9
Do not know	12	9.4
<b>Most common measure to prevent oral cancer*</b>		
Maintaining oral hygiene	106	82.8
Avoiding smoking, tobacco, alcohol	115	89.8
Raising awareness and providing education	71	55.5
Applying sunscreen before long term sun exposure	26	20.3
<b>Consumption of fruits and vegetables prevent from oral cancer</b>		
Yes	88	68.8
No	40	31.3
<b>Overall prognosis</b>		
Good	32	25
Bad	96	75

(\*) Multiple response questions, each response is considered 100 %

Similarly 57% of the respondents said Biopsy is the best method for screening Oral cancer. More than half (52.3%) of respondents were known about treatment modalities of Oral cancer whereas two third, i.e., 78.9% of respondents stated out movement of mouth is best for physical rehabilitation. Similarly 84.4% of respondents mentioned spread to other site as major complication of oral cancer.

Almost all (93.8%) of the respondents said we can change our lifestyle to reduce risk of oral cancer. Similarly, 79.7% of participants said patient can return to normal life after being cured of Oral cancer. Almost all (94.5%) respondents said expensive herbal tobacco can cause oral cancer. likewise, 73.3% of respondents said betel quid chewer can develop oral cancer. Majority of (83.6%) of respondents said alcohol and tobacco together can increase risk of developing oral cancer.

**Table 5: Knowledge of Screening, Treatment Modalities and Complication of Oral cancer n=128**

Variables	Frequency (f)	Percent (%)
<b>Self-examination of OC possible</b>		
Only a dental surgeon can do it	82	64.1
You need someone else to help you.	7	5.5
You can perform a self -oral examination	39	30.5
<b>Best method for screening oral cancer</b>		
Urine test	3	2.3
Biopsy	73	57
X-ray	14	10.9
Blood test	38	29.7
<b>Treatment modalities*</b>		
Radiation therapy	85	66.4
Surgery	99	77.3
Chemotherapy	94	73.4
All of above (Radiation, Surgery, Chemotherapy)	67	52.3
<b>Physical Rehabilitation of Oral Cavity*</b>		
Movement of mouth	101	78.9
Chewing	82	64.1
Swallowing	75	58.6
Speech therapy	92	71.9
<b>Complication *</b>		
Bleeding from oral cavity	71	55.5
Growth in oral cavity	88	68.8
Spreads to other site	108	84.4
Difficulty in feeding	85	66.4

\*Multiple Responses (each response considered as 100%)

The result showed more than half (65.6%) had moderate level of awareness. Furthermore there was no association between levels of awareness with selected demographic variables.

## DISCUSSION

In the present study, more than half (59.4%) had heard of Oral cancer which is contradictory to the results of the study done in Kantipur Dental College & Hospital Kathmandu, Nepal among 471 respondents which revealed that only 38.60% had heard of oral cancer [8], these might be due to the difference in sample size between two study as well as the setting, as this study was conducted in community. Likewise, the study done on awareness & knowledge of oral cancer among Siamese ethnic group in which 63.6% of the respondents had heard about oral cancer which is similar to the present study. Another study conducted on Oral Cancer Awareness and its Determinants among a Selected Malaysian Population on 458 sample size reveals that Majority of respondent (84.2%) respondents had heard of oral cancer [9, 6].

In the present study, most of the (68.8%) respondents disagreed with questioned of getting oral cancer is matter of luck and we cannot do

**Table 6: Perception on Oral cancer n=128**

Perception	Yes F (%)	No F (%)	Do not know F (%)
Getting OC is a matter of luck and we cannot do anything to prevent this	24(18.8)	88(68.8)	16(12.5)
Early discovery of this cancer can increase the success of your treatment	120(93.8)	6(4.7)	2(1.6)
We can change our lifestyle/habits to reduce the risk of OC	105(82)	10(7.8)	13(10.2)
Oral cancer is a curse and sin	20(15.6)	108(84.4)	-
Patient with OC never return to normal life even after being cured of OC	26(20.3)	102(79.7)	-
Expensive herbal tobacco products will not cause OC	7(5.5)	121(94.5)	-
Oral cancer is contagious disease	39(30.5)	89(69.5)	-
Betel quid chewer can develop oral cancer	99(73.3)	29(22.7)	-
Oral cancer is related with family history	41(32)	87(68)	-
Using alcohol and tobacco together increases the risk of developing OC more than using either one alone	107(83.6)	21(16.4)	-

anything to prevent this, almost all (93.8%) stated early detection can increase the success of treatment, majority (82%) said lifestyle influence the risk of oral cancer, which is contradictory to study conducted on oral cancer awareness of the general public in coastal village areas of Tamilnadu, India which revealed that 23.3% respondents disagree with question of luck, 31% stated early detection can improve treatment, 39.7% respondents said lifestyle influence risk of oral cancer [10]. This contradiction may be due to study conducted in Tamilnadu, India was done in remote village, in which 47% were illiterate, whereas present study was conducted on sub-metro politician city where 97.6% people were literate. Likewise, 69.5% believed that oral cancer is not contagious which is contradictory to the results of the study done in Kantipur Dental College & Hospital Kathmandu, Nepal which revealed that only 22.30% believed that oral cancer is not contagious. The observed difference might be due to different characteristics of the study participants and different setting [8].

In the present study, more than half (68.8%) was aware that consumption of fruits & vegetables prevent from oral cancer and three fourth (75%) said prognosis of oral cancer is poor which is similar to the findings of the study done in Biratnagar, Nepal in which 62.2% of the respondents were aware that consumption of fruits & vegetables prevent from oral cancer and 68.9% said prognosis of oral cancer is poor [4].

In regard to signs and symptoms, 88.3% non healing mouth ulcer, 73.4% said a growth of lump inside the mouth, 48% said presence of persistent red/white patches, 63.3% said difficulty in swallowing which is contradictory to the result of the study findings in Tamilnadu, which reveals 40.6% said non healing ulcer, 35.2% said a growth of lump inside the mouth, 37.0% said persistent presence red/white patches, and 20.1% said difficulty swallowing

[10]. This might be due to difference in setting which was conducted in rural village. This study showed all (100%) respondents reveals smoking is the most recognized high risk habit which is similar to study done in Malaysia in which 92.4% respondents said smoking is the most recognized high risk habit for oral cancer [6].

In this study 13% of respondents said that oral cancer affects females more than male, whereas 58.6% answered that oral cancer affects both sex equally which is contradict to the study findings of population based cross sectional study among 500 participants in India which revealed that, 40.6% said that oral cancer affects female and 29.2% said that it affects both sex equally [10]. This contradiction may be due to variation in sample size.

Findings showed that 65.6% had moderate level of awareness which is similar to the study conducted on Oral Cancer Awareness among People of Biratnagar which revealed 73% of respondents had moderate level of awareness on Oral cancer [3]. Furthermore there was no association between level of knowledge and selected demographic variables.

## CONCLUSION

The study concluded that awareness regarding oral cancer among the people of Tarahara is moderate. Furthermore there is no association of level of awareness on oral cancer with selected demographic variables. The study emphasizes that the efforts must be made to make people aware of oral cancer. Health education regarding oral cancer and its risk factors with periodic reinforcement will play an important role in creating awareness.

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