Knowledge and awareness of cancer among Umm Al-Qura University students (Al-Leith Colleges Campus) - Saudi Arabia

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ABSTRACT

Background: Cancer caused over 8 million deaths worldwide in 2013 and has moved from the third leading cause of death in 1990 to the second leading cause behind cardiovascular disease in 2013. Cancer can be reduced and controlled by implementing evidence-based strategies for cancer prevention, early detection of cancer and management of patients with cancer. Many cancers have a high chance of cure if detected early and treated adequately. Cancer awareness has been shown to contribute to improvements in the early detection and management of disease. **Objective:** The current study aimed to evaluate and assess the level of knowledge and awareness of cancer among Umm Al-Qura University students - Al-Leith colleges campus - Saudi Arabia, the study covered different colleges include (health sciences, social, computer, and college of engineering). **Methods:** This is a descriptive cross-sectional study conducted in college of health sciences at Al-Leith, Umm Al-Qura University - Kingdom of Saudi Arabia during the period from August 2016 to April 2017. Data were collected using a questionnaires, 202 students were randomly selected, 106 (52%) of the students from health sciences college and the remaining 96 (48%) were from other faculties (social sciences, computer, and college of engineering). **Results:** The education level of students was as follows: 35 (17%) of students in the first level, 28 (14%) of students in the second level, 58 (29%) of students in the third level, and 81 (40%) of the fourth level. Most of the students from health sciences college (76%) were answered correctly define cancer, while about half of the students in the other faculties (56% only 58%) gave true definition of the disease. In terms of knowledge and awareness about risk factors for cancer, the study showed that most students aware by tobacco, alcohol, pesticides, preservative food, radiation, and obesity as cancer risks, but they did not know that viruses, bacteria, fungi, and sports inactivity were classified as risk factors for cancer. Most of the students involved in the current study were aware by lumps pain as cancer signs and symptoms, but at the same time, they do not aware by other signs and symptoms of the disease (skin ulcers, bleeding, low weight, and coughing), they gave low percent of positive results. **Conclusion:** The study concluded that students' awareness regarding cancer needs to be raised through educational and awareness programs.

Key words: Cancer, awareness, students

INTRODUCTION

Cancer caused over 8 million deaths worldwide in 2013 and has moved from the third leading cause of death in 1990 to the second leading cause behind cardiovascular disease in 2013.[1] Substantial progress has been made in recent years with regard to prevention and treatment options for certain cancers.[2]

The number of new cases is expected to rise by about 70% over the next 2 decades. Among men, the five most common sites of cancer diagnosed in 2012 were lung, prostate, colorectal, stomach, and liver cancer. Among women, the five most common sites diagnosed were breast, colorectal, lung, cervix, and stomach cancer.[3]

If recent trends in major cancers are seen globally in the future, the burden of cancer will increase to 23.6 million new cases each year by 2030. This represents an increase of 68% compared with 2012 (66% in low and medium HDI countries and 56% in high and very high HDI countries).[4,5]

The most commonly diagnosed cancers in high HDI countries (according to the WHO classification, Kingdom of Saudi Arabia (KSA) belong to this group of countries) are breast, lung, prostate, bowel, and stomach[3].

The ultimate goal of collecting cancer information is to prevent and control cancer and improve patient care.

To appropriately allocate resources to prevention, screening, diagnosis, treatment, and palliative care and to monitor their effectiveness, it is necessary to have timely information about cancer burden for individual countries.

In KSA, tumors are one of the top 10 diseases causing mortality (MOH, 2010).

Cancer can be reduced and controlled by implementing evidence-based strategies for cancer prevention, early detection of cancer, and management of patients with cancer. Many cancers have a high chance of cure if detected early and treated adequately.

Cancer awareness has been shown to contribute to improvements in the early detection and management of disease the importance of cancer awareness has also been emphasized as a means of ensuring behaviors that facilitate early detection, and the absence of cancer awareness has been seen as a detriment to this end.[6]

METHODS AND OBJECTIVE

Study Design

This is a descriptive cross-sectional study conducted in college of health sciences at Al-Leith, Umm Al-Qura University- Saudi Arabia (KSA) during the period from August 2016 to April 2017. The current study aimed to evaluate and assess the level of knowledge and awareness of cancer among Umm Al-Qura University students - Al-Leith colleges campus - Saudi Arabia, the study covered different colleges include (health sciences, social, computer, and college of engineering).

Data Collection

A modified validated questionnaire was adopted for this study; data collectors were responsible for full explanation of the study aims, methods, and benefits. Then, they were started distributing the questionnaire to the selected participants.

They were asked to fill the questionnaire about cancer, signs, occupational exposure to some factors including tobacco use, alcohol consumption, insecticides exposure, chemical usage, and preserved food, biological factors as bacteria, viruses, and fungi.

Statistical Analysis

SPSS software was used for statistical analysis.

Ethical Consent

A written informed consent was obtained from each respondent, ensuring strict anonymity. The Ethical Committee of the Health Sciences College at Al-Leith, University of Umm AL-Qura has approved the study protocol.

RESULTS

A total of 202 undergraduate students answered the questionnaire. Approximately half 106 (52%) of the participants were from health sciences college, the remaining 96 (48%) were from other college in Al-Leith include (social sciences, computer, and college of engineering) (Table 1).

As shown in Table 2, the level of education of the participants was as follow: 35 (17%) were from 1st year, 28 (14%) from 2nd year, 58 (29%) from 3rd year, and 81 (40%) from 4th year.

Table 3 summarizing answers gave by students concerning the definition of cancer; 132 (65%) of the participants were well-defined cancer. The table summarizing variations in the answers gave by students from different colleges; 76 (72%) of students from health sciences were well-defined cancer comparing with students from others college 40 (42%) they do not define cancer.

Concerning the answers gave by students regarding their knowledge about the risk factors of cancer, Table 4 summarizes that the majority of students from health sciences aware by smoking, alcohol, pesticides, preserved food radiation, and obesity as risk factors for cancer, their answer were 92%, 94%, 96%, 91%, and 81%, respectively. Approximately same answers findings gave by students from other colleges regarding first four factors 75%, 87%, 100%, and 84, respectively, and differ in last two factors (radiation and obesity) about half of the students from college other than health sciences do not know that these factors are risk for cancer.

Regarding, viruses, bacteria fungi, genetics, and lack of physical activities, approximately half of total participants do not aware by these factors.

Table 5 summarizes that both groups of participants were matched in their answers about lumps as a sign for cancer, 95% of students from health sciences college and 73% of students from others college aware by lumps as risks for cancer. Regarding others signs (sores, unexplained bleeding, unexplained weight loss, persistent indigestion cough, and pain), both groups of students gave low positive or right answers.

DISCUSSION

Cancer is an important health problem both in KSA and worldwide. The reasons for high cancer mortality include insufficient and/

Table 1: The description of the study population by college

Description	*n* (%)
Health sciences	106 (52)
Others (social sciences, computer, and college of engineering)	96 (48)
Total	202 (100)

Table 2: The characteristics of the study population by level of education

Level of education	*n* (%)
1st year	35 (17)
2nd year	28 (14)
3rd year	58 (29)
4th year	81 (40)
Total	202 (100)

Table 3: The distribution of the answers the students gave to the questions regarding definition of cancer

Answer of the question		
College	They define cancer	They do not define cancer
Health sciences college	76 (72)	30 (28)
Others	56 (58)	40 (42)
Total	132 (65)	70 (35)

Table 4: The distribution of the answers the students gave to the questions regarding cancer risk factors

Questions	Health sciences college			Others (social sciences, computer, and college of engineering)		
	n (%)			*n* (%)		
	Yes	No	Do not know	Yes	No	Do not know
Smoking	98 (92)	8 (8)	0 (0.00)	72 (75)	8 (8)	16 (17)
Alcohol	100 (94)	0 (0.00)	6 (6)	83 (87)	8 (8)	5 (5)
Pesticide	102 (96)	4 (4)	0 (0.00)	96 (100)	0 (0.00)	0 (0.00)
Preserved foods	93 (88)	5 (4)	8 (8)	81 (84)	3 (3)	12 (13)
Viruses	46 (43)	27 (25)	33 (31)	59 (61)	13 (14)	24 (25)
Bacteria	63 (59)	5 (4)	38 (36)	40 (41)	12 (13)	44 (46)
Fungi	52 (49)	29 (27)	25 (24)	37 (39)	22 (23)	37 (38)
Radiation	97 (91)	2 (2)	7 (7)	53 (55)	9 (12)	32 (33)
Genetic factors	21 (20)	12 (11)	73 (69)	31 (32)	21 (22)	44 (46)
Lack of physical activity	44 (42)	35 (33)	27 (25)	27 (28)	13 (14)	56 (58)
Obesity	86 (81)	13 (12)	7 (7)	53 (55)	8 (8)	35 (37)

Table 5: The distribution of the answers the students gave to the questions regarding cancer sings

Questions	Health sciences college			Others (social sciences, computer, and college of engineering)		
	n (%)			*n* (%)		
	Yes	No	Do not know	Yes	No	Do not know
Lumps	101 (95)	3 (3)	2 (2)	70 (73)	11 (11)	15 (16)
Sores	43 (41)	12 (11)	51 (48)	29 (30)	6 (6)	61 (64)
Unexplained bleeding	67 (63)	17 (16)	22 (21)	31 (32)	13 (14)	52 (54)
Unexplained weight loss	27 (25)	15 (14)	64 (61)	17 (18)	42 (44)	37 (38)
Persistent indigestion	33 (31)	18 (17)	55 (52)	22 (23)	39 (41)	35 (36)
Cough	58 (55)	19 (18)	29 (27)	39 (41)	22 (23)	35 (36)
Pain	79 (75)	21 (20)	6 (5)	21 (22)	30 (31)	45 (47)

or incorrect information about cancer formation, diagnosis, and treatment. It has been reported that cancer incidence throughout the world will increase by 2 times in the year 2030. It has been assumed that 75% of this increase would be observed in developing or underdeveloped countries, including KSA. Therefore, these countries are compelled to place importance on cancer prevention and early diagnosis of cancer through cancer control programs.

To implement/improve cancer control program in Saudi Arabia, it is important to understand what Saudis know about cancer and its early detection methods. Our results revealed a poor understanding of the risk factors and signs, regarding cancer.

Thus, emphasizing the need to start continuous, community-based cancer literacy program at national level which aims at creating public awareness about the symptoms of cancer for downstaging and to clarify the difference between proven and non-proven risk or protective factors of major cancers so that public can choose for protective lifestyle.

Increased public awareness may lead to reduced exposure to risk factors, earlier presentation and greater participation of patients in their own care in the event of cancer being diagnosed. Increased public awareness could be achieved by a number of methods such as cancer information leaflets. However, the most likely way to improve cancer knowledge is through the popular media, particularly television.[7]

CONCLUSION AND RECOMMENDATION

Awareness and knowledge regarding cancer among the participants were less than required.

The study recommends a multilevel intervention among the population through lectures, seminars, workshop, and face-to-face interviews to upgrade the level of students awareness regarding cancer.

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