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Case Report

Knowledge and Practices on Oral Cancer Among ASHA Workers of Vikarabad District, Telangana - A Cross Sectional Study

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Abstract

Introduction: Oral cancer is one among few human cancers with a vast potential for prevention. In developing countries, the lack of wide population coverage by specialist health personnel prompted the employment of various health auxiliaries to reach unreached. Acredited social health activist workers are one of such auxiliaries employed by the Indian government to cater diverse health needs of the rural population.

Aim and Objectives: To assess knowledge and practices of ASHA workers in the Vikarabad district regarding oral cancer.

Materials and Methods: A cross-sectional study was conducted on ASHA workers of 5 primary health centres of Vikarabad district. A 19 item structured self-administered questionnaire was used to collect data of which 9 questions were about their practices and 10 questions regarding knowledge. Collected data were subjected to statistical analysis using SPSS version 22.0.

Results: 171 ASHA workers participated in the study. Their mean age was 33 years with a mean knowledge score of 25.1±2.2. Around 25.7% of them have come across patients with oral cancer. 52% said they do not have sufficient awareness regarding oral cancer and 97% of them were willing to learn more about oral cancer of which 53.8% opted lecture as the preferred mode of education.

Conclusion: The knowledge of participants in the present study was good. But still, they felt that they were lacking sufficient knowledge to detect oral cancer. So there is a need for conducting awareness programmes aimed at decreasing the prevalence of oral cancer among the rural population by training ASHA workers.

Keywords: Accredited Social Health Activist; Health Education; Oral Cancer; Knowledge; Attitude; Practice

Introduction

Cancer is one of the most common causes of morbidity and mortality today, with more than 10 million new cases and more than 6 million deaths aeach year worldwide [1]. More than 20 million persons around the world live with a diagnosis of cancer, and more than half of all cancer cases occur in developing countries. Canceris responsible for about 20% of all deaths in high-income countries and 10% in low-income countries. It is projected that by 2020 there will be every year 15 million new cancer cases and 10

million cancer deaths. Part of this growth in absolute numbers derives from the aging of populations worldwide. The cancer epidemic in high-incomecountries, and increasingly in low- and middle-income cancer risk factors [2].

It is estimated that around 43% of cancer deaths are due to tobacco use, unhealthydiets, alcohol consumption, inactive lifestyles and infection [3]. Of these, tobacco use is the world's most avoidable cause of cancer. In addition to lung cancer, tobacco consumption causes cancer of the oral cavity, pharynx, larynx, oesophagus, stomach, pancreas, liver, kidney, ureter, urinary bladder, uterine cervix and bone marrow (myeloid leukemia). Exposure to environmental tobacco smoke (passive smoking) increases lung cancer risk. Tobacco use and alcohol consumption act synergistically to cause cancer of the oral cavity, pharynx, larynx and oesophagus.

Cancer incidence and survival rates are linked to socioeconomic factors [3,4]. Low-income and disadvantaged groups are generally more exposed to avoidable risk factors such as environmental carcinogens, alcohol, infectiousagents, and tobacco use. These groups have less access to health services and health education that would empower them to make decisions to protect and improve their health. In addition, changing lifestyles expose people to risk factors that were once primarily obtained only in developed countries (such assedentariness, diets high in animal fat and tobacco use).

Oro-pharyngeal cancer is a significant component of the global burden of cancer. Tobacco and alcohol are regarded as the major risk factors for oral cancer [5]. It has been difficult to distinguish the separate effects of these agents, however, since drinkers of alcoholic beverages tend to be users of tobacco, and vice versa. Large-scale epidemiological investigations have documented a synergistic effect of tobacco and excessive use of alcohol on the occurrence of oro-pharyngeal cancer. The population-attributable risks of smoking and alcohol consumption have been estimated to 80% for males, 61% for females, and 74% overall [6]. The evidence that smokeless tobacco causes oral cancer was confirmed recently by the International Agency for Research on Cancer. Moreover, studies have shown that heavy intake of alcoholic beverages is associated with nutrient deficiency, which appears to contribute independently to oral carcinogenesis [6].

There is now sufficient understanding of the causes to prevent at least one-thirdof all cancers worldwide. Information is also available that would permit the early detection and effective treatment of a further one-third of cases. Effective strategiesexist for the relief of pain and the provision of palliative care to all cancer patients in need and of support to their families, even in low-resource settings. Although theexisting body of knowledge about cancer prevention, treatment and palliative careis extensive, more still needs to be known in many areas, notably in aetiology andprevention research.

Nonetheless, this knowledge is not always put into practice. Efforts to prevent and control cancer are hampered by the low priority frequently given to the disease by governments and health ministries, excessive reliance and expenditure on treatment, and a considerable imbalance between resources allocated for basic cancer research and those devoted to its prevention and control. For example, primary prevention, early detection and palliative care are often neglected in favour of treatment-oriented approaches, even in cases where these approaches are not cost-effective and cause unnecessary human suffering. Another example is the failure to take into consideration the social inequalities related to cancer prevention and control. Implementation of effective, integrated and multi sectoral preventive strategies targeting multiple risk factors for cancer will reduce in the long-term the incidence of cancer in sites such as oral cavity, stomach, liver, breast, uterine cervix, colon and rectum. Early detection, which comprises screening of asymptomatic populations and awareness of early signs and symptoms, increases the probability of cure. However, it requires the facilities to confirm diagnosis and provide treatment, and availability of resources to serve the population in need. The prevalence of cancer should also justify the effort and expense. Awareness of early signs and symptoms is particularly relevant for cancers of the breast, cervix, mouth, larynx, endometrium, colon and rectum, stomach and skin. Based on existing evidence [7], population screening can currently be advocated only for cancers of the breast, cervix and colon and rectum, in countries where resources are available for wide coverage of the population, appropriate treatment is in place and quality-control standards are implemented. Nonetheless, studies are underway to evaluate low-cost approaches to screening that can be implemented and sustained in low-resource settings. Population studies on the predictive power as regards screening for oral cancer are also needed [8]. ASHA workers are one such auxiliaries employed by the Indian government to cater to the diverse health needs of rural population.

Keeping in mind the above reasons and need, our study was directed to assess the knowledge and practices of ASHA workers in Vikarabad district regarding oral cancer.

Materials and Methods

A cross sectional study was undertaken the present study was under taken to assess knowledge and practices of ASHA workers in Vikarabad district regarding oral cancer.

Study setting

The study was conducted in all the 11 PHC's of Vikarabad revenue division, Vikarabad.

Study population

The study was conducted on ASHA workers (Accredited social health activists) who visited PHC's for their monthly meetings in Vikarabad district.

Study design

This was a cross-sectional study conducted on ASHA workers to the present study was under taken to assess knowledge and practices of ASHA workers in Vikarabad district regarding oral cancer. The study was conducted over a period of 3months from August to October, 2017 in Vikarabad district, Telangana, India.

Sample procedure

List of PHCs in Vikarabad was obtained. A total of 239 ASHAs are present in the eleven PHCs of Vikarabad revenue division. Whole population sampling was used and all ASHAs were included in the survey. Among them, 171 were presentand participated on the day of the study.

Sample selection

- **Inclusion criteria:** All those who are willing to participate and present on the day ofsurvey were included in the study.
- **Exclusion criteria:** All those who were absent on the day of data collection were excluded.

Details of the pilot study

A pilot study was carried out among randomly selected 30 subjects/ASHAs. Pilotstudy was conducted with the following objectives:

- To check the feasibility of the study.
- To know the practical difficulties encountered with the data collection.
- To check the reliability and validity of the questionnaire.

A 19-item structured, reliable, self-administered questionnaire was given to the participants to assess knowledge and practices of ASHA workers regarding oral cancer.

Subjects who were not able to read, interview method was followed for data collection. It has three domains. 1st part included information regarding the demographic details of the participant, 2nd part was regarding their practices to assess oral cancer in villages and 3rd was regarding the knowledge of ASHA workerson oral cancer. Three point Likert scale was used in the questionnaire. The English questionnaire was translated to Telugu language and validated. The internal consistency and content validity was tested in pilot study, based on which necessary changes were made in the questionnaire. Cohen's Kappa test was performed to determine intra-examiner reliability, which was found to be 0.9, indicating a high degree of agreement and Cronbachs alpha was found to be 0.84.

Organization of the survey

Ethical clearance

The ethical clearance was obtained from the institutional review board.

Permission

The need for the study was explained and permission was obtained from DMHO of Vikarabad. The Permission to conduct the survey was also obtained from the concerned authorities of PHC's for conducting the survey.

Informed consent

Verbal consent from each ASHA worker was taken prior to the start of the survey after discussing in detail about the purpose of the study.

Schedule of the study

The study was systematically scheduled to spread over a period of two months . Even though a detailed schedule plan was prepared well in advance, few adjustments and changes had to be made while working it out practically.

Implementation of the survey

Data collection

For the collection of data, the standardized proforma was used after obtaining permission from the concerned authorities of PHC's. A prior appointment was taken from the chief medical officer of PHCs regarding the date of the conducting the survey. The study was conducted on ASHA workers (Accredited social health activists) who visited PHC's on their monthly meetings in Vikarabad district.

The investigator distributed the self-administered questionnaire to all the ASHAs present on the day of survey and ample time was given for answering the questionnaire. In case of any problem in understanding the questionnaire, they were clarified at the same moment regarding that. The same procedure was repeated on the appointed dates of data collection.

Statistical analysis

The data collected was compiled and was checked for completeness. The findings obtained were coded and entered into computer

into Microsoft excel 2010. Analysis was done using Statistical Package for Social Sciences version 22 Descriptive analysis was carried out and presented in frequency distributions and graphs.

Results

A total of 171 ASHA workers participated in the study all being females. Table 1 describe the distribution of the participants based on their age and experience. A majority of the participants i.e. 46% were between 30-40 years followed by 44%of the participants between 20- 30 years. Only about 10% of the participants were above 40 years. About 56% of the study participants were having an experience of more than 10 years followed by 37% of the study participants with 5 - 10 years' experience. Only 7% of the study participants were having less than 5 years of work experience.

		Frequency	Percentage
Age	20-30	75	43.9
	31-40	78	45.6
	Above 40	18	10.5
Experience	Less than 5 years	13	7.6
	5-10 years	63	36.8
	More than 10 years	95	55.6
Total		171	100.0

Table 1: Distribution of participants based on age and experience.

Table 2 describes the distribution of study participants based on their practices on oral cancer. 93% of the study participants stated that they would examine the oral cavity of the patients they come across. About 56% of the study participants stated that they have never come across the patient with any oral lesion.74% of the study participants stated that they have never come across the patient with oral cancer. About 57% of the study participants stated that they can identify people with high risk of developing oral cancer.

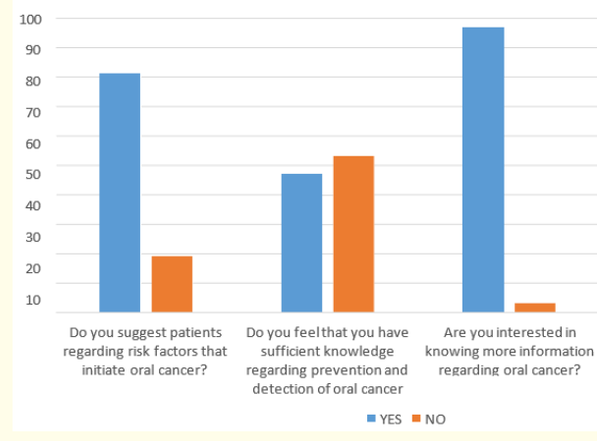
Question	Yes		No	
	N	%	N	%
Did you ever examine oral cavity of patients you have come a crossed?	159	93	12	7
Have you ever come across any patient with oral lesion?	76	44	95	56
Have you ever come across a patient with oral cancer?	44	26	127	74
Can you identify people with high risk of developing oral cancer?	97	57	74	43

Table 2: Distribution of participants based on their practices on oral cancer.

Table 3 and graph 1 describes the distribution of study participants based on their attitude towards oral cancer. About 81% of the study participants stated that theywould suggest patients regarding risk factors that initiate oral cancer. About 56% of the study participants stated that they do not have sufficient knowledge regarding prevention and detection of oral cancer and 97% of the study participants were interested in knowing more information regarding oral cancer.

Question	Yes		No	
	N	%	N	%
Do you suggest patients regarding risk factors that initiate oral cancer?	138	81	33	19
Do you feel that you have sufficient Knowledge regarding prevention anddetection of oral cancer?	81	47	90	53
Are you interested in knowing moreinformation regarding oral cancer?	166	97	5	3

Table 3: Distribution of participants based on their attitude towards oral cancer.



Graph 1: Distribution of participants based on their attitude towards oral cancer.

Table 4 describes the distribution of study participants based on their oral cancer knowledge score. 97% of the study participants stated that they knew that smoking or chewing tobacco causes oral cancer. About 56% of the study participants stated that they didn't knew that consumption of alcohol causes oral cancer. Majority of the participants i.e. 42% didn't knew that consumption of spices leads to oral cancer.

About 64% of the study participants didn't knew that poor oral health leads to oral cancer. Majority of the study participants i.e.

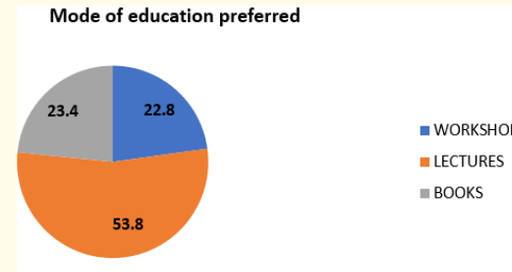
Statement	Agree		Don't know		Disagree	
	n	%	n	%	n	%
Smoking/chewing tobacco causes cancer	166	97	-	-	5	3
Consumption of alcohol causes oral cancer	66	39	9	5	96	56
Consumption of spices doesn't cause oralcancer	54	32	45	26	72	42
Poor oral health leads to oral cancer	39	23	110	64	22	13
Non – healing ulcers leads to oral cancer	151	88	12	7	8	5
Difficulty in chewing andswallowing may lead to oral cancer	137	80	15	9	19	11
Change in lifestylereduces the risk of developing oral cancer	148	86	5	3	18	11
Early detection of mouth Cancer improves thechances of prognosis	155	91	7	4	9	5
Mouth cancer can bedetected early can be cured completely	147	86	17	10	7	4
There is no cure for oral cancer	99	58	40	23	32	58

Table 4: Distribution of participants based on their oral cancer knowledge score.

88% agreed that they knew non – healing ulcers, difficulty in chewing and swallowing causes oral cancer. About 86% of the participants agreed that change in life style reduces risk of developing oral cancer.

About 91% of the study participants agreed that early detection of oral cancer has better prognosis and only 18% disagreed that there is no cure for oral cancer.

Graph 2 describes the distribution of study participants based on mode of education preferred. Majority of the study participants i.e. 54% opted lectureas a preferred mode of education followed by books and work shop by 23% and 22%respectively.



Graph 2: Distribution of participants based on mode of education preferred.

Discussion

One of the major components of the National Rural Health Mission (NRHM) launched in 2005 is the female health volunteer of the village 'Accredited Social Health Activist' (ASHA) to provide effective, efficient and affordable health care to rural population (Accredited Social Health Activist guidelines., 2005). She forms an important interface between the community and the public health system. She is primarily an inhabitant of the village; she is therefore familiar with the cultural and religious practices of the community. ASHA is the first port of call for any health related demands of deprived sections of the population, especially women and children, who find it difficult to access advanced health services. She forms the pillar supporting the health infrastructure in villages, and is aptly the 'hope', the colloquial translation for ASHA, for the all the rural women in India!

There is an estimated burden of over 1 million individuals who are diagnosed with cancer in India in 2008 [9]. The three most commonly occurring cancers in India are that of breast, uterine cervix and Cancer of oral cavity, together accounting for one third of them. These are usually detectable at an early stage and have precancerous stages that are amenable to secondary prevention. Therefore, screening and early detection of these three cancers will help to markedly reduce the cancer burden in India. ASHA is in a distinctive position to generate awareness on cancer related issues. However, there is limited evidence on practices of ASHAs in cancer prevention in India.

ASHA worker who covers a population of 1000 individuals may appropriately make the people knowledgeable by informing them on warning signs of cancer, risk factors and tests available for prevention and early detection thereby creating awareness among the community. She would also be instrumental in teaching self- breast examination (BSE) to women in the community and facilitate early breast cancer detection and follow up. Given the current health care infrastructure, ASHA looks to be the ideal model for cancer prevention using community health workers (CHW) and offers an effective means of cancer surveillance.

Being aware of the major risk factors for oral cancer and the ability to identify early cancer lesions of oral cancer are vital for both the prevention and early detection of the disease. This study assessed knowledge and practices of ASHA workers regarding oral cancer which helps to understand their suitability for identifying high risk people in the community that they serve.

About 41% of the ASHA workers were in the age group of 20-30 years which is similar to the study conducted by Srivastava DK [8]. Thus, majority of the ASHAs may be considered young and this may be a strength as they are energetic and enthusiastic and may deliver better service with proper motivation and capacity building.

Around 97% of the participants said that they would check the oral cavity of the patients they come across which shows that if trained properly we can overrule incipient oral cancer lesions. A promising sign that there might be a decrease in the amount of tobacco consumption in the near future was the willingness of a majority (80.7%) of participants to make people aware regarding the risk factors of oral cancer.

It is well known that knowledge regarding a disease is directly proportional to its prognosis. This is because knowledge regarding the disease will lead to early recognition of the symptoms and thus lead to early diagnosis and a better prognosis.

Delayed presentation of oral cancer is mainly due to lack of awareness of the public about oral cancer and its associated risk factors which also results in increased treatment morbidity and reduced survival rates as reported by Warnakalasuriya., *et al*. 1999 [10].

Majority of the current study population (97%) stated that they were aware that tobacco causes oral cancer. This was in agreement with study findings of Sudhir S., *et al*. on general population where 80% have agreed for the same [7]. Although tobacco has been accepted globally as a risk factor for cancer, there are still pockets of society who aren't aware of the link between tobacco and disease who were approximately 3% in current study. This is in line with a study conducted by Ghani., *et al*. where 20% have stated the same [11]. This signifies much more targeted efforts to reach the unreached sections of community. Educational leaflets and other education strategies tailored specifically to this population could lead to increased oral cancer knowledge which in turn reduces their probability in developing oral cancer.

91% believed that diagnosis of oral cancer at early stages would have good prognosis. More than half (86%) of the study population agreed that modification of the life style habits reduces the risk of developing oral cancer. These findings are in accordance with previous study. More than half of study population (88%) stated that they know that non healing ulcers in the mouth could be an indicator of oral cancer. These findings are in contrast with previous studies.

For effective primary prevention, although knowledge is clearly a very important part of the equation, there are other factors involved as well. In spite of having a good knowledge score 52.6% participants said they don't have sufficient awareness regarding oral cancer and 97% of them were willing to learn more about it which is in concordance with the study conducted by Kumar M., *et al*. [1] on primary health care providers. This shows that the ASHA workers in spite of being overburdened are willing to seek information regarding oral cancer.

Health education through mass media both print and visual should be effectively utilized in communities with high literacy. Brochures containing information on oral cancer, risk factors, detailed harm caused by tobacco use, pan, alcohol, early warning signs of oral cancer, methods to perform oral self-examination may be distributed to the public and similar approach may be undertaken through other mass media.

Conclusion

The result of this study concludes that knowledge of ASHA's was good with a mean score of 25.1 where the maximum score was 30. But still they felt that they were lacking sufficient competence to detect oral cancer. So there is a need for public health dentists to conduct training to make ASHA's aware of gross signs and symptoms of oral cancer. This may help in the early detection of oral cancer lesion by ASHA's enhancing the referral system at the grass root level.

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