

Awareness and Perception of Colorectal Cancer Risk Factors among Saudis in Eastern Province, Saudi Arabia

Gihan Yousef Ali¹, Sayed Ibrahim Ali², Mohammed Bijad Al.Osaimi³,
Saja Khalid Alhawal³, Bashaier Mohammed Al.Otaibi³, Latifah Khalid Al.Jouf³,
Mastourah Ghazi Al.Ruwaili³

¹Assistant professor of Pediatrics, College of Medicine, King Faisal University, Hofuf, Kingdom of Saudi Arabia

²Assistant professor of Biostatistics, College of Medicine, King Faisal University, Hofuf, Kingdom of Saudi Arabia

³Undergraduate Medical students of the college of Medicine, King Faisal University, Hofuf, Kingdom of Saudi Arabia

Abstract: Introduction: Worldwide Colorectal cancer (CRC) is one of most widespread cancers. In KSA, it is the 2nd most common Cancer. The prevalence of colorectal cancer in recent years prompted the people to seek medical advice randomly with minimal bowel symptoms.

Objective: This work aim to assess the knowledge, attitude, and perception of people in Eastern province of KSA regarding CRC.

Materials and Methods: This cross-sectional survey study was done during a period from 20 November to 13 December 2015; a questionnaire was distributed among Saudi population through social media. A total of 593 participants (Male = 214, Female = 379).

Results: The results depicted that mean age of the sample is 36 years (± 11 SD). The overall awareness among community is 31.9 %. Age was significant correlation with the degree of awareness especially at the age group (20-29) ($P < 0.05$). Gender doesn't show any association significant (>0.05) for most of the questions. However, results showed that males (17.3%) are more aware than females (15.2%). Educational level shows non-significant relation with the degree of awareness. High educational level shows highest respond percentage 52%. Most of the respondent knew that food habit and family history is important risk factors. Only 18% had an idea about treatment and screening.

Conclusion: The overall awareness for colon cancer and its adverse effect among people in eastern province is low. Community awareness campaign is needed to reducing its adverse effect.

Keywords: Colorectal cancer, awareness, risk factors, Saudi Arabia, Eastern Region.

1. INTRODUCTION

Colorectal cancer (CRC) is the third most common cancer in the world, with nearly 1.4 million new cases diagnosed in 2012 and it's predicted that worldwide the number of cases will rise to 1.36 million for men and 1.08 million for woman by 2035 [1].

CRC is an age dependent disease that increase with advanced age. Several other risk factors can predispose to it's developing including, smoking, Inflammatory bowel disease (IBD), physical inactivity, obesity, dietary habits and Family history of disease [2].

There is a significant global variation in CRC incidence, The highest incidence of colorectal cancer was in Oceania and Europe and the lowest incidence in Africa and Asia. About 54 % of colorectal cancer cases occurred more in developed countries [3].

In Saudi Arabia, despite the relatively low incidence, CRC is the second most common cancer, ranking first among men (10.6%) and third among women (8.9%) between 1994 and 2004. In spite that KSA consider as a low-risk country for CRC, the incidence seems to be increasing with time. According to the data from the Saudi Cancer Registry indicate an increase in CRC incidence between 2001 an2006, and almost doubled between 1994 and 2003 [4].

Colon Cancer account 1/3 of diagnosed cases of cancers above 65 years old people [5]. Compared to the west we had the higher increase incidence of CRC in the first four decades [6] and that is the cause of our concern about the future of our community [6].

The World Health Organization (WHO) reported the death rate from CRC in Saudi Arabia at 8.3%. Moreover, Saudi patients are more likely to present at a more advanced stage and at a younger age compared with Western countries[5,6]

Awareness and Perception of CRC risk factors are the two Key metrics that we can limit the problem, which was based on known how people think about colorectal cancer, and see if this thinking is right or wrong? Saudi population generally had decrease awareness regarding the timing of CRC and its risk factors which is it global phenomenon [5].

The awareness and the knowledge about risk factors for CRC not studied all over the kingdom.

Objective:

This work aim to assess the knowledge, attitude, and perception of people in Eastern region of KSA regarding CRC risk factors. We will throw some of light on misconceptions of the disease, and awareness by the magnitude of the problem in eastern regions of Kingdom of Saudi Arabia in comparison with Riyadh population.

2. METHOD

This cross-sectional survey study was done during a period from 20 Nov. to 13 December 2015, A questionnaire design in Arabic language (national language of KSA) was distributed among eastern regions Saudi population through social media (as Facebook, twitter and what's up). A total of 593 participants (Male = 214, Female = 379), aged from 15-70 years. Some of the participant were interviewed randomly selected in King Abdulaziz Hospital – Al Ahsa, and King Fahad hospital in Al.Hafuf . The questionnaire included demographics, knowledge about source of cancer, beliefs, and its risk factors. The questionnaire answered anonymously and in private.

3. STATISTICAL ANALYSIS

Data were collected and Categorical values were compared by Pearson's Chi square test using (IBM Statistics SPSS version 22). (SPSS Inc., Chicago, IL, USA). A P value of < 0.05 was considered statistically significant.

4. RESULT

Five hundred ninety three (593) participants shared in our study. Their mean age was 36±11 SD that ranges from 20-60 years. They were classified according to age into 4 age group. Group 1 (20-29yrs) group 2 (30-39yrs) group 3 (40-60yrs) group 4 (> 60yrs). Most of them was educated only one was illiterate. They were subdivided according to their level of education into primary, secondary, diploma and university bachelors.

Figure (1) shows number of participants in different age groups in both sex.

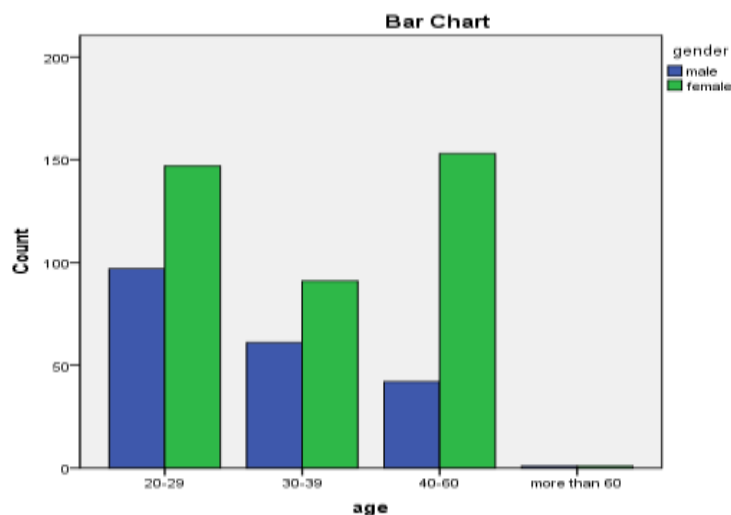


Figure (1): Age Groups And Sex Of The Studied Group.

Table (1) demonstrates the sociodemographic distribution of the studied population according to their sex. It shows no significant difference in the level of education between males and females P value (0.283). Their general knowledge about the CRC also shows no significant difference between males & females. Nearly half of the population included were in university level in both sex (59% in males and 52.2% in females).

Table (1)

Groups		Female (no. ,%)	Male (no. ,%)	P value
Age	20_29	147 (60.2%)	(%39.8) 97	0.002
	30_39	91 (59.9%)	61 (40.1%)	
	40_60	153 (78.5%)	42 (21.5%)	
	>60	1(50%)	1(50%)	
Education level	Primary	26 (6.6%)	14 (7%)	0.797
	Secondary	114 (29.1%)	70 (34.8%)	
	Diploma	1(0.3%)	2(1%)	
	University	235 (59.9%)	105 (52.2%)	
Education	Educated	16 (4.1%)	9 (4.5%)	0.283
	Not educated	0 (0.0%)	1 (0.5%)	
Awareness about CRC	Aware	59 (15.1%)	36 (17.9%)	0.217
	Not aware	333 (84.9%)	165 (82.1%)	

Table 2 shows Pearson correlation of the studied groups age sex and level of education to their awareness about CRC. Age is the only parameters that shows significant correlation P value 0.002. In spite that gender has no significant correlation males are more aware (17.9%) than females (15.1%). University level is the highest level to be aware with CRC (17.4%).

Table 2: Pearson Chi-square correlation between age, Sex and level of education and their awareness about CRC

Groups		Aware (no. ,%)	Not aware (no. ,%)	P value
Age	20_29	56 (23.0%)	188 (77.0%)	0.002
	30_39	19 (12.5%)	133 (87.5%)	
	40_60	20 (10.3%)	175 (89.7%)	
Sex	Males	36 (17.9%)	165 (82.1%)	0.392
	Females	59(15.1%)	333 (84.9%)	
Education level	Primary	5 (12.5%)	35 (87.5%)	0.797
	Secondary	26(14.1%)	158(85.9%)	
	Diploma	0 (0%)	3 (100.0%)	
	University	59(17.4%)	281(82.6%)	

Table 3 shows the awareness level of the studied population to risk factors treatment and protection of CRC. An evaluation of result revealed poor levels of knowledge as the majority of respondent provided the wrong answers. Only one-fourth of study respondents were able to give correct answer about nature of CRC, where 23% think CRC is infectious disease, and 72% say not genetic.

Regarding the knowledge about CRC risk factors, 27% says No relation between Food habits and CRC. 72% don't know age group which has high incidence to develop CRC. Regarding the knowledge of its treatment, more than three-quarters don't know about ways of treatment and percent of curative treatment , and 70% don't know how to protect themselves from it .

Table 3: Awareness of the study population about the risk factor treatment and protection of CRC

Question	Aware	Unaware
Is colon cancer an infectious disease?	454 (76.5%)	139 (23.5)
Is colon cancer a genetic disease?	165 (27.8%)	429 (72.2%)
Do you think that wrong food habits can leads to Colon Cancer	429 (72.3%)	165 (27.7%)
What are the age group that is more prone to have colon cancer	164 (27.6%)	430 (72.4%)
cancer had a curative treatment Do the colont	111 (18.7%)	482 (81.3%)
Can we prevent our self from Cancer	180 (30.3%)	413 (69.7%)
Are you interested in learning more information about cancer and its types?	492 (82.9%)	91 (17.1%)

5. DISCUSSION

In this study, we are interested to evaluate the awareness of the Saudi population specifically the population of eastern region about CRC including its Nature, risk Factors, treatment, and protection in the Saudi population, and to link these findings with age, gender, and their level of education. In spite that CRC is considered the second most common cancer in KSA [4], Most of our respondent were not aware about the CRC. As well as Riyadh population there is large knowledge gaps between knowing the colon, rectum and their function and CRC screening, symptoms, risk factors, and detection. [5]. Gimeno Garcia et.al; 2014 investigates the public awareness of CRC screening among Spanish population and concluded that lack of knowledge is linked to low levels of education, minority ethnic groups, lack of health insurance, and low household income (9)

Age of the respondent is the only factor that has significant relation with the awareness of CRC in the present study. In spite that low level of awareness was found in all groups, age group (20-29) has highest percentage of awareness 23.0% while age group (40-60) has the least awareness 10.0%. This agreed with Zubaidi et.al 2015 they found that lack of knowledge was universal among all age groups in Riyadh. While in developed country general knowledge about CRC was found to be more in elderly where the Screening rates gradually increased from 50 to 70 years [9].

Gender shows no significant effects on the degree of knowledge. While males seem to be more knowledgeable than females in this region. The same results was found by Al Wutayd et.al; 2015 whom results revealed that male respondents were more likely to give correct answers in relation to the main risk factors among Riyadh population .While Zubaidi et.al 2015 who found that in Riyadh population females were more knowledgeable of CRC than males. This can be explained in our study that males have more social contact than females. Thus, educational programs should be aimed at both males and females [5], As expected respondent with high education (university level) have the highest level of information about CRC (53.2%). This agreed with most of studies done in KSA and different countries [5,8,9].

Generally, most survey respondents were knowledgeable on CRC risk factors. They know that it is not contagious. Considerable percentage (26.6%) respond that CRC is genetic disease and family history is a risk factor. One of the main risk factors for developing CRC include a family history of CRC, this information was also detected in most of previous studies [5,8,9] A great percentage define food habit as risk factor. AL Wutayd et.al; 2015 found that among Riyadh population (only 16% of their respondents answered correctly about red meat being one of the risk factors for CRC risk factors). This can be explained that our question was general about food habit while their question was specific. Very few percentages have information about screening and treatment of CRC (18%). In Riyadh population about half of the study group correctly identified colonoscopy and 32% correctly identified FOBT as screening tests for prevention of the disease of the disease [9] This agreed with studies from other regions, the most educated populace and those in the age group most likely to develop CRC typically knew more about CRC risks and screening methods; however, specific and important knowledge, such as knowing that polyps and a family history of CRC are risk factors and that screening should

be initiated at 50 years of age, was lacking [5]. While about the third of participant are aware about how to prevent and self-protection against this disease.

6. STRENGTHS & WEAKNESS

KSA is a large country previous studies was concentrated on the capital population. Our study strength points is that this study was carried out in a new region in KSA. And it investigated people awareness about this disease. That can be guide to early screening and treatment.

Our weak relative point small sample size. That can be excused by short time of survey, and the way of collecting data by social media can be less accurate. But some of the questionnaire was filled by direct contact with participant.

7. CONCLUSION

Generally there is deficient for the knowledge about CRC among population in the eastern area KSA. While there is variable degree of knowledge of CRC across all age groups especially males, highly educated and young age group. Most of our participant were aware about risk factors for CRC. But deficient information was detected towards treatment and screening Our recommendation is that Educational programs about risk factors, warning symptoms, and early screening should be directed to all populations in the Kingdom of Saudi Arabia especially eastern region.

REFERENCES

- [1] Ferlay J, Soerjomataram I, Ervik M, Dikshit R, Eser S, et.al; Cancer Incidence and Mortality Worldwide: IARC Cancer. Int JCancer. 2013 Mar 1;132(5):1133-45. doi: 10.1002/ijc.27711
- [2] Berkowitz Z, Hawkins NA, Peipins LA, White MC & Nadel MR: Beliefs, Risk Perceptions, and Gaps in Knowledge as Barriers to Colorectal Cancer Screening in Older Adults J Am Geriatr Soc. 2008;56(2):307-314.
- [3] Siegel R, DeSantis C and Jemal A : Colorectal cancer statistics, 2014. CA Cancer J Clin 2014;64:104-117. VC doi: 10.3322/caac.21220
- [4] Ibrahim EM, Zeeneldin AA, El-Khodary TR, Al-Gahmi AM, Bin Sadiq BM.: Past, Present and Future of Colorectal Cancer in the Kingdom of Saudi Arabia Saudi J Gastroenterol 2008 Oct;14(4):178-82.
- [5] Zubaidi AM, AlSubaie NM, AlHumaid AA, Shaik SA, AlKhayal KA, AlObeed OA. Public Awareness of Colorectal Cancer in Saudi Arabia: A Survey of 1070 Participants in Riyadh. Saudi Journal of Gastroenterology : Official Journal of the Saudi Gastroenterology Association. 2015; 21(2):78-83. doi:10.4103/1319-3767.153819
- [6] Al-Ahwal M, Shafik YH and Al-Ahwal HM: First national survival data for colorectal cancer among Saudis between 1994 and 2004: what's next? BMC Public Health 2013, 13:73 doi:10.1186/1471-2458-13-73
- [7] Isbister WH : Colorectal Cancer Below Age 40 In The Kingdom Of Saudi ARABIA Aust N Z J Surg. 1992 Jun;62(6):468-72.
- [8] Al Wutayd O , Alamri F, Ali AM, Kassim KA , Ibrahim AK : Colorectal Cancer Risk Factors: A Study of Knowledge, Attitude and Practice Among Adults in Riyadh, Saudi Arabia Cancer, Research Journal 2015; 3(5): 94-99 Published online August 11, 2015 (<http://www.sciencepublishinggroup.com/j/crj>) doi: 10.11648/j.crj.20150305.11
- [9] Gimeno Garcia AZ, INHA, Nicolas-Perez D,1 and Quintero E: Public Awareness of Colorectal Cancer Screening: Knowledge, Attitudes, and Interventions for Increasing Screening Uptake, ISRN Oncology Volume 2014 (2014), Article ID 425787, 19 pages,