

ORIGINAL ARTICLE

Effect of Oral Health Education on Oral Cancer and Oral Self-examination in Gwalior, Madhya Pradesh

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ABSTRACT

Aim: The aim of this study is to evaluate the effect of health education on awareness about oral cancer and oral self-examination.

Methodology: Study participants were interviewed about their awareness on oral cancer and oral self-examination before- and after-health education using a pre-tested interview schedule. Awareness items were scored, and the mean change in awareness score was computed. Paired *t*-test was used for testing statistical significance.

Results: The mean awareness scores after the health education intervention increased from 6.3 (95% confidence interval [CI]: 4.5–6.8) to 7.7 (95% CI: 7.4–7.9). Of the 200 study participants, 189 had performed oral self-examination, and 11 of them were able to suspect lesions in their mouth. 69% of the study participants were tobacco users and current smokers.

Conclusion: Health education intervention was able to initiate a favorable behavior change in the community. Hence, oral self-examination programs should be promoted.

Keywords: Health education, Oral cancer, Quasi-experimental, Self-examination.

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INTRODUCTION

Cancer and oral cancer is a growing health problem in several regions of the world. Oral cancer is the sixth most common cancer globally. In India, the age-adjusted rate of oral cancer was 20/100,000 population, which is higher than that reported in the developed countries.^[1,2] Etiology of oral cancer has been primarily linked to the use of tobacco in smoking and chewable form; other factors such as poor oral hygiene and nutritional influences also contribute in its etiology. Oral cancer is ideal cancer to be identified by the screening program. Ignorance about the danger signs or lack of health-seeking behavior in case of premalignant lesions is perhaps responsible for this situation. The late diagnosis also leads to the high economic burden.^[3,4] Screening and health education are well-recognized approaches for preventing the occurrence of oral cancers.^[5] Health education has also been instrumental in improving the health-related knowledge and behavior.^[6] Hence, this study was carried out in an urban slum population of Gwalior to assess the effect of a health education intervention package on the awareness about prevention of oral cancer and adoption of oral self-examination practice.

METHODOLOGY

This study was conducted, after obtaining approval from the Ethical Committee of the Institute, from April to June 2017 among patients. Attending the OPD of Maharana Pratap College of Dentistry and Research Center in Gwalior, Madhya Pradesh, sampling methodology was finalized. The study tool was a structured pre-tested close-ended questionnaire which had questions on social and demographic aspects, awareness about oral cancer, and questions regarding substance abuse. This study tool was adapted from the study by Elango *et al.*^[7] and Singh *et al.*^[8] Patients attending dental OPD were administered the questionnaire. The post-intervention questionnaire also included a few additional questions such as whether the study participant had performed oral self-examination, and whether he has found any lesions in the oral cavity or whether he has any intention to quit tobacco or alcohol, and whether he has actually quit any of these habits? The construct validity, face validity, and content validity of

the questionnaire and health education brochure were tested. After completion of the interviews, "oral cancer health education brochure" was provided to the participants, and health education sessions were conducted on a one-to-one basis. This brochure had information on risk factors, early warning symptoms, and signs of oral cancer along with steps for conducting oral self-examination, in a vernacular language with pictorial views of precancerous lesions and conditions.

RESULTS

The mean age of study participants was 29 years. About 21% of the respondents were illiterate, and about 19% had attained education level of graduate and above. 50% of respondents were employed in private jobs, and about 10% were students. Only 27% had a monthly income of Rs. 15,000 or more. Before the intervention, about 92% had heard about oral cancer. 69% reported smoking as a cause of oral cancer, 35% felt that alcohol use can cause oral cancer, and 87% mentioned chewing "Gutkha" or "Khaini" or "Pan" as a cause oral cancer. Awareness was maximum among students and minimum among self-employed. After the health education intervention, awareness level increased significantly. The mean awareness scores after the health education intervention increased from 6.3 (95% confidence interval [CI]: 4.5–6.8) to 7.7 (95% CI: 7.4–7.9). Of the 200 study participants, 189 had performed oral self-examination, and 11 of them were able to suspect lesions in their mouth. 69% of the study participants were tobacco users and current smokers. After the health education intervention, in which the association of these risk factors with oral cancer had been explained, of those, who had been using tobacco and/or alcohol, 44% expressed the willingness to quit the tobacco.

DISCUSSION

The awareness levels about oral cancer prevention and control were already high in the study community, but none of the participants had performed an oral self-examination. The health education intervention initiated a favorable behavior change in the community. More than 90% of the study participants performed oral self-examination. Similar to our finding, a study among the patients attending dental hospital in Sri Lanka reported

a high level of awareness about oral cancer.^[9] Similarly, in South India also, 86% of the respondents had heard about oral cancer.^[10] Lower incidence of oral cancer in the developed countries could be the possible reason of the lower level of awareness, whereas higher incidence of oral cancer in the developing countries may have increased its awareness in the developing country setting.^[11] Most of the respondents performed oral self-examination in our study after the health education intervention. This behavior change can be attributed to the health education intervention which was implemented over a short period of 2 months. In future, some of them could enter into the next stage of quitting, thereby reducing the incidence of oral cancer. Hence, promotion of oral self-examination could be a potential primary preventive strategy.

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