

Awareness and Attitude towards Cancer & Early Detection Program at KAUH in the Western Region of Saudi Arabia

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To evaluate level of knowledge, awareness and attitude about cancer, early detection and screening tests among new graduates from the faculty of medicine at King Abdul-Aziz University (KAU) and to compare with the general population.

A self-administered questionnaire using simple Arabic language was distributed to two groups at KAU (Group-I: Six year medical students and Interns (95); Group-II: General Population with a comparable level of education from the general population (55)). Results were analyzed and then compared between the two groups.

Responses to all questions evaluating cancer awareness revealed the following:

Q1. Is cancer preventable? : 70 participants from G-I answered yes (73.7%) vs. 44 from G-II (80%) ($p= 0.432$)

Q2. Mention two causes of cancer? 35 participants of G-I gave a correct answer (36.8%), 6 gave wrong answers (6.3%) and 54 gave partially correct ones (56.8%) vs. G-II 13 (23.6%), 38 (69.1%), 4 (7.3%) respectively ($p= <0.001$).

Q3 & Q4. What are the most common cancers in males and females in Saudi Arabia? Answers revealed partially correct and wrong responses for the majority of both

groups with no significant difference ($p= 0.788, 0.094$ respectively).

Q5. What is the source of your information about cancer? 56 participants from G-I answered physicians (58.9%) and 32 participants answered other sources (33.6%) while 30 participants from G-II answered physicians (54.5%) and 17 participants answered T.V and Radio (30.9%) ($p= <0.001$).

Responses to questions about cancer screening, early detection and attitude revealed that G-I has more awareness than G-II about the indications for different screening tests. 86 participants of G-I (90.5%) vs. 17 participants of G-II (30.9%) scored 100% correct answer; while 9 participants of G-I (9.5%) vs. 27 participants of G-II (49.1%) scored 75% correct answers ($p= <0.001$). As for having screening tests done: 18 participants of G-I (18.9%) vs. 3 of G-II (5.5%) ($p= 0.027$) answered yes. With regards to participation in a screening program if present: G-I 62 (65.3%) vs. 39 (70.9%) for G-II ($p= 0.034$) answered yes. When asked "Do you encourage your relatives or friends to do screening tests": 28 participants from G-I answered yes (29.5%), 31 answered No (32.6%), 34 answered may be 35.8%) and 2 gave no answer 2 (2.1%) vs. 25 participants from G-II 25 (45.5%), 4 (7.3%), 20 (36.3%) and 6 (10.9%) respectively ($p=$ of 0.001) and 16 participants from G-I answered yes (16.8%) vs. 34 from G-II (61.8%) ($p= <0.001$) when asked, "Is diagnosis of cancer, the end of life".

Conclusions: The Level of knowledge, awareness and attitude about cancer, screening tests and early detection is poor especially in the general population. More attention should be given to this subject in our medical schools as well as utilizing the media properly for the purpose of education and awareness.

Introduction

Cancer is the second leading cause of death in developed countries⁽¹⁾. Cancer will become an increasingly important challenge to health services of developing countries in the coming decades⁽²⁾. Between January 1999 and 2000, the total number of cases reported

to the national cancer registry of Saudi Arabia was 14,856. Almost two thirds (78.5%) were Saudis and 21.5% were Non Saudis. The five most common malignancies in Saudi Arabia in order are; Female breast cancer (BC), Non hodgkins lymphoma, Leukemia, Colorectal cancer (CRC) and Hepatocellular carcinoma (HCC)⁽³⁾.



Breast and CRCs account for 10.2% and 6.6%, respectively, out of all other malignancies in Saudi Arabia. Screening programs were very effective in reducing mortality in certain malignancies (Cervix, Breast and CRC) in developed countries. Several randomized controlled trials have demonstrated a reduction in breast cancer mortality in cohorts screened by annual or biannual mammography,

making mammography one of the best-documented screening procedures⁽⁴⁾. Screening by fecal occult blood testing for CRC has also documented a reduction in mortality (level-I evidence)⁽⁵⁾. Poor knowledge in addition to awareness and attitude towards cancer screening programs play a major role in late diagnosis and hence the increase in mortality in developing countries. In this study,

we have elected to evaluate the level of knowledge, awareness and attitude about cancer, early detection and screening tests among new graduates from the faculty of medicine at KAU and a sample from the general population.

Materials and Methods

A self-Administered questionnaire using simple Arabic language was distributed to two groups at KAU after full explanation of how to answer, (Group-I: Six year medical students and Interns in their class rooms (95); Group-II: Comparable group from the general population with the same level of education (university level but non medical) (55). The questionnaire consisted of twelve questions, 5 about cancer awareness and 7 about cancer screening, early detection and attitude. These questions were designed to assess mainly the level of knowledge in our new graduates from the faculty of medicine and to compare their knowledge with the second group from the general population. This will have an impact on evaluating our teaching program of cancer awareness which in turn will have an impact on educating our general population. The following five questions about cancer awareness are (Table.2):

- Q1. Is cancer preventable?
- Q2. Mention two causes of cancer?
- Q3. What are the most common cancers in males in Saudi Arabia?
- Q4. What are the most common

cancers in females in Saudi Arabia?

Q5. What is the source of your information about cancer?

Questions about cancer screening, early detection (Questions 1-4 in Table.3) and attitude (Questions 5-7 in Table.3) are as follows:

Q1. If cancer is discovered early, is it curable?

Q2. What are the indications for different available screening tests?

Q3. Is mammography a sensitive screening test?

Q4. Did you have any screening tests for early detection?

Q5. Do you participate in any screening program if present?

Q6. Do you encourage your relatives or friends to do screening tests?

Q7. Does a diagnosis of cancer mean the end of life?

Responses to all questions were collected and analyzed using the SPSS statistical program. Frequencies were generated then comparisons between the two groups for all responses were performed using Chi-square test to determine their significance.

Results

Out of 180 participants, 150 completed their questionnaire. Group-I consisted of 95 six year medical students and interns and group-II consisted of 55 persons from the general population. Characteristic features of the study population are summarized in

(Table.1). Age was ranging from 22 to 45 years with a mean age of 29.4 years. Seventy three (48.7%) were males and 77 (51.3%) were females. The majority were Saudis (92%). The level of education was mainly of a university level for both groups (94%). Responses to all questions evaluating cancer knowledge and awareness revealed the following (Table.2);

Q1. Is cancer preventable? G-I answered yes in 73.7% while G-II 80% (p-value 0.432); Q2. Mention two causes of cancer?; G-I answers were correct in 36.8%, wrong in 6.3% and partially correct in 56.8% while G-II 23.6%, 69.1%, 7.3% respectively (p= <0.001); Q3 & Q4. Mention two most common cancers in males and females in Saudi Arabia?; Answers revealed no significant differences between the two groups in all items of either correct, wrong or partially correct (Table.2). Both groups did not know the most common malignancies in males (p= 0.788) and partially knew the most common malignancies in females (p= 0.094); Q5. What is the source of your information about cancer?; G-I answers were: physicians (58.9%), other sources (33.6%) while G-II answers were: physicians (54.5%), T.V and Radio (30.9%) p= <0.001).

Responses to all questions about cancer screening, early detection and attitude revealed the following (Table.3); Q1. If cancer discovered early, is it curable? ; G-I answered yes in 76.1% while G-II in 60% (p= 0.153); Q2. What

are the Indications for different available screening tests? ; G-I answered 100% correct in 90.5% and 75% correct in 9.5% while G-II answered 100% correct in 30.9%, 75% correct in 49.1%, 50% correct in 14.5% and 25% correct in 5.5% (p= <0.001); Q3. Is mammography a sensitive screening test? ; The answer was yes in 74.7% compared to G-II of 74.5% (p= 1.000); Q4. Did you have any screening tests for early detection? ; G-I answered yes in 18.9% while G-II 5.5% only (p= 0.027); Q5. Do you participate in screening program if present?; G-I answered yes in 65.3%, no in 0% and may be in 34.7% while G-II answered 70.9%, 5.5%, and 23.6% respectively (p= 0.034) ; Q6. Do you encourage your relatives and friends to do screening tests?; G-I answered yes in 29.5%, no in 32.6%, may be in 35.8% and no answer in 2.1% vs. G-II; 45.5%, 7.3%, 36.3%, 10.9% respectively (p= 0.001); Q7. Is diagnosis of cancer, means end of life? ; Group-I answered yes in 16.8% while G-II 61.8% (p= <0.001). This indicates that G-I have more awareness than G-II about the indications for different screening tests and they have a better attitude towards such tests.

Discussion

The evaluation of public awareness, attitude and misperceptions is of fundamental importance for the successful implementation of cancer control

activities⁽⁵⁾. The level of education, awareness and attitude of primary health physicians towards cancer health education and prevention is a very important issue that should be evaluated in order to have proper strategic planning for

cancer control. In this study, we have evaluated to some extent the level of knowledge, awareness and attitude about cancer, early detection and screening programs at King Abdul-Aziz University Hospital which may

represent part of our community. Regarding knowledge about causes of cancer (Table .2), the general population was found to have poor knowledge. This necessitates more efforts to educate our society. Regarding

Character	Six Year Students & Interns		General Population		Total
	No.	%	No.	%	No (%)
SEX					
- Males	35	36.8	38	69.1	73 (48.7)
- Females	60	63.2	17	30.9	77 (51.3)
RACE					
- Saudi	92	96.8	46	83.6	138 (92)
- Non Saudi	3	3.2	9	16.4	12 (8)

Table - 1 Characteristic features of the study population regarding awareness and attitude towards cancer and early detection program.

Questions	Six year medical students & Interns	General population	Total	P-Value
	No.(%)	No.(%)	No. (%)	
Is cancer preventable?				
- Yes	70 (73.7)	44 (80)	114 (76)	0.432
- No	25 (26.3)	11 (20)	36 (24)	
Mention two causes for cancer?				
- Correct	35 (36.8)	13 (23.6)	48 (32)	<0.001
- Wrong	6 (6.3)	38 (69.1)	44 (29.3)	
- Partially correct	54 (56.8)	4 (7.3)	58 (38.7)	
Mention two most common cancers in males in Saudi Arabia?				
- Correct	2 (2.1)	2 (3.6)	4 (2.7)	0.788
- Wrong	71 (74.7)	42 (76.4)	113 (75.3)	
- Partially correct	22 (23.2)	11 (20)	33 (22)	
Mention two most common cancers in females in Saudi Arabia?				
- Correct	5 (5.3)	1 (1.8)	6 (4)	0.094
- Wrong	2 (2.1)	5 (9.1)	7 (4.7)	
- Partially correct	88 (92.6)	49 (89.1)	137 (91.3)	
What is your source of information about cancer?				
- Magazines and News paper	3 (3.2)	6 (10.9)	9 (6)	<0.001
- TV and Radio	3 (3.2)	17 (30.9)	20 (13.3)	
- Physician	56 (58.9)	30 (54.5)	86 (57.3)	
- Friends	1 (1.1)	0 (0)	1 (0.7)	
- Other sources	32 (33.6)	2 (3.7)	34 (22.7)	

Table - 2 Response of the study population to the questionnaire regarding knowledge and awareness towards cancer at King Abdul Aziz University in the western region of Saudi Arabia.

common cancers in males and females in Saudi Arabia, both groups revealed poor knowledge and awareness. On the contrary, M. Abdulhadi reported in a study that the limited knowledge and misconception among medical personnel & professionals was alarmingly disappointing ⁽⁶⁾. Nadia Y. Seif et al reported that the majority of their study sample had unsatisfactory knowledge and attitude towards breast screening programs ⁽⁷⁾. Regarding the sources of information in our study, 57.3% were from physicians and very little from other sources like magazines, newspapers, T.V, radio and friends. Another study reported that the main source of information regarding breast self examination was peer group (47.5%) of women spending long time together discussing different issues which creates strong relation among each other ⁽⁷⁾. This result is congruent with the World Health Organization's report (WHO) that family and friends were significant motivators to practice breast self-examination ⁽⁸⁾. Regarding awareness and attitude towards early detection and screening programs, both groups were found to have the misconception that cancer patients will not be cured even if diagnosed early. Regarding mammography as a screening test, 25.4% of our

Questions	Six year medical students & Interns	General population	Total		P-Value
	No.(%)	No.(%)	No.	(%)	
If cancer discovered early, is it curable?					
- Yes	68 (71.6)	33 (60)	101	(67.3)	0.153
- No	27 (28.4)	22 (40)	49	(32.7)	
Indications for different screening tests?					
- 100% correct	86 (90.5)	17 (30.9)	103	(68.7)	<0.001
- 75% correct	9 (9.5)	27 (49.1)	36	(24)	
- 50% correct	0 (0)	8 (14.5)	8	(5.3)	
- 25% correct	0 (0)	3 (5.5)	3	(2)	
Is mammography a sensitive screening test?					
- Yes	71 (74.7)	38 (74.5)	109	(74.6)	1.000
- No	24 (25.3)	13 (25.5)	37	(25.4)	
Did you have any screening tests for early detection?					
- Yes	18 (18.9)	3 (5.5)	21	(14)	0.027
- No	77 (81.1)	52 (94.5)	129	(86)	
Do you participate in screening program if present?					
- Yes	62 (65.3)	39 (70.9)	101	(67.3)	0.034
- No	0 (0)	3 (5.5)	3	(2)	
- May be	33 (34.7)	13 (23.6)	46	(30.7)	
Do you encourage your relatives and friends to do screening tests?					
- yes	28 (29.5)	25 (45.5)	53	(35.3)	0.001
- No	31 (32.6)	4 (7.3)	35	(23.3)	
- May be	34 (35.8)	20 (36.3)	54	(36.1)	
- No answer	2 (2.1)	6 (10.9)	8	(5.3)	
Is diagnosis of cancer, the end of life?					
- Yes	16 (16.8)	34 (61.8)	50	(33.3)	<0.001
- No	79 (83.2)	21 (38.2)	100	(66.7)	

Table - 3 Response of the study population to the questionnaire regarding awareness and attitude towards early detection and

participants do not feel that it is a sensitive screening test for early detection of breast cancer. This indicates poor knowledge and attitude which will have a negative impact on the society. Assessing knowledge about indications for different screening tests (Q.2 of table.3) showed that the general population has poor awareness compared to young physicians (G-I). Type and level of education plays a role in the ease of delivering health education; however, it can also be an obstacle if some misconceptions exist. In a previous study, highly educated participants had a higher erroneous response regarding the outcome of breast cancer and the importance of mammography than the general population⁽⁹⁾. A common fear and misconception in our community is that the screening mammography increases the risk of breast cancer. There are other factors that may be the reason for not doing such screening tests and these are: lack of access to a facility, lack of

awareness and the fear of cancer detection. Misconception and wrong attitude were noticed in the answer to question number five regarding participation in screening program in both groups (Table 3). This issue needs to be considered especially for our new graduates and their teaching program. Wrong attitude was also found in encouraging their relatives and friends to do screening tests which is more among young doctors than the general population. This issue should be evaluated to identify the reasons behind such an attitude. Misconception and wrong attitude were found in one third of the participants in terms of believing that a diagnosis of cancer means the end of life which was more prevalent in the general population than in young physicians. The over all responses indicate poor cancer health education and wrong attitude. This is a very important issue to our new medical graduates and to the general population.

To establish cancer health education and cancer prevention or early detection programs, primary health physicians should be educated on the objectives of these programs. They are the main health service providers for the community at large and have to be equipped for this important task. This can be achieved through the incorporation of appropriate topics in the curricula of undergraduate medical students and through the continuing education of physicians, nurses and technicians. Professional training courses should be available for practicing physicians and perhaps academic or financial rewards should be offered⁽¹⁰⁾. The sole involvement of doctors and other health care professionals would most probably not suffice^(11, 12). The general population should be educated at all levels through all channels of the national mass media that could efficiently be utilized to cultivate or disseminate a healthy positive attitude towards cancer screening and early detection.

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