



## RESEARCH ARTICLE

### AWARENESS ON TOBACCO AND ITS DELETERIOUS EFFECTS ON ORAL HEALTH – A QUESTIONNAIRE BASED STUDY ON TELANGANA POPULATION

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#### ABSTRACT

**Background:** Oral cancer is the sixth most commonly reported malignancy worldwide. Etiology being multifactorial with tobacco usage being identified as the strongest. The scientific evidence relating to the burden of oral diseases attributable to tobacco use has been reviewed in the past and there is a need for a well-structured dental teaching program concentrating on oral cancer awareness and tobacco cessation programs.

**Aims and objectives:** Aim of the present study was to estimate the knowledge and awareness of oral cancer.

**Materials and Methods:** A questionnaire-based survey was conducted among 500 patients visiting outpatient department of Meghna institute of dental sciences Nizamabad, over a period of 3 months. Both males and females with deleterious habits (smoking, chewing ghutka, and drinking alcohol) were included and administered with 25 closed and open ended questions after their written consent. The collected data was statistically analyzed using students t-test.

**Results:** 91.6% population knew about cancer. Lung cancer was the cancer that most populations were aware of (36.4 %) followed by oral cancer (33.2%). Subjects were aware that ghutka chewing as the main cause of cancer, followed by smoking and drinking alcohol.

**Conclusion:** In conclusion, this survey demonstrates adequate knowledge and moderate awareness on oral cancer in a population of North Telangana. An oral health promotion strategy should be implemented involving the elements of basic education on oral cancer and self-examination techniques of oral cavity. Importance of regular oral cancer screening should be stressed upon & implemented for prevention and early intervention of oral cancer.

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## INTRODUCTION

Oral cancer is a major health issue because of the recent alarming rise in its incidence especially in developing & under developed countries. Oral cancer is the 6th most common malignancy reported worldwide. (Parkin *et al.*, 1999) The magnitude of this problem is particularly great in South East Asian countries including India (World Health Organization, 1984). (Ariyawardana and Vithanaarachchi, 2005) According to the World Health Organization (WHO) estimates, 194 million men and 45 million women use tobacco in various forms in India. (Sathyanarayanan *et al.*, 2012) Among many risk factors associated with oral cancer, tobacco usage has been identified as the strongest. (Johnson, 2001) Other risk factors include smoking, smokeless tobacco products, alcohol and HPV (human papilloma virus) infections. Both smoking and

alcohol have synergistic effects. The contribution of each risk factor in causation of oral cancer varies across regions. Smokeless tobacco products and betel quid with or without tobacco are the major risk factors for oral cancer in south Asian countries. (Mamta Agrawal *et al.*, 2012) Oral cancer incidence rates are increasing in men and younger individuals. (Moore *et al.*, 2000) Despite many recent advances in diagnosis and treatment, visual accessibility to oral cancer and ease of early detection and the prognosis has not yet changed. (Nanda Kumar, 1990-96) Tobacco is the leading preventable cause of death and more than five million people die globally from the effects of tobacco every year-more than that of HIV/AIDS and tuberculosis. Every eight seconds someone, somewhere in the world, dies as a result of tobacco use. It is reported that by the year 2030, the death toll is likely to exceed eight million a year. (Nanda Kumar, 1990-96) According to statistics by WHO (GLOBOCAN 2008) oral cancer is the second most common cancer in India. In spite of the increased mortality and morbidity oral cancer remains largely preventable. Thus

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awareness from signs of oral cancer and knowledge about its causative factors is very important as majority of the public still remains unaware of basic knowledge about oral cancer and also early detection of oral cancer makes them more amenable to treatment, thus reducing the mortality and morbidity. (National Cancer Institute, 1993) The objective of the present study was to determine the level of awareness and knowledge about early signs and the associated risk factors in oral cancer, in the high-risk population of North areas in Telangana region, India.

## MATERIALS AND METHODS

A specially designed questionnaire in both Telugu and English languages were used which comprised of 5 sections consisting of 25 questions regarding demographic data, habits, practice of self-examination of mouth, level of knowledge and Awareness of oral cancer, its signs/symptoms and associated risk factors. The study included 500 patients who attended outpatient Department of oral medicine and radiology, Meghna institute of dental sciences located in Nizamabad, Telangana state (India) for a period of 3 months. The study included individuals with deleterious habits like chewing pan ghutka, tobacco, smoking and drinking alcohol. Individuals without deleterious habits and who are not interested to participate in the study were excluded from the study. Institutional ethical committee clearance was obtained prior to the commencement of the study. The written consent was obtained from all the participants and the questionnaire was administered and explained to them. A response category for each question was 'YES' and 'NO'. The subjects were asked to tick the most appropriate one and were instructed to fill the questionnaire all on their own.

## RESULTS

The results analysis depicts that among 500 patients 91.6% of the people had awareness about cancer or have heard of cancer, among the participants 66.4% were males and 33.6% were females (Figure 1). Participants were more aware of Lung cancer (36.4%) followed by oral cancer (33.2%) and breast cancer (15.4%) and the least heard type of cancer were related to Thyroid, Cervix, and prostate. The results infer that the information regarding cancer among participants was obtained through media 48% and through friends 24.4% (Figure 2). Results show that of 44.6% participants have a notion that ghutka chewing is the main culprit of cancer, followed by as 33.8% smoking, as 21.6% alcohol drinking habit and 43.2% participant answered (believed) that general population who are consuming 'smokeless' form of tobacco are at a high risk of developing oral cancer followed by 32.2% smoke 21.6% alcohol and 3.6% poor oral hygiene (Figure 3). Most of them answered that adults had the high risk of developing oral cancer. Most of the participants in the study have the habit of smoking cigarettes rather than beedi and other smoke forms (46%-cigarettes, 43%-beedi, 11%-others) where as in smokeless forms habit of ghutka chewing (52%) is more predominant rather than betel nuts (34.4%) and pan (13.6%). 30.2% of the study population have answered that some changes in the mouth were observed like white and red patches as the first sign and symptom of oral cancer followed by an ulcer (23.2%), continuous pain of jaw (20.8%), reduced mouth opening (16.6

%) and least abnormal tissue growth (9.2%) (Figure 4). 81.6% individuals answered that we can prevent cancer and 76.2% of the individuals replied that they would like to approach doctor rather than RMP, for any suggestions, indications, confirmation and treatment of oral cancer.

### Q.1 Do you know about cancer?

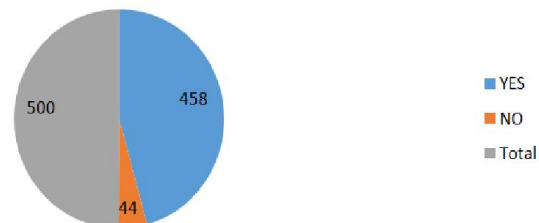


Figure 1. Percentage of population who knew about cancer

### Q4. How did you get to know about oral cancer?



Figure 2. Percentage of different modalities in developing the awareness of cancer

### which of following group of people have a greater chance of developing oral cancer ?



Figure 3. Percentage of population who know the risk factors of cancer development

### Do you know what are the initial signs and symptoms of oral cancers ?

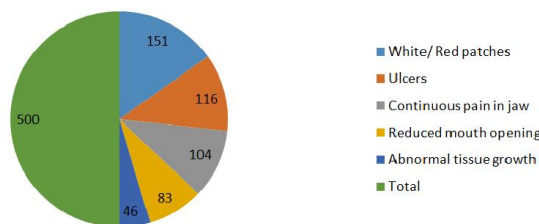
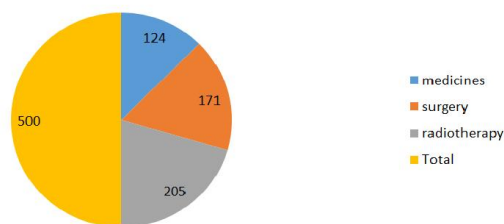


Figure 4. Percentage of population who are aware of the initial signs and symptoms of oral cancers

### If patient is known cancer positive, what are the treatment modalities ?



**Figure 5. Percentage of population who are aware of the different treatment modalities for cancer**

43.4% of patients preferred to visit a dentist if they detect any signs or symptoms of oral cancer, on the hand 56.6 % population still continue to visit the physicians and RMPs for the oral ailments. When asked about the choice of treatment for oral cancer, 41% of the total population answered radiotherapy whereas 34.2% said surgery and whereas 24.8% of the total population stated chemotherapy (Figure 5). 47.3% of the population had an opinion that the survival rate of individuals with cancer is above 50% and rest of 53.7% of the population believed that the survival has 50-50% or less than 50% chance of living.

## DISCUSSION

Among all cancers, oral cancer is one of the commonest cancer in Indian subcontinent. The stage at which oral cancer is diagnosed is the major determinant of mortality and morbidity rate. (Oluwatumise Awojobi *et al.*, 2012) Early diagnosis of oral cancer could be aided by opportunistic screening for tobacco related habits even before its signs and symptoms manifest clinically. (Lo'pez-Jornet *et al.*, 2007) In spite of the efforts made by international health organizations in the field of prevention, a relative increase in the incidence of the oral cancer has been observed in recent decades. Which is due to lack of awareness towards oral cancer in remote areas of developing countries. (Horowitz *et al.*, 1996) The aim of the present study was to evaluate the awareness, knowledge and attitude towards oral cancer in various area of North Telangana region. In the present study, 91.6% of population have heard about cancer. In a study conducted by Shah and Praveen in March 2014, 34% of population knew about of oral cancer. (Redeker *et al.*, 2009) Comparing both the studies it can be inferred that there was an improvement in knowledge and awareness of the people about cancer in our study which may be due to increased media attention towards cancer. (Hertrampt *et al.*, 2012) With regards to awareness about risk factors of oral cancer, it was found that 44.2% of population knew that ghutka chewing was the main causative of cancer, followed by smoking (33.2%) and drinking alcohol (22.6%). This is in accordance with a study done by Horowitz *et al* where 27% of subjects could identify smoking to be linked to causation of oral cancer. (Raczowska *et al.*, 1997) Similarly, Redecker *et al* reported in their study that 90% of population thought smoking as causative factor oral cancer. (Rebollo-Palencia *et al.*, 1996) In a study done by Hertrampt *et al.* more than 50% of subjects could identify the association between tobacco use

and oral cancer. (Shah and Praveen, 2014) In a pilot study on the Polish public's knowledge 95% identified tobacco as a major risk factor and 25% indicated alcohol as causative of oral cancer. (Awareness about Oral Cancer and Its Risk Factors among Rural Adult Population of Belagavi City, 2015) These finding are contradictory with a recent Spanish study done by Rebollo-Palencia *et al.*, in which 69% of the subjects knew of the positive association between excess alcohol and cancer. (Horowitz *et al.*, 1995) 81.6% of the population had awareness that oral cancer is preventable by avoiding consumption of tobacco, pan, ghutka, smoking etc and 76.2% responded that they consult a doctor for queries regarding oral cancer.

## Conclusion

The result obtained from this survey reveals the increased levels of awareness about the deleterious habits and their association with oral cancer in urban population. This will assist in implementing health education programs thereby helping to reduce the incidence of oral cancer by early prevention. Among the various health professionals, oral physicians have the greatest access to tobacco users visiting the healthcare system. The study also reflect alarming situation and demands urgent anti-tobacco& tobacco cessation measures to be adopted by health professionals, who happens to be health promoters & health role models for society. The mass media's role in educating the public and mouth self-examination may be used as an effective tool in improving further awareness. It is needed to strengthen the awareness on harmful effects of tobacco and also cessation aids among its users which will help them in future to quit the habit, prevent them from developing oral cancer and live a healthy life.

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