AWARENESS OF ORAL CANCER AMONG GENERAL PUBLIC IN LIBYA: AQUESTIONNAIRE-BASED SURVEY

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Abstract

Cancer is a major health problem in both developed and developing countries. Fighting against cancer require health care professionals to be well trained in diagnosing as well as organizing public education programs. This study is to evaluate public knowledge of oral cancer risk factors, and to assess their awareness of oral cancer examination. A questionnaire was designed to collect information about awareness of oral cancer, knowledge of conditions associated with alcohol and tobacco use, perception of risks of oral cancer, and subjects' attitude twards oral cancer screening. 122 participates (57.4% females and 42.6% males) had responded to the questionnaire. The responses revealed that 64% have heard about oral cancer and that media was the common source of information (59%). Some participants (35.2%) believe that oral cancer is preventable whilst 54.0% of the participants pointed that they do not know. More than 45.1% of the respondents were aware that smoking is a risk. 23.7% of the respondents considered sore lesions in mouth that does not heal as an early sign of oral cancer. To sum up, there is unawareness of the unhealthy habits, signs, and symptoms of oral cancer. Education programs can be carried out through mass media means raise awareness of such issues.

Keywords: Oral Cancer; Awareness; Knowledge; Risk Factors; Signs and Symptoms.

Introduction

Oral cancer (OC) is ranked among top ten most prevalent cancers in the world, and it accounts for 2.1% of all cancers. Every year, almost 275,000 new OC patients are diagnosed and at least 120,000 die because of this disease (Jemal A. et al. 2011 & Rikardsen O. et al. 2014). Mortality rates because of oral cancer are higher in developing countries compared to the developed ones. More than 90% of OC cases are oral squamous cell carcinoma (OSCC) that affect the lips, tongue, pharynx, and other sites of the oral cavity (Llewellyn C. et al. 2001).

The etiology of oral cancer is multi-factorial, but the most prominent factors are tobacco (smokedor chewed), excess alcohol consumption, betel quid chewing, sun

exposure (in the case of lip cancer), human paiplloma Virus (HPV) infection, immune deficiencies, diet, and finally socio-economic status (Drummond S. et al. 2005, Agrawal M. et al. 2012). Synergistic effects of cigarettes and alcohol use on development of oral cancer are well documented. At least two thirds of all cases appear due to lifestyle factors, such as tobacco and alcohol use (Chandu A. et al. 2005, Rogers S. et al. 2003). Unconfirmed risk factors are ethnicity and race, poor oral hygiene, dental conditions, chronic candidiasis and chronic trauma of the oral mucosa (Drummond S. et al. 2005). Globally, several epidemiological studies have reported that the prevalence of OC increased with aging (Znaor A. et al. 2003).

Oral cancers are more common than leukemia, melanoma, and cancers of the liver, brain, thyroid, kidney and ovary. The prognosis for oral cancer is poor, with an overall five year survival rate of 54%. Majority of oral cancers are from longstanding premalignant lesions, and mortality rates depend on cancer stage. Early detection of oral malignancies, supported with prognostic markers to evaluate the prognosis, considerably aid in determining the appropriate treatment, thereby increasing the long-term survival of patients. Most of the consequences of cancers occurring in the oral cavity can be prevented by avoiding the known risk factors, and by early detection (Agrawal M. et al. 2012). Public awareness of oral cancer is generally low; as reported by Peker and Alkurt 2010, Rogers S. et al 2001a, and Park J. et al. 2011 it is lesser than other types of cancer. Public unawareness of oral cancer and its associated risk factors usually result in delaying presentation, increase treatment morbidity, and reduced survival rates (Warnakalasuriya et al. 1999). Failure to recognize the early signs and symptoms of oral cancer has been reported in many studies (West R. et al. 2006, Devadiga A. et al. 2010). Amarasinghe et al. (2010) reported that the patients thought that their symptoms were trivial and would resolve on its own.

Enhancing understanding of the signs, symptoms and early detection of oral cancer among the general population can help prevention, better cure and prognosis of the disease. Efforts are required for the early detection and primary prevention of oral cancer among the community by the means of a variety of outreach programs related to education and awareness of oral cancer.

The aim of our study is to obtain baseline information about the level of oral cancer awareness of its risk factors, signs and symptoms, early detection and its prevention among a selected population. The finding of this study will help in the implementation of an effective health education program in order to reduce the high risk habits and eventually the incidence of oral cancer.

Materials and Methods

This cross-sectional study was conducted on the general population in AL-Brega Libya. Two main shopping malls located at various parts of the city were strategically chosen to select participants from different walks of life. 122 participant, who were over 18, agreed to fill the questionnaire. The purpose of the study was explained to them and verbal consent was obtained from each of the participants before filling the survey. The self-administered questionnaire was in Arabic, the first language of the participants. It consisted of 13 closed-ended questions, which were divided to three sections; the first targeted general awareness of oral cancer, the second investigated oral cancer risk factors, and the last one was about oral cancer clinical signs and symptoms and treatment seeking behavior. Socio-demographic information such as age, sex and educational level were also recorded, and those who were diagnosed with oral cancer at any point of their lifetime were excluded from the study. To minimize bias and standardize recording, one investigator administered all the questionnaires.

Statistical Analysis

SPSS (IBMR Statistical Package for Social Studies) version 20.0 was used for data analyses. Qualitative data were presented as frequencies and percentages and quantitative data were presented as means and standard deviations. The chi-square test, Student's t-test, and one-way analysis of variance (ANOVA) were used to examine differences between groups. Results were considered significant at $p<0.05$.

Results

Of the 122 participants, 70 (57.4%) were females and 52 (42.6%) were males. Two participants (1.6%) reported consuming alcohol, and 18 (14.7%) are smokers.

In terms of education 58.2% of the participants got college/ university degrees, 17.2% finished their high school education, 14.8% finished their basic education stage, 9% got postgraduate degrees and only 0.8% of the participants were illiterate Table (1) shows frequencies and percentage of demographic characteristics habits of the Participants.

Table (1): Frequencies and Percentage of Demographic Characteristics Habits of the Participants (N= 122).

Characteristics	Total n (%)
Age	
18 – 27year	18.8%
28-37 year	41.8%

38-47 year	18.0%
Over 48 year	21.3%
Gender	
Male	42.6%
Female	57.4%
Education level	
None	0.8%
Primary school	14.8%
Secondary school	17.2%
University	58.2%
Postgraduate	9.0%
Education Years	
Less than 12 years	33.6%
More than 12 years	66.4%
Habits	
Smoking	14.7%
Alcohol	1.6%

With no significant difference across gender, only 70 (57.4%) individuals had heard of oral cancer Figure (1).

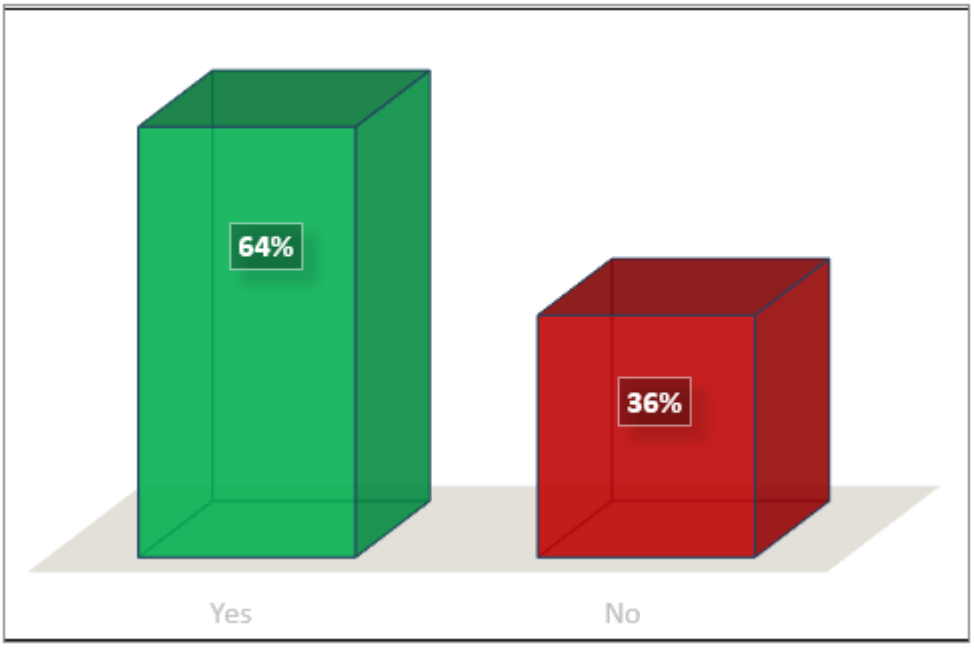

Figure (1): Percentage of the Participants Who have Heard of Oral Cancer.

Among the participants who have heard of oral cancer, media (TV, newspapers, and the Internet) was the main sources of information (58.9%). Only 19.2% had heard about oral cancer from their dentists, and only 3.8% from the physicians Figure (2).

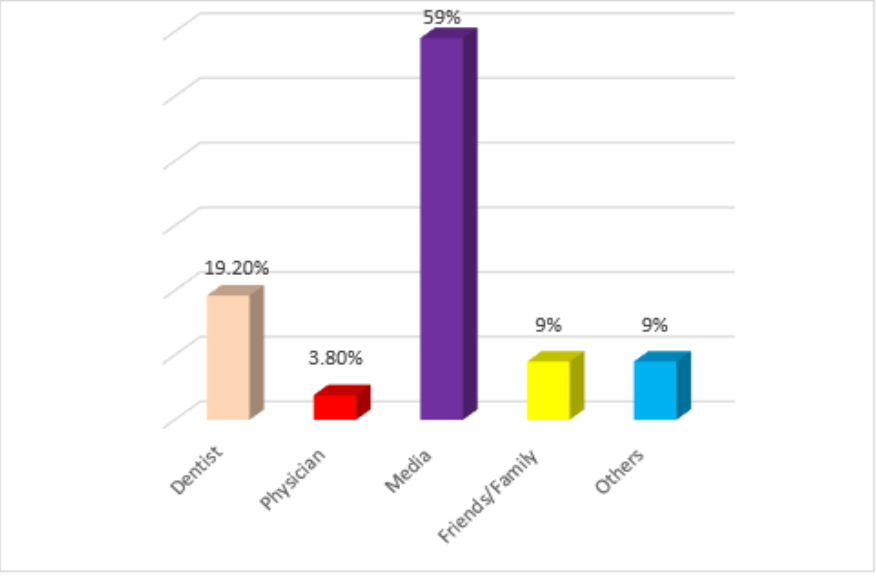

Figure (2): Source of Information Regarding Oral Cancer.

Around 35.2% of the participants believed that oral cancer is preventable. However, there was certain misconception about oral cancer; 17.2% believed that oral cancer is a contagious disease, and 45.1% believed that it is treatable. Knowledge concerning risk factors varied greatly; 45.1% and 40.1% of the subjects, respectively, know that smoking and tobacco are risk factor for oral cancer, whereas less participants 31.9% know that alcohol is a risk factor. However, 31.1% the subjects identified older age as a risk factor of oral cancer, 15.5% identified virus as a risk factor of oral cancer, and knowledge of excessive sunlight as a risk factor for lip cancer was reported by only 9.0% of the participant, (see Table (2)).

Table (2): Proportion of knowledge about Oral Cancer.

Variable	Yes N (%)	No N (%)	Don't Know N (%)
General knowledge			
Heard of OC			
OC is preventable	43 (35.2%)	13 (10.6%)	66 (54.0%)
OC is contagious	21 (17.2%)	40 (32.8%)	61 (31.7%)
OC can be treated	55 (45.0%)	22 (18.0%)	45 (36.9%)
Risk factors for OC			
Old age	38 (31.1%)	18 (14.8%)	66 (54.0%)

Smoking	55 (45.1%)	21 (17.2%)	46 (37.7%)
Smokeless tobacco use	49 (40.1%)	33 (27.0%)	40 (32.8%)
Alcohol drinking	39 (31.9%)	13 (10.7%)	70 (57.3%)
Sun exposure	11 (9.0%)	25 (20.5%)	86 (70.5%)
Virus	19 (15.5%)	71 (58.1%)	32 (26.2%)
Signs of OC			
Non-healing ulcer	29 (23.7%)	53 (43.4%)	40 (32.8%)
White patch	18 (14.7%)	66 (54.1%)	38(31.1%)
Red patch	17 (13.9%)	50 (41.0%)	55(45.1%)
Lump	6 (4.9%)	20 (16.3%)	96(78.7%)

*** OC** = Oral cancer

Regarding knowledge of the early signs of oral cancer, generally, the participants showed poor knowledge of these signs and symptoms. 23.7% of respondents chose sore lesions in mouth that does not heal as an early sign of oral cancer followed by white patches in mouth which was 14.7%, then 13.9% selected red patches in mouth, (see Table (2)).

The total mean score of oral cancer knowledge was 4.79±1.82 with no significant differences between males and females ($p>0.05$). Knowledge of oral cancer was significantly associated with education ($p<0.05$); participants with less than 12 years of education were significantly less aware, and had less knowledge of the signs and risk factors of oral cancer (Mann-Whitney test; Kruskal-Wallis test) (see Table (3)).

Table (3): Gender * Education Crosstabulation.

Gender	Education		Total
	more than 12 years	less than 12 years	
Female	51	19	70
Male	30	22	52
Total	81	41	122

Discussion

OC is a life-threatening condition affecting considerable proportion of population worldwide with high mortality rate at advanced stages (Rikardsen O. et al. 2014). Oral cancer screenings are an inexpensive, safe and non-invasive method of detection (Barry P. et al. 1989). These screenings may provide an excellent opportunity for raising public awareness, and educating patients about symptoms and behavioral risk factors and how to reduce them. This may result in reducing the oral

cancer burden on the community. Lack of knowledge about the early signs of oral cancer may result in ignoring early pre-cancerous lesions whereas misconception about risk factors can reduce the chance of avoiding them.

The results of this study demonstrated lack of knowledge about oral cancer in our population, a similar finding was reported in previous studies by Barry P. et al. 1989, Ghani W. et al. 2013, and Al-Maweri S. et al. 2014. The low level of awareness observed in our study could be attributed to the lack of public health education programs that focus on this type of cancer. This emphasizes the importance of initiating intensive public education programs, which establish such knowledge.

Socioeconomic factors may affect public awareness and knowledge about risk factors and early signs of oral cancer. In the present study we found a significant association between level of knowledge and gender, age and education level. It has also been noticed that female participants have better knowledge than males, which might be attributed to following certain educational programs on the media. Another explanation is that women are generally more concerned about their health than men and more curious about such information. In the present study we found a significant correlation between the level of knowledge and education ($P < 0.01$). Participants with high school or university degrees had the highest knowledge scores while those who were illiterates or attended only basic education schools had the lowest knowledge scores. This finding is consistent with the results reported in Ariyawardana et al. 2005.

In our study, a considerable proportion (64%) of the participants had heard of oral cancer via public media. Such findings emphasize the role of mass media in educating the public about important health issues such as oral cancer. Our results support previous findings, which reported that mass media is a common source of information regarding oral cancer (Rogers S. et al. 2011a, & Warnakalasuriya et al. 1999). Unfortunately, only 19.2% had heard about oral cancer from their dentists. Therefore, dentists are advised to practice their pivotal role in informing the public about oral cancer.

OC is a multifactorial malignancy, in which initiation and progression of this condition is highly determined by range of risk factors such as age, gender, exposure to carcinogenic factor(s), and genetics. The current sample showed an insufficient knowledge regarding risk factors. However over 45.1% and 40.41% of the participants respectively identified smoking and smokeless tobacco use as risk factors; such results are similar to earlier studies conducted in India(Agrawal M. et al. 2012), Saudi Arabia (Bassel T. et al. 2015), and Yemen (Sadeq A. et al. 2014). The greater awareness of smoking and smokeless tobacco use as a risk factor can be attributed to anti-tobacco media campaigns. A small proportion of the participants

were aware that old age, alcohol consumption, viruses and sun exposure in the case of lip cancer are potential risk factors.

At early stages of the disease, oral cancer is asymptomatic and hence the affected individuals do not seek treatment. Therefore, knowledge on the signs of oral cancer is of paramount importance. Self-examination of the oral mucosa has been considered an effective method of detecting asymptomatic early disease (Peacock Z. et al. 2008). Only 23.7% identified non-healing ulcer and 14.7%, 13.9% of the participants respectively identified white and red patches as early signs of oral cancer. Such findings imply that most people do not have enough information about such early signs. It has been reported that lack of public knowledge about early signs of oral cancer leads to late clinical presentation and decreases survival rates (Tadbir A. et al. 2013).

Generally, lack of awareness of oral cancer risk habits, signs and symptoms was evident in this sample, which requires implementing and initiating intensive relevant educational programs that target the public using the mass media.

Conclusion

In this study we investigated awareness and knowledge of oral cancer among a selected sample. Results revealed many deficits in their knowledge of signs, symptoms and risk factors for the cancer. This lack of knowledge in identifying early signs of oral cancer may result in neglecting early pre-cancerous lesions whereas misconception about risk factors can reduce the chance of making early decisions about personal habits. Health education needs to be carried out to fill the gap within knowledge and to raise awareness of oral cancer symptoms and risk habits.

Acknowledgements

We would like to express our gratitude to all individuals, who agreed to participate in the study.

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