

# Assessment of the Effectiveness of Planned Teaching Programme on Awareness and Knowledge of Oral Cancer Among Factory Workers in Pune

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## Abstract

**Introduction:** Oral cancer is one of the 10 leading cancers in the world. In India, it is the most common cancer among males and the third most common cancer in females. Cancer is an abnormal growth of cells which tend to proliferate in an uncontrolled way.

**Aim:** To assess the existing knowledge regarding oral cancer among factory workers, to develop a planned teaching programme on awareness and knowledge of oral cancer, and to assess the effectiveness of planned teaching programme.

**Materials and Methods:** A total of 40 samples using a semi-structured questionnaire. Conduct a pretest to assess the existing knowledge and awareness among factory workers and given a planned health teaching on oral cancer. After a week later posttest was conducted.

**Results:** The study shows the knowledge level and awareness regarding oral cancer among factory workers increased after the health teaching programme. During pretest, only 2.5% of people were aware about oral cancer and its early symptoms. Furthermore, 22.5% of people are not aware about oral cancer as well as 75% of people were had an average knowledge regarding oral cancer. After the health teaching programme, 47.5% of people shown excellent knowledge level and 50% of people shown a moderate level of knowledge as well as only 2.5% of people shown very poor knowledge level regarding oral cancer.

**Conclusion:** This survey highlights the general lack of awareness and knowledge on oral cancer among factory workers. Structured awareness program is warranted for this population.

**Key words:** Awareness, Oral cancer, Tobacco

## INTRODUCTION

Oral cancer is a major health problem worldwide.<sup>1</sup> Incidence of oral cancer is increasing drastically in India. Tobacco usage, chewing tobacco, and human papillomavirus infection are the most common risk of oral cancer. The

incidence of oral cancer is highest in India, South and Southeast Asian countries.<sup>2-4</sup> Oral cancer will remain a major health problem, and the incidence will increase by 2020 and 2030 in both sexes, however, early detection and prevention will reduce this burden. Oral cavity is accessible for visual examination, and oral cancers and premalignant lesions have well-defined clinical diagnostic features, but oral cancers are typically detected in their advanced stages.<sup>5</sup> Oral cancer can be diagnosed earlier by self-mouth examination, increase awareness in high-risk communities. Early detection has better curing rates and it will also reduce the cost for the treatment. Education campaigns are needed to raise public awareness about oral cancer and its links with tobacco and alcohol consumption.<sup>6</sup>

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**Aim**

To assess the existing knowledge regarding oral cancer among factory workers, to develop a planned teaching programme on awareness and knowledge of oral cancer and to assess the effectiveness of planned teaching programme.

**MATERIALS AND METHODS**

This descriptive study was conducted in factory workers in Pune. The sample size of this study consists of 40 industrial workers. At first stage, the knowledge and awareness of factory workers regarding oral cancer were accessed using questionnaire. Then, oral cancer awareness training session was conducted. After a week again, the knowledge about oral cancer was assessed using the questionnaire.

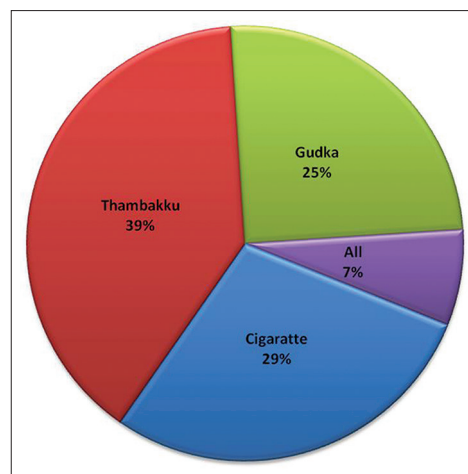
**RESULTS**

The workers were from the secondary education which was 55%, followed by 17.5% from primary education and 27.5% from graduate and above. Among the 40 samples, 52.53% of factory workers referred newspaper as a source of information regarding oral cancer followed by 22.5% from friends and relatives and 25% of people are heard from radio regarding oral cancer and its awareness. In financial status, 52.5% of samples had their family monthly income between 8001 and 11,000 Rs., where 40% of them had family monthly income of 5000-8000 Rs. per month and 7.5% of them had their monthly income of 11,001-14,000/Rs. The study shows the majority are from joint family (65%), whereas 35% are from nuclear family. The study also illustrates among the total study people 70% of people are using tobacco and other tobacco products and rest 30% of people are nonusers.

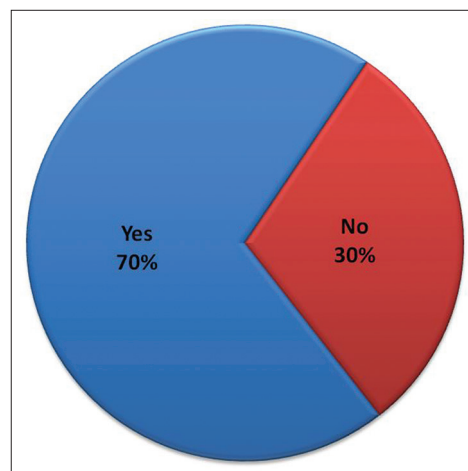
Figure 1 shows the majority of factory workers using thambaku (39.57%) and the second most using product is cigarette (28.57%). Furthermore, 25% of factory workers are using gutka while 7.14% of people are using all the products of tobacco in different forms.

Figure 2 shows the total number of people use tobacco among the whole study population. From the total sample, 70% of people are using tobacco and tobacco products. Rest 30% of people are nonusers.

Table 1 shows the age group among the participants majority are from the age group of 21 to 30 years (40%). The second most participants are from the age group of 31 to 40 (32.5%). It also shows 15% of people are above 40 years and 12.5% of people are from the age group below 20 years old.



**Figure 1: The different types of tobacco products people using mostly**



**Figure 2: The frequency of tobacco users among the total sample**

**Table 1: The age group of participants**

Age	Frequency (%)
Below 20	5 (12.5)
21-30	16 (40)
31-40	13 (32.5)
Above 40	6 (15)

Figure 3 analysis of overall correct knowledge score in frequency and percentage obtained from the factory workers during pretest.

Figure 4 shows that 2.5% of factory workers have good knowledge regarding oral cancer, 22.5% of factory workers have poor knowledge regarding oral cancer, while 75% of factory workers have average and adequate knowledge regarding oral cancer.

Figure 4 shows that 2.5% of factory workers have good knowledge regarding oral cancer, 22.5% of factory

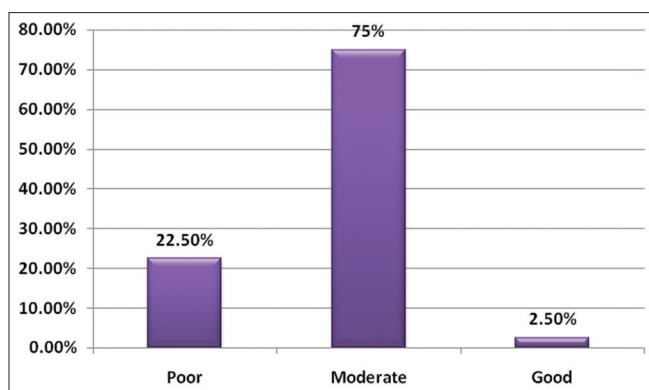


Figure 3: Oral cancer awareness in pretest

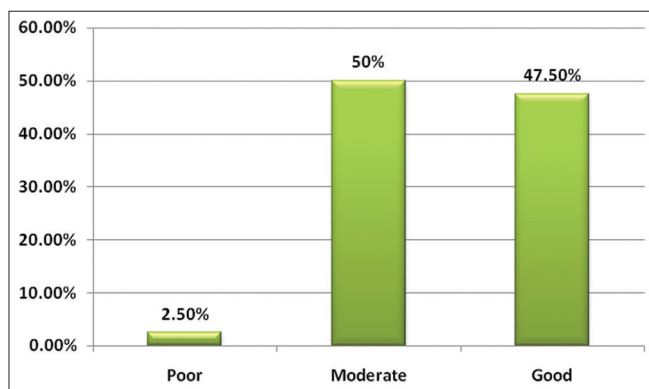


Figure 4: Oral cancer awareness after post awareness program

workers have poor knowledge regarding oral cancer, while 75% of factory workers have moderate and adequate knowledge regarding oral cancer in the pretest. Posttest result shows 47.5% of excellent knowledge level among factory workers regarding oral cancer as well the poor knowledge level decreased to 2.5% only, whereas the half of the group shown moderate knowledge and adequate knowledge level.

## DISCUSSION

Motallebnejad *et al.*'s study was conducted to find out the knowledge about oral cancer and effect of an education in Babol (Iran).<sup>7</sup> The questionnaire was the study tool. The result of the study showed that community sample of 400 people, 76.0% had no knowledge of oral cancer. Mean knowledge score before the education intervention was 1.47 (standard deviation 3.40) out of 10. Knowledge about oral cancer was not associated with age, sex or education level. This study also shows during pretest 75% of people is having moderate level of awareness regarding oral cancer and 2.5% of people are well aware about the oral cancer. That is 2.55 people are having the excellent level of knowledge. At the same time, 22.5% of people had very poor level of knowledge regarding oral cancer.

Cancer Patient Aid Association, India,<sup>8</sup> was conducted, a study about tobacco use and awareness among marginalized children. The result of the study showed that the percentage of tobacco users in urban Mumbai was quite low at 4.8% compared with rural Kasara (36%) and Assam (76%); and 74.6% of the children were aware that tobacco use was dangerous and harmful to health. The average age of initiation was 9 years. Out of the 1004 children surveyed, 253 were tobacco users and 79% were males. This study also shows 70% of samples are tobacco users and 30% were nontobacco users. Pravara Rural Hospital, Loni (2007-2011), the Department of Radiotherapy and Oncology, Rural Medical College.<sup>9</sup> A cross-sectional retrospective study was conducted through case records of oral cancer patients who reported during 2007-2011 to the Department of Radiotherapy and Oncology, Rural Medical College and Pravara Rural Hospital, Loni, Maharashtra state, India. The result obtained was the 464 oral cancer patients constituted 24% of total cancer patients, 6.25% were young (<30 years), 67.24% were in 30-60 years, and 26.51% were more than 60 years. Conclusion was the prevalence of oral cancer was higher among elderly males predominantly with risk habits of betel quid/tobacco chewing and smoking for more than 10 years. This study also shows from these total tobacco users the majority group of people use tobacco in the form of thambaku that is 39.28%. The second most used tobacco product was cigarette (28.57%) and gutka (25%). At the same time, rest 7.14% of people use tobacco in the form of all these products. Among these tobacco users, half of them are using this tobacco since 1 to 5 years. Whereas, 21.42% of people are using these tobacco products since 5 years. Amrita institute of medical sciences and research Centre, Cochin, India. Elango *et al.* in 2009<sup>10</sup> conducted a study on factors affecting oral cancer awareness in high-risk population in India by Amrita Institute of Medical Sciences and Research Centre, Cochin, India. The questionnaire was used as tool for the study. The result of the study showed that out of 1885 persons 86% had heard about oral cancer and 32% knew someone with oral cancer. 62% of the subjects correctly identified the causes; this included 77% of the subjects who identifying smoking, 64% alcohol, and 79% paan chewing as a cause of oral cancer. This study also shows from these total tobacco users the majority group of people use tobacco in the form of thambaku, that is, 39.28%. The second most used tobacco product was cigarette and gutka. The percentage shows 28.57% and 25%, respectively. At the same time, rest 7.14% of people use tobacco in the form of all these products. Shetty and Brown oral cancer risk factors among Mexican American Hispanic Adolescents in South Texas.<sup>11</sup> A study was conducted to assess the knowledge

of high school children on oral cancer risk factors. The result of the study showed that the effective response rate was 67%. 95% of the students were Hispanic American, 55% had not heard about oral cancer, also shown that the overall risk of oral cancer among the Mexican American Adolescent population is high especially among the males, and there is a great need for carefully planned health education and promotion for behavior change. This study also shows 22.5% of people are not aware about oral cancer and its causes and early symptoms. Whereas, 75% are had moderate knowledge level as well as 2.5% of people had excellent knowledge, and they are aware about oral cancer.

## CONCLUSION

This study highlights the lack of awareness of oral cancer among factory workers. Recently, a trend has been observed toward increased incidence of oral cancer among young adults. This increase in incidence is only observed in patients with tongue cancer. An oral cancer awareness program with screening that should be implemented for this population.

## REFERENCES

1. Dikshit R, Gupta PC, Ramasundarahettige C, Gajalakshmi V, Aleksandrowicz L, Badwe R, *et al.* Cancer mortality in India: A nationally representative survey. *Lancet* 2012;379:1807-16.
2. Elango JK, Gangadharan P, Sumithra S, Kuriakose MA. Trends of head and neck cancers in urban and rural India. *Asian Pac J Cancer Prev* 2006;7:108-12.
3. Chaturvedi AK, Anderson WF, Lortet-Tieulent J, Curado MP, Ferlay J, Franceschi S, *et al.* Worldwide trends in incidence rates for oral cavity and oropharyngeal cancers. *J Clin Oncol* 2013;31:4550-9.
4. Jornet PL, Garcia FJ, Berdugo ML, Perez FP, Lopez AP. Mouth self-examination in a population at risk of oral cancer. *Aust Dent J* 2015;60:59-64.
5. Lin WJ, Jiang RS, Wu SH, Chen FJ, Liu SA. Smoking, alcohol, and betel quid and oral cancer: A prospective cohort study. *J Oncol* 2011;2011:5.
6. Varshitha A. Prevalence of oral cancer in India. *J Pharm Sci Res* 2015;7:845-8.
7. Motallebnejad MM, Khanian M, Alizadeh R, Dabbaghian I. Community survey of knowledge about oral cancer in Babol: Effect of an education intervention. *East Mediterr Health J* 2009;15:6.
8. Raval S, Maudgal S, More N. Study on tobacco use and awareness among marginalized children. *Indian J Cancer* 2010;47 Suppl 1:14-8.
9. Pawar HJ, Dhumale GB, Singh KK. Epidemiological determinants of oral cancer in a rural area of Maharashtra State, India. *Int J Healthc Biomed Res* 2014;2:186-94.
10. Elango JK, Sundaram KR, Gangadharan P, Subhas P, Peter S, Pulayath C, *et al.* Factors affecting oral cancer awareness in a high-risk population in India. *Asian Pac J Cancer Prev* 2009;10:627-30.
11. Shetty K, Brown J. Oral cancer risk factor among Mexican Hispanic adolescents in South Texas. *J Dent Child (Chic)* 2009;76:142-8.

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