Awareness and Knowledge of Cancer Symptoms and Risk Factors: A Community Survey in Al Ahsa, Saudi Arabia

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Abstract

Background Cancer is predicted to rank as the leading cause of death also the greatest barrier to rising life expectancy in every country globally in the 21st century. **This study aimed to** measure the awareness and knowledge about cancer risk factors and symptoms among Al Ahsa community**. Methods** A cross-sectional study was conducted among Al Ahsa community (aged 18 and above) between October and November 2020. Data collection was conducted after taking consent of the participants to participate. Privacy and confidentiality of the collected information were ensured by using anonymous data collection tools. A pilot study was conducted to check the clarity of the Arabic version of the questionnaire, prior to data collection. **Results** a total of 332 participants answered the questionnaire. Presence of tumor is the most frequently known cancer symptoms between the participants (79%). The lowest known symptom is difficult in swallowing (21.9%). Majority of the participants (89.5%) knew that smoking is considered a risk factor, followed by exposure to Radiation (76.6%). The lowest known risk factor is eating red or processed meat every day (26.7%). Majority of the participants did not aware of cancer screening tests available for common cancer. significantly association between total knowledge score and gender. It seems to increase with female rather than male participants. **Conclusion** This study showed the general level of knowledge about cancer between the population was poor. Awareness regarding the risk factor of cancer was generally restricted to tobacco and exposure to radiations. Awareness regarding the symptoms also was poor and limited to mass or tumor and difficult in swallowing.

Key words: Cancer, Cancer awareness, Al Ahsa

Introduction

Cancer is genes related disease. Hereditary or somatic variations in genes are creation of abnormal growth and form a tumor which ultimately producing the disease (Michail Shipitsin and Kornelia Polyak, 2008). Cancer cells that initially remains localized; with time, it metastasizes, leading to malignant tumour (Naqvi, A., 2016).

Cancer is predicted to rank as the leading cause of death also the greatest barrier to rising life expectancy in every country globally in the 21st century (Bray et al., 2018). The concern of cancer is rise in last decade, with a global anticipated incidence of 18.1 million and death rate of 9.6 million in 2018 (World Health Organization, 2018).

Cancer is one of the top ten leading cause of death, following cardiovascular disorders, presenting 10.6% of overall recorded casualties. Even though the occurrence of cancer has been rising all over the world, almost of deaths happen in underdeveloped nations, most likely as a result of a mixture of late diagnosis and inadequate treatments (Jassem et al., 2013; World Health Organization, 2018).

Although cancer is a critical health problem for adults 65 years of age and older, many are unaware of this problem. In Kingdom of Saudi Arabia the overall of cancer cases between Saudis, in 2006, as stated by the Saudi Cancer Registry (SCR), was 8,054 (Saudi Cancer Registry, 2010).

There are several types of cancers, the most popular male cancer types are lung, stomach, liver, colon, rectum, oesophagus and prostate cancer, whereas the most common type affect women involve breast, lung, stomach, colon, rectum and cervical cancer (WHO, 2009).

According to (American Cancer Society), cancer may also cause symptoms similar to fever, extreme tiredness (fatigue), or weight loss. This might be for the reason that tumor cells utilize body's blood and nutrition, or it might turnout elements that alter the absorption process for the affected part. Cancer can influence the body's defenses to develop clinical manifestations. Occasionally, cancer cells secrete substances into the body that cause symptoms that are not usually linked to cancer immediately. For example, some cancers of the pancreas can release substances that cause clotting in leg veins. Several lung tumors make hormone-like secretions that raise blood calcium concentrations. This affects nerves and muscles, making the person feel weak and dizzy.

Cancer risk factors include exposure to elements or other substances, as well as specific behaviors. They also include uncontrolled issues, as old age and hereditary factors. Additionally, the problem of cancer in underdeveloped nations is estimated to duplicated throughout the coming years as a result of socioeconomic changes, such as expanded tobacco usage, old age and unhealthful way of life (Torre et al., 2015).

The prevalence of adulthood obesity in the Gulf populations has risen to be in dangerous level along with industrialized buildings in last few years, this is due to growth in incomes, and enhanced income conditions. Increased rates of obesity, including children overweight, high intake of excessive-calorie and low nutrition meals, smoking and air contamination, are all linked with elevated occurrences of cancer in the Gulf Countries (Alnohair, 2014). The Knowledge and awareness of the cancer and the importance of screening and early detection can reduce the risk of cancer mortality (CDC, 2004).

The aim of our study is to measure the awareness and knowledge of cancer risk factors and symptoms in Al Ahsa.

Methodology

Descriptive cross-sectional study was conducted as the research design. Respondents of this study were the general public living in Al Ahsa, Saudi Arabia. Data were gathered through online-administered questionnaires between October to November 2020. The sample size was 385 and was calculated using 50% prevalence with confidence limit of 95% and 5% margin of error. Only 332 participants completed the questionnaire accurately "with response rate of 86.2%". The questionnaire included 2 sections. Section I covered the sociodemographic characteristics of the participants. Section II enclosed cancer risk factors. The second section contains a set of 25 items, with yes and no options. 1 point was given for the correct answer and 0 for the incorrect answer. Data collection was conducted after taking consent of the participants to participate. Privacy and confidentiality of the collected information were ensured through the use of anonymous data collection tools. A pilot study was conducted to check the clarity of the Arabic version of the questionnaire, prior to data collection. A group of 30 participants were asked to complete the questionnaire to examine its clarity and modify the complicated or difficult words. The researcher documented the suggested changes to the tool. For testing reliability of the questionnaire, the researchers used the pilot study results.

Date was analyzed with Statistical Package for Social Sciences (SPSS), version 25. Descriptive statistics and cross tabulations analyses were conducted and presented.

Results:

Table (1): General Characteristics of Study Sample

Items	No. (n. 332)	%
Age / year		
20- 30	200	60.2
31- 40	60	18.0
40- 50	51	15.3
More than 50 years	22	6.6
Gender		
Male	51	15.3
Female	282	84.9
Educational level		
Basic education	19	5.7
Secondary	88	26.5
University	226	68

Table (1) displays the respondents' demographic and general profiles. Participants of this study were the public living in Al Ahsa, the participants number was (N = 332). From a total of 332 respondents, there were 51 (15.3%) male and 282 (84.9%) female. The ages of the participants were 20-30 (60.2%), 31-40(18%) , 40-50 (15.3%) and more than 50 (6.6%). The level of education were (5.7%) had basic education, (26.5%) had secondary and (68%) had university level.

Figure (1): Participants Knowledge about Screening Test (n = 332).

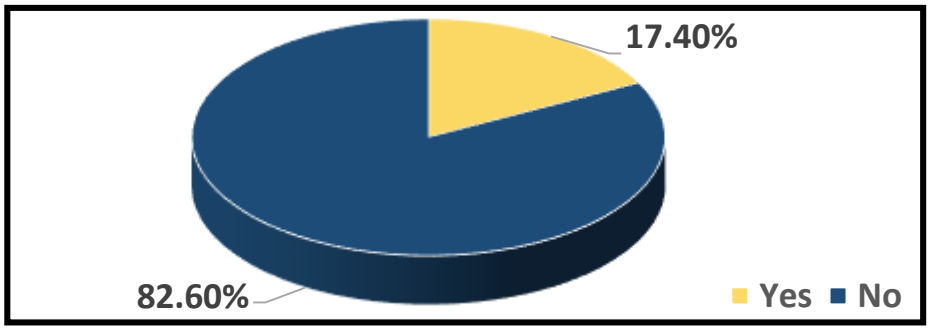


Figure (1) illustrates the participant's knowledge in the direction of screening test. It is clear that majority of the participants (82.6%) didn't give attention "did not aware" of cancer screening tests available for common cancer.

Table (2): Knowledge of Cancer Symptoms and Risk Factors

	Items	No.	%
1.	Tumor	263	79.0
2.	Skin pigmentation changes	228	68.5
3.	Unreasonable pain	217	65.2
4.	Unreasonable weight loss	209	62.8
5.	Sunburn	174	52.3
6.	Increase weight	153	45.9
7.	Unresonable bleeding	143	42.9
8.	Defecation changes	120	36.0
9.	Lip ulcer	85	25.5
10.	Difficult in swallowing	73	21.9
11.	Chronic cough	107	32.1
12.	Smoking	298	89.5
13.	Negative smoking	243	73.0
14.	Hereditary	233	70.0
15.	Radiation	255	76.6
16.	Infectious disease (AIDS-Hepatitis B/C)	213	64.0
17.	Lifestyle	204	61.3
18.	Food	182	54.7
19.	Dangerous place "with x-ray or irradiations"	182	54.7
20.	Relative with the same disease	176	52.9
21.	Decrease exercise	158	47.4
22.	Nutrition with high fat	157	47.1
23.	Mobil waves	139	41.7
24.	Old age	117	35.1
25.	Eating red or processed meat every day	89	26.7

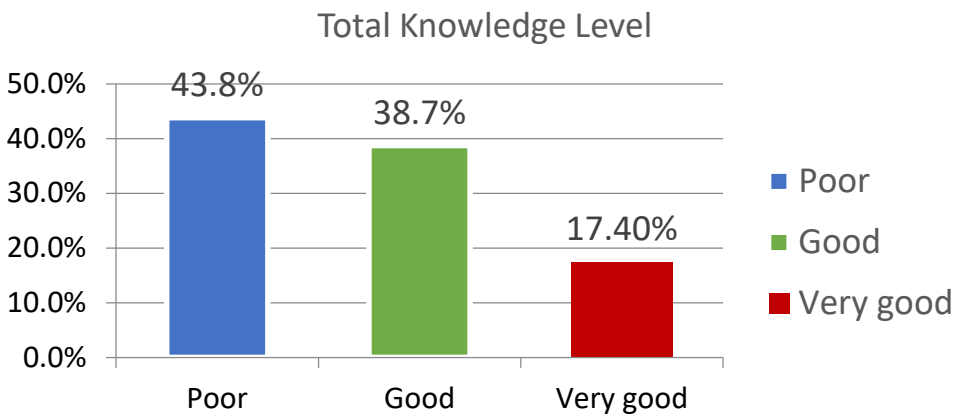
Table (2) shows the participants knowledge about cancer risk factors. Presence of tumor is the most frequently known cancer symptoms between the participants 263 (79%). The lowest known symptom is difficult in swallowing 73 (21.9%). Majority of the participants 298 (89.5%) knew that smoking is considered a risk factor, followed by exposure to Radiation (76.6%). The lowest known risk factor is eating red or processed meat every day 89 (26.7%).

Table (3): Association between Total Knowledge Score of Cancer Symptoms and Risk Factors and Demographic Characteristics

Items	No.	Total knowledge level						X^2	*P* value
		Poor (n=146)		Good (n= 129)		Very good (n = 58)			
		No.	%	No.	%	No.	%		
Age / year									
20- 30	200	81	40.5	86	43.0	33	16.5	4.774	.573
31- 40	60	31	51.7	19	31.7	10	16.7		
40- 50	51	25	49.0	16	31.4	10	19.69		
More than 50 years	22	9	40.9	8	36.4	5	22.7		
Gender									
Male	51	30	58.8	14	27.5	7	13.7	5.534	.05*
Female	282	116	41.1	115	40.8	51	18.1		
Educational level									
Basic education	19	10	52.6	7	36.8	2	10.5	5.575	.233
Secondary	88	46	52.3	31	35.2	11	12.5		
University	226	90	39.8	91	40.3	45	19.9		

Table (3) demonstrates a significantly association between total knowledge score and gender. It seems to increase with female rather than male participants. Although there is no significant correlation between the knowledge score and age but its appear like knowledge increase by age with the participants. Also, there is no significant correlation between the participants' knowledge level and their level of education, but knowledge seems to increase with education.

Figure (2): Total Knowledge Level among Participants (n = 333).



The middling knowledge level for all cancer symptoms and risk factors tend to be poor or insufficient. Obviously, near to half of the participants (43.8%) had poor level of knowledge.

Discussion

The goal of this study was to assess awareness of cancers symptoms and risk factors among the general public in Al Ahsa. To summarize our findings, in the study sample of 332 participants. The study found that (84.9%) were female, majority of them (60.2%) involved in the age group between (20-30). The level of education between the participants was (68%) had university level.

The current study showed that swollen or tumor is the most recognized cancer symptoms between the participants (79%). The lowest identified symptom was difficult in swallowing (21.9%). However, the study performed by Puri et al. and another study confirmed by Raj et al. stated that unusual bleeding was the major symptom for cancer as 23% and 66%, correspondingly. The similarity of findings between the present study as compared to other studies could be due to the similarity of the participants characters.

Majority of the participants (89.5%) in this study realized that smoking is considered a risk factor, followed by exposure to radiation (76.6%). The lowest known risk factor is eating red or processed meat every day (26.7%). In the same line, the study of Pedgaonkar S who found that (60%) was aware of smoking and smokeless tobacco as a risk factor for cancers. In contrast with study done by Sankheswari et al. found smoking as a major risk factor mentioned by (22.6%) of participants. The closeness of the findings could be related to that smoking was the famous risk factor for all nations.

In the present study most of the participants (82.6%) did not aware of cancer screening tests available for common cancer. In contrast the study of Kumar YS, which showed that most of the study population was not aware of screening and treatment method of common cancer.

The present study showed that the awareness levels of cancer risk factors and symptoms among Al Ahsa population is poor. Close to our findings, the study done by (Kyle et al., 2013) who found that awareness levels among adolescents of cancer symptoms was low,

Conclusion

This study showed the general level of knowledge about cancer between the population was poor. Awareness regarding the risk factor of cancer was generally restricted to tobacco and exposure to radiations. Awareness regarding the symptoms also was poor and limited to mass or tumor and difficult in swallowing.

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