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POPULATION AWARENESS OF COLORECTAL CARCINOMAS (CRC) INCLUDING ITS SURGICAL ANAGEMENT IN RIYADH REGION, SAUDI ARABIA

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ABSTRACT

Background: Colorectal carcinomas (CRC) are the second most common cancer in Saudi Arabia, ranking first among men and third among women. It has been estimated that about half of colorectal cancer cases are due to lifestyle factors and about a quarter of all cases are preventable. Increasing surveillance, engaging in physical activity, consuming a diet high in fiber and reducing smoking and alcohol consumption decrease their risk. **Objective** Our aim was to study the level of awareness of people about colorectal carcinomas in Riyadh region, Saudi Arabia. **Methodology:** The design of this study was institutional-based descriptive study**.** The sample comprised 384 patients**.** Data were collected by pre-tested questionnaire and analyzed by SPSS**. Results:** The results showed that awareness level is low with (63.50%) of the respondents had low awareness about colorectal cancer, while the awareness of (34.70%) of respondents' was average. Only (1.80%) of the respondents had a high level of awareness of colorectal cancer. **Conclusion:** We concluded that the awareness of colorectal carcinoma in Saudi Arabia is low. Efforts were needed to bridge people's knowledge towards colorectal cancer.

INTRODUCTION

Awareness is knowledge that something exists, or understanding of a situation or subject at the present time based on information or experience.[1] The colon which also called the large intestine is an organ through which stool, moves and leaves the body through the anal canal

and anus.[2] The large intestine is the combination of the cecum, colon, rectum, and anal canal.[3, 4] The rectum acts as a temporary storage site for feces. CRC is the second most common cancer in Saudi Arabia, ranking first among men (10.6%) and third among women (8.9%).[5] CRC incidence and mortality rates vary markedly around the world. Globally, CRC is the third most commonly diagnosed cancer in males and the second in females, with 1.4 million new cases and almost 694,000 deaths estimated to have occurred in 2012 (6). Rates are substantially higher in males than in females.

Globally, the incidence of CRC varies over 10-fold. In the latest data from 2012 from the Globocan database, the highest incidence rates are in Australia and New Zealand, Europe, and North America. The lowest rates are found in Africa and South-Central Asia.[7] These geographic differences appear to be attributable to differences in dietary and environmental exposures that are imposed upon a background of genetically determined susceptibility.

Most colorectal cancers are due to lifestyle factors and increasing age with only a small number of cases due to underlying genetic disorders. Other risk factors include diet, obesity, smoking, and not enough physical activity. Dietary factors that increase the risk include red and processed meat as well as alcohol

It has been estimated that about half of colorectal cancer cases are due to lifestyle factors and about a quarter of all cases are preventable.[8] Increasing surveillance, engaging in physical activity, consuming a diet high in fiber, and reducing smoking and alcohol consumption decrease the risk.[9][10]

The aim of this study was to verify the level of awareness about colorectal carcinomas in Riyadh region, Saudi Arabia, to determine the attitude and barriers toward the disease and to determine the relation between level of awareness and social factors.

METHODOLOGY

The design is institutional-based descriptive cross-sectional study of patient's awareness of colorectal carcinoma in Riyadh region, KSA. The study was done in Riyadh city, the capital and largest city of Saudi Arabia, and in Majmaah city which is located about 180 km north of the capital city Riyadh.[11] Our target papulations werre Residents of Riyadh & Majmaah working in different institutions (Universities, schools, companies) aged 18 years and over, and no prior history of CRC or inflammatory bowel disease, of both genders.

The sample size was calculated by the following formula:

$$N = \frac{Z^2 P(1-P)}{e^2}$$

= 1.96^2×0.5×/0.05×0.05

= 384

A pre-tested questionnaire was used for data collection. The questionnaire has been obtained from Ahmad M. Zubaidi et al and adapted to fit our objectives.[12] To determine the level of awareness, 10 questions regarding knowledge about CRC were asked. Subjects who answered correctly 8-10 questions were considered having good knowledge. Those who answered correctly 5-7 and less than 5 questions were specified as having average and weak knowledge respectively.

The data was analyzed using SPSS 22.0. Mean ±S.D was given for quantitative variables like age etc. Frequencies and percentages were given for qualitative variables. Pearson Chi Square was applied to determine associations between qualitative variables. A p-value of < 0.05 was considered significant.

Confidentiality maintained by data coding. Approval to conduct the study obtained from the department of Essential and Health Sciences Research Center in Almajmaah University.

RESULTS

Table 1 Socio demographic characteristics (n=389)

Social factor	Frequency	Percent
Age group		
18 – 24 years old	103	26.5%
25 –34 years old	116	29.8%
35 –44 years old	101	26.0%
Above 45 years old	96	17.0%
Gender		
Male	190	48.8%
female	199	51.2%
Residence:		
Riyadh	159	**40.9%**
Majmaah	230	**59.1%**
Marital status:		
Single	92	23.7%
Married	249	64.0%
Widow	25	6.4%
Divorced	23	5.9%

Educational Level		
Ph.D	22	5.7%
Bachelor	184	47.3%
Diploma	85	21.9%
High School	82	21.1%
Secondary School	11	2.8%
Primary School	5	1.3%

The results shows that 29.8% of the respondents were in the age group (26 – 35 years), 26.5% from the age group (18 – 25 years), 26% from the age group (36 – 45 years) and 17.7% Over 40 years of age. It was shown that 51.2% of the respondents were females and 48.8% were males. Regarding residence, (59.1%) of the respondents were living in Majmaah with percentage of 40.9% of the respondents were living in Riyadh. Regarding marital status the results showed that the married, the single, the widowed and divorce constituted 64.0%, 23,7%, 6.4% and 5.9 respectively. It was shown that 184 (47.3%) of the respondents had a bachelor degree, 85 (21.9%) had diplomas, 82 (21.1%) had high school level, 22 (5.9%) had PhD while 11(2.8%) had secondary school level and 5 (1.3%) acquired primary school level.

Table 2: Awareness of Colorectal Cancer

Level of awareness	No.	%
Weak	247	63.5%
Average	135	34.7%
Good	7	1.8%
Total	389	100.0%

The results show that 63.50% of the respondents had weak awareness about colorectal cancer, while 34.70% of respondents' awareness was average and 1.80% of the respondents had a good awareness of colorectal cancer.

Table 3: Awareness of CRC according to age and gender

Scale	Age (A)	Age (B)	Arithmetic average (A) standard deviation (A)	Arithmetic average (B) standard deviation (B)	Difference average (A-B) Standard Error (A-B)	Sig.
Awareness level concerning colorectal cancer	25-18	Over 45	(0.508)2.77	(0.503)3.07	-.0.299	**0.002
	35-26	Over 45	(0.494) 2.74	(0.503)3.07	-0.327	**0.000
Scale	**Gender**	**N0.**	**Average**	**SD**	**(T) value**	**Sig.**
Awareness level concerning colorectal cancer	Male	190	2.84	0.522	-0.243	//0.808
	Female	199	2.86	0.496		

Number (%)						
Total grades	**Awareness Evaluation**	**25-18 (N=103)**	**35-26 (N=116)**	**45-36 (N=101)**	**Over 45 (N=69)**	**Total (N=389)**
4-0	**Weak**	**(62.14)64**	**(60.34)70**	**(66.34)67**	**(66.67)46**	**(63.50)247**
7-5	**Average**	(35.92)37	(36.21)42	(33.66)34	(31.88)22	(34.70)135
10-8	**Good**	(1.94)2	(3.45)4	(0.00)0	(1.45)1	(1.80)7

Number (%)				
Total Grades	**Awareness Evaluation**	**Male (N=190)**	**Female (N=199)**	**Total (N=389)**
4-0	**Weak**	**(60.53) 115**	**(66.33)132**	**(63.50)247**
7-5	**Average**	(37.37) 71	(32.16) 64	(34.70)135
10-8	**Good**	(2.11) 4	(1.51)3	(1.80)7

Results indicate that there are statistically significant differences between the ages of (18-25 years old) and (Over 45 years) for the favor of the ages (Over 45 years) which indicates that individuals with ages (Over 45 years) have a higher awareness level that the respondents with ages of (18-25 years old). As well as Ages of (26-35 years old) and (Over 45 years) for the favor of the ages (Over 45 years) which indicates that individuals with ages (Over 45 years) have a higher awareness level that the respondents with ages of (26-35 years old). While There was no statistically significant differences in the responses of respondents on total scale (Awareness level concerning colorectal cancer), that are attributable to gender (Male, Female) (t=-0.243,Sig. >0.05). **Age category (19-25):** (62.14%) of the respondents have weak awareness about colorectal cancer, while (35.92%) of respondents' awareness is average and (1.94%) of the respondents have a good awareness of colorectal cancer. **Age category (26-35):** (60.34%) of the respondents have weak awareness about colorectal cancer, while (36.21%) of respondents' awareness is average and (3.45%) of the respondents have a good awareness of colorectal cancer. **Age category (36-45):** (66.34%) of the respondents have weak awareness about colorectal cancer, while (31.88%) of respondents' awareness is average and (1.45%) of the respondents have a good awareness of colorectal cancer. **Age category (Over 45):** (66.67%) of the respondents have weak awareness about colorectal cancer, while (31.88%) of respondents' awareness is average and (1.45%) of the respondents have a good awareness of colorectal cancer. **Male:** (60.53%) of the respondents have weak awareness about colorectal cancer, while (37.37%) of respondents' awareness is average and (2.11%) of the respondents have a good awareness of colorectal cancer. **Female:** (66.33%) of the respondents have weak awareness about colorectal cancer, while (32.16%) of respondents' awareness is average and (1.51%) of the respondents have a good awareness of colorectal cancer.

DISCUSSION

Somehow colorectal awareness is universally low per studies held in Singapore, Malaysia, Europe and United Kingdome 13, 14, 15, and 16 respectively.

In comparing to a study was done in Riyadh kingdom of Saudi Arabia to investigate colorectal cancer (CRC) awareness.[17] they found Most respondents believe that screening for colon cancer should begin at symptom onset (42.9%), while in our study 38.56% of respondents believe that Early screening for colon cancer should be at the age of 50 year.

In the same study, Less than 20% of all respondents believe that polyps are a risk factor for CRC, in our study 5.14% of the respondents answered "Colon polyps" are a risk factor for CRC.

Other study of a rural-based cross sectional survey was carried out in Perak state in Peninsular Malaysia in March 2011.[14], they found that among respondents, 38% and 32% had zero knowledge score for warning signs and risk factors respectively, in comparing to our study the majority of respondents' answer were "Average" with a percentage of 42.42% to question How common is Colorectal Cancer? And 28.79% of the respondents answered by "High" while 15.42% answered "Rare".

About the barriers to screening, A study in Maryland, USA has been done by National Health Interview Survey (NHIS) (18) identified that lack of patient awareness and physician recommendation as key barriers to obtaining CRC screening**.**

In our study 38.05% believe that Unaware of screening is the most obstacles to do early screening for CRC**.**

CONCLUSION

The study concluded that the awareness of colorectal carcinoma according to this study is low. Efforts are needed decrease it's mortality and morbidity by enhancing healthy life by utilization of screening modalities for early detection.

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