

## Research Article

# Knowledge and Awareness of Head and Neck Cancer Risks among Saudi Adults

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### Abstract

**Objective:** Head and Neck Cancer (HNC) in Saudi Arabia is the fifth commonest cancer in males and the sixth among females. These cancers are more common in men over the age of 50, however, recent reports show dramatic increase in incidence in younger population. HNC is considered a lifestyle disease. Major underlying risk factors include: smoking, use of smokeless tobacco, alcohol intake, viral infections, exposure to UV light, and dietary factors. In this study we assessed knowledge, attitude and behavior regarding HNC among a random sample of Saudi adults.

**Method:** A pretested questionnaire was administered to a convenient random sample of patients attending several government hospitals in Jeddah. The total number of distributed questionnaires was 221. The questionnaire assessed knowledge and perception of oral cancer as well as habits known to be risk factors.

**Result:** Our results revealed that while 68.3% had heard of "Oral Cancer", 43.6% felt they didn't have enough knowledge and 50.8% felt they knew nothing about it. Ulcers in the oral cavity were not perceived as an early sign of HNC by 78% of respondents. However, 50.2% replied that swelling of the neck is an early sign. Approximately eighty percent (80.3%) were aware that tobacco use is a risk factor, but only 49.8% thought alcohol use a risk factor too. An astounding 92% did not think exposure to sunrays a risk factor. Although 90.2% said their dentist informed them about oral cancer (data not shown) only 16.8% reported having had an oral examination.

**Conclusion:** Accumulating evidence shows that the public is poorly informed about HNC particularly in Saudi Arabia. Lack of public awareness is considered a potent barrier for early detection. In a country where tobacco use is rampant, this poses a very serious health concern.

**Keywords:** Alcohol; Head and Neck Cancer; Risk Factors; Smoking; Tobacco

### Introduction

Head and Neck Cancer (HNC), refers to group of malignancies arising from the head and neck region. Included are tumors of the oral cavity, nasal cavity, the pharynx, the larynx (voice-box), the paranasal sinuses, the salivary glands, and cervical lymph nodes

of the neck. It is the sixth most common cancer worldwide [1]. The global incidence of head and neck cancer exceeds half a million cases annually. In the UK, 11,449 cases of head and neck cancers were diagnosed in 2014, comprising 3.0% of all new cancers cases that year. In the USA, it also accounts for approximately 3.0% of all cancers, and the number of new cases in 2016 is expected to reach 63,030, of which 46,290 men and 16,740 women. Of these cases, 13,360 are expected to die [2]. In Saudi Arabia, HNC is the

fifth commonest cancer in males and the sixth among females, accounting for 5.28% of all cancer cases [3].

The overwhelming majority of head and neck cancers are Squamous Cell Carcinomas (SCCHN) [1]. These cancers are more common in men and in people over the age of 50, however, recently it has been confirmed that there is a dramatic increase in the incidence rates of some types of head and neck cancer among younger population [4]. A more remarkable rise in the incidence rates of oropharyngeal cancer was reported in adults younger than 45 years of age [5,6]. The high incidence of head and neck squamous cell carcinoma is greatly attributed to the high alcohol and tobacco consumption [7,8]. Despite the great advances in biological and clinical research, the 5-year survival rate of head and neck cancer did not improve over the past two decades. It remained terribly low, with only 50% of the patient diagnosed with the disease could survive it [9].

Head and neck cancers are curable when diagnosed and treated early. Early diagnosis is associated with improved prognosis [10]. Unfortunately, most of these cancers are diagnosed at advanced stages. Awareness of risk factors is a great preventive measure to diagnose HNC early [11]. The aim of our study was to briefly assess knowledge, attitude and behavior regarding HNC.

## Materials and Methods

**Questionnaire:** A questionnaire was formulated and adapted from existing literature. Forward translation was carried out from English to Arabic. A group of bi-lingual experts were recruited to carry out the back-translation into Arabic. The questionnaire was pre-tested with a sample group similar to the intended study sample. The pretesting was done to ensure that there was a unified understanding of the questions to reduce comprehension-based bias. The questionnaire was finalized into a final version.

**Study Sample:** The questionnaire was administered to a convenient random sample of patients attending several government hospitals in Jeddah, Makkah province, Saudi Arabia. The questionnaire primarily assessed knowledge and perception of oral cancers as well as habits known to be risk factors. Questionnaires were anonymous and voluntary and adhered to the Ethical Research Conduct of King Abdulaziz University.

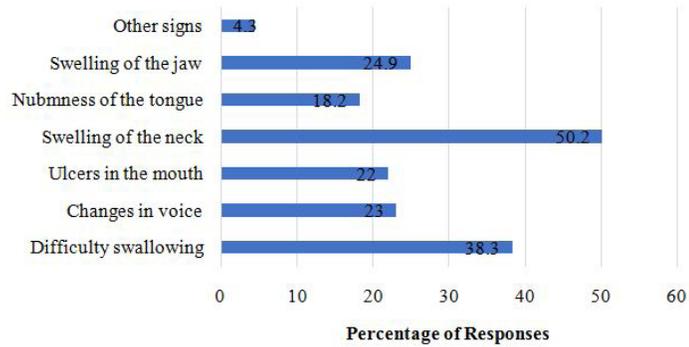
## Results

A total of 221 questionnaires were distributed in various government hospitals in the city of Jeddah (King Abdulaziz University Hospital, King Fahad Armed Forces Hospital and King Fahad Hospital). Our sample comprised 59% males and 41% females, with the majority between the ages of 18-35. Thirty-one percent had only completed high-school, but 46.3% had completed university (Table 1). Our results revealed that only 68.3% of the study sample had heard of “Oral Cancer”. However, of those, 43.6% feel they don’t have enough knowledge about the condition and 50.8% feel they know nothing at all. Seventy-eight percent

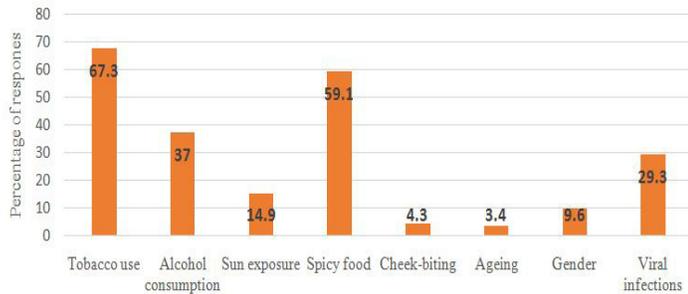
(78%) did not believe that oral ulcers could be early signs of HNC although 50.2% believed that swelling of the neck is an early sign (Figure 1). Eighty percent (80.3%) were aware that tobacco use is a risk factor, but only 49.8% thought alcohol consumption a risk factor too. Ninety-two percent (92%) of the sample did not think exposure to sunrays was a risk factor for HNC (Figure 2). When asked about the main source of their information, most replied the internet or TV programs rather than schools or the family doctor/dentist. Only 9.8% said their dentist informed them about oral cancer and only 16.8% had received an oral examination for HNC (Figures 3 and Figure 4).

Demographics Groups		Frequency N = 221	Percent
Nationality	Saudi	124	56.1
	Non saudi	82	37.1
	Total	206	93.2
	Missing Data	15	6.8
Gender	Male	124	56.1
	Female	86	38.9
	Total	210	95
	Missing Data	11	5
Age group	18-24	95	43
	25-35	66	29.9
	36-45	26	11.8
	46-55	17	7.7
	55 and above	8	3.6
	Total	212	95.9
	Missing Data	9	4.1
Marital Status	single	111	50.2
	married	90	40.7
	widowed	3	1.4
	divorced	6	2.7
	Total	210	95
	Missing Data	11	5
Education- al Level	Uneducated	6	2.7
	Elementary level	7	3.2
	Intermediate level	18	8.1
	Secondary level	67	30.3
	Vocational training	6	2.7
	University level	99	44.8
	Advance studies	11	5
	Total	214	96.8
	Missing Data	7	3.2

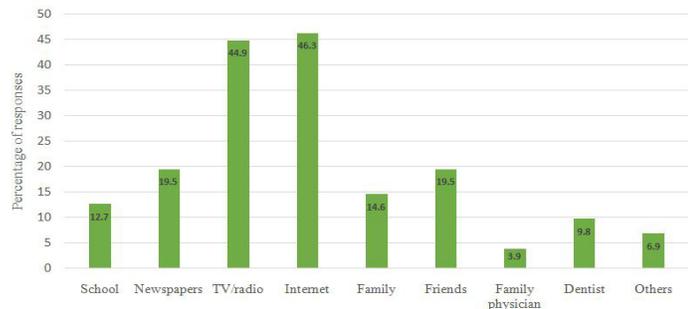
Table 1: Sample Demographics.



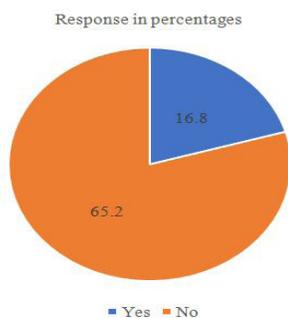
**Figure 1:** Answers to the question ‘Which of the following are early signs and symptoms of Head and Neck Cancer?’.



**Figure 2:** Responses to the Risk Factors for HNC.



**Figure 3:** Reported Source of HNC Information.



**Figure 4:** Response to Having Had an Oral Examination for HNC.

## Discussion

Head and neck cancer can be diagnosed by multiple specialties, but is primarily the responsibility of dentists [12-14]. Early diagnosis is pivotal to the early detection of HNC and this is dependent on the concurrence of several factors. Education of patients has been proved as a great adjunct to prevention but is still suboptimal [15]. In Saudi Arabia, the use of smokeless tobacco (shamma) is an important risk factor and has been studied particularly in the southern parts of the Kingdom [16-18]. However, the use of other risk factors has not been adequately addressed in the population. While many are aware of the detrimental effects of tobacco, very few are aware of the effect of alcohol consumption and sunray exposure on HNC incidence. Furthermore, a substantial number of respondents believed that spicy food is a risk factor 59.1% (Figure 3). When compared to the response to sun exposure being a risk factor 14.9% (Figure 3), this clearly demonstrates how lacking we are in accurate information of the community.

The effects of HNC treatment on the quality of life of patients is very significant [19]. Dentists are ethically obliged to provide education to their patients, particularly those of high risk [12]. Increased awareness among oral health care providers has proven to be an efficient intervention and provides better referral practices [20]. Our results show evidence of a severe deficiency in this common practice by dentists in our community, and warrants closer attention. In Saudi Arabia, more than 116,000 children and more than 2,889,000 adults use tobacco daily [21]. Furthermore, there is an increase in incidence of the Human Papilloma Virus (HPV) infection among women [5,22] which translates as an increase in the occurrence of risk factors/risk practices which will add to the HNC burden of the country.

## Conclusion

Lack of public awareness is considered a potent barrier for early detection of HNC. In the Kingdom of Saudi Arabia where tobacco use is rampant, this poses a very serious health concern. The first line of intervention needs to be the dissemination of knowledge and awareness by the dentists, particularly general practitioners.

## Limitations

Both the size and method of randomization (conveniently accessing patients attending main hospitals in the city of Jeddah) used in this study is not optimal. For more concrete evidence a wider approach should be adopted. However, this study provides an incentive for further work in this aspect of HNC and the Kingdom of Saudi Arabia.

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