AWARENESS OF MEDICAL STUDENTS IN SULAIMANI UNIVERSITY ABOUT COLORECTAL CANCER SCREENING

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ABSTRACT

Background

Colorectal cancer (CRC) is one of most common cancers. Deaths from colorectal cancer have decreased with the use of CRC screening tests. Screening can find colorectal cancer early, when there is a greater chance that treatment will be most effective and lead to a cure.

Objective

To identify and compare knowledge and attitude among medical students of colleges of medicine, dentistry and pharmacy /Sulaimani University regarding CRC screening.

Materials and Methods

A cross sectional study was conducted from (20th–21st November), 2016 included 310 medical students regarding their knowledge and attitude about CRC and its screening. Questionnaires were distributed among them then data were collected and analyzed by SSPS 20th version. Chi square was used to get the association, P-value ≤ 0.05 was considered statistically significant.

Results

310 students included in this study, only 44.8% of them considered CRC to be a high-risk condition for public health. However, the majority of participants identified CRC-related symptoms (> 60%), and acknowledged its screening to be of great value in reducing CRC incidence and mortality (45.8%). Nearly 47 % had received information regarding CRC screening and 67.7% believed that there is alack or shortage of trained professionals conducting screening, with a significant association regarding P value (0.017). Students of college of medicine had the highest frequency of correct answers and positive attitudes among the 3 colleges.

Conclusion

Although most medical students had positive attitudes regarding cancer screening, this study showed important deficits in knowledge. Medical students in Sulaimani University need to be better informed about CRC and its screening.

Keywords: *CRC Screening, Knowledge, Attitude, Medical students.*

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INTRODUCTION

Colorectal cancer (CRC) refers to tumors that originate in the colon (large bowel) or rectum [1]. According to World Health Organization it is the third most common cancer in men (after lung and prostate cancer) and the second in women (after breast cancer)[2]. Because malignancies of the colon and rectum share common features the two conditions are often discussed together [1- 5]. In general, colorectal cancer can be prevented, and routine screening is a necessary element for identification of premalignant lesions (adenomatous, hyperplastic, and inflammatory polyps) and detection of existing tumors at an early stage even if the person is asymptomatic [1,4, 6]. Bowel cancer risk is associated with a number of risk factors. It's strongly related to age and sex. An estimated 75% of patients with colorectal cancer have sporadic disease; the remaining 25% have a family history of the disease [7]. Genetic, environmental, and lifestyle factors increase the risk of malignancy. [1, 5, 7] This disease can be totally asymptomatic, or it can have several symptoms including (a change in bowel habits, rectal bleeding or blood in stool, persistent abdominal discomfort, a feeling that bowel doesn't empty completely, weakness or fatigue, unexplained weight loss) [1,7]. Colorectal cancer screening is defined as testing asymptomatic individuals for the presence of colorectal cancer or adenomatous polyps [8, 9, 10]. CRC screening tools include: Fecal and serum tests (fecal occult blood test, fecal immunochemical based stool tests (FIT), DNA stool assays, and serum markers). Imaging tests (barium enema, CT colography). Optical tests(flexible sigmoidoscopy, colonoscopy) [11-14]. Screenings can find colorectal cancer early, when there is a greater chance that treatment will be most effective and lead to a cure [15, 16, 17]. Some studies suggest that people may reduce their risk of developing colorectal cancer by avoiding the factors that may lead to CRC such as alcohol and tobacco consumption [18].

Colorectal cancer is the third most common type of cancer worldwide, thorough attention and awareness has to be raised about the topic, it is crucial to evaluate medical student's level of knowledge on CRC and its screening program, in Sulaimani city there is no study done regarding this subject among medical students till now. Cancer incidents in Kurdistan region and Iraq have rapidly increased among them is CRC. A research done over the span of eight years (2006-2014) found an increase of cancer cases in Sulaimani -Kurdistan Region and colorectal cancer was not an exception [19]. Colorectal cancer incidents increased during the last four years of the research (2010-2014) as compared with the first four years when the research started, it was found that CRC was the fourth most common cancers in both males and females separately. Early diagnosis and screening for colorectal cancer has shown to be effective and beneficiary. Slightly higher rates of colorectal cancer in Sulaimani were noticed as compared to Qatar while the CRC rates in Sulaimani were close from those of Egypt [19].

Objective

To find out: Medical students' knowledge and attitude about CRC screening. The comparison of knowledge and attitude of the students of colleges of medicine, pharmacy, and dentistry about CRC screening.

MATERIALS AND METHODS

Study design: Cross-sectional study

Timing: The study was conducted from (20thNovember – 21st November), 2016.

Setting: The study was conducted in faculty of medical sciences (college of medicine, college of dentistry and college of pharmacy) of Sulaimani University.

Sampling: A convenient sample of 310 medical students. A self administrative questionnaire was designed in four parts. Part 1 was sociodemographic questions including age, gender, residency, marital status…etc. Part 2 was general, 3 questions were asked intended to find out whether the students had any background information about CRC and its screening, the source of their information and whether they wanted to receive any information about the topic in the future. Part 3 was about knowledge, questions were designed to provide information about medical students' knowledge of (1) CRC risk factors, (2) CRC-related symptoms, and (3) CRC screening methods. Part 4 was about attitude of the students regarding CRC and its screening, questions were asked regarding the students' personal attitude and regarding their opinion about potential barriers to patients receiving CRC screening.

Data analysis: The collected data were coded; for the knowledge part; 2= Correct, 1=Don't know, 0=Incorrect . For the attitude part; 1=Yes, 2=No. The codes were entered into Microsoft Excel program, 2010 and then the data were transferred and analyzed by Statistical Package for Social Sciences (SPSS) program 20th version. Chi-Square Test was used to find

the association and a (P-value ≤ 0.05)was considered statistically significant.

For initiating the research an official permission was taken from the department of (Family and Community Medicine) of college of medicine, a verbal consent was taken from each student, on a voluntary basis they accepted to participate in this study.

RESULTS

From total of all students that participated in this study which were 310 students, the mean of their age was 20.28 ± 1.7

Table 1 shows the sociodemographic status of medical students. Regarding gender the highest percentage was among females (65%),single (95.8%). moderate (93.9%), from inside the city of Sulaimani (51.6%) and of college of medicine (61.6%).

Table 2 shows opinion of medical students regarding symptoms of colorectal cancer. The correct answer for rectal bleeding as a symptom had a higher percentage (86.8%) than the incorrect one. Diarrhea as a symptom had more percentage as a correct answer (58.4%). Concerning the correct answer for constipation, it had a higher percentage (54.2%). As for 'altered bowel', the correct answer had higher percentage than the incorrect one (70.3%).

Table 3 shows knowledge of medical students regarding screening of colorectal cancer. Highest percentage among students who didn't know whether screening begins at the age of 50 (47.4%) and there's a significant association regarding P value (0.017). The correct answer for 'screening reducing mortality' had the highest percentage (58.1%) and there's a significant association regarding P value (0.002) The highest percentage of correct answers was among Colonoscopy reducing the mortality (59%).

Table 4 shows knowledge of medical students regarding colorectal cancer risks and whether is it a public health problem. Whether colorectal cancer is a public health problem majority of answers were among the correct one (44.8%). The highest percentages of correct answers for the questions: if' familial history of CRC as a factor is a risk for developing CRC' (58.7%), IBS as a factor for developing CRC' (57.7%) , smoking as a factor for developing CRC (43.9%) . The highest percentage among students who didn't know whether male gender is at higher risk of CRC or not (49.4%) .

Table 5 shows attitude of medical students regarding colorectal cancer screening. Majority of students would be embarrassed to have colonoscopy (51%),would have peace of mind if they had CRC screening (75.8%) (58.4%) didn't think there's lack of evidence regarding CRC screening benefits(58.4%)) . Regarding informing their families' higher percentage of students were willing to do it (73.5%) . About (53.5%) don't think that patients believed screening is not effective. About (67.7%) believed that there is lack or shortage of trained professionals conducting screening and there was a significant association regarding the P value (0.017).

Figure 1 shows distribution of the students regarding their information about CRC screening ,(52.9 %) they had no information.

Figure 2 shows distribution of the students regarding their information source. the highest frequency were among those that their source is medical college (72.11%).

Table 1. Sociodemographic status of medical students in University of Sulaimani

Gender	Frequency	(%)
Male	106	34.2
Female	204	65.8
Marital Status		
Single	297	95.8
Married	11	3.5
Widow	2	0.6
Socioeconomic status		
Low	18	5.8
Moderate	291	93.9
High	1	0.3
Residency		
Inside the city	160	51.6
Outside the city	150	48.4
College		
Medicine	191	61.6
Dentistry	75	24.2
Pharmacy	44	14.2
Total	310	100.0

Table 2. Opinion of medical students regarding, symptoms of colorectalcancer.

Knowledge Questions	Answers	College						Total		P value
		Medicine		Dentistry		Pharmacy		No.	(%)	
		No.	(%)	No.	(%)	No.	(%)			
Is rectal bleeding a colorectal cancer related symptom?	**Correct**	166	86.9	65	86.7	38	86.4	269	**86.8**	0.919
	Incorrect	25	13.1	10	13.3	6	13.6	41	13.2	
	Total	191	100	75	100	44	100	310	100	
Is diarrhea a colorectal cancer related symptom?	**Correct**	83	43.5	29	38.7	17	38.6	181	**58.4**	0.447
	Incorrect	108	56.5	46	61.3	27	61.4	129	41.6	
	Total	191	100	75	100	44	100	310	100	
Is constipation a colorectal cancer related symptom?	**Correct**	112	58.6	32	42.7	24	54.5	168	**54.2**	0.194
	Incorrect	79	41.4	43	57.3	20	45.5	142	45.8	
	Total	191	100	75	100	44	100	310	100	
Is altered bowel a colorectal cancer related symptom?	**Correct**	136	71.2	49	65.3	33	75	218	**70.3**	0.949
	Incorrect	55	28.8	26	34.7	11	25	92	29.7	
	Total	191	100	75	100	44	100	310	100	

Table 3. Knowledge of medical students regarding screening of colorectal cancer

Knowledge Questions	Answers	College						Total		P value
		Medicine		Dentistry		Pharmacy				
		No.	(%)	No.	(%)	No.	(%)	No.	(%)	
Screening begins at age of 50 in average risk individuals	**Correct**	82	42.9	21	28	13	29.5	116	37.4	**0.017**
	Incorrect	25	13.1	12	16	10	22.7	47	15.2	
	Don't Know	84	44	42	56	21	47.7	147	**47.4**	
	Total	191	100	75	100	44	100	310	100	
Colorectal cancer screening can reduce mortality	**Correct**	123	64.4	35	46.7	22	50	180	**58.1**	**0.002**
	Incorrect	22	11.5	12	16	13	29.5	47	15.2	
	Don't Know	46	24.1	28	37.3	9	20.5	83	26.8	
	Total	191	100	75	100	44	100	310	100	
FOBT is effective in reducing colorectal cancer mortality in average-risk patients	**Correct**	85	44.5	19	25.3	20	45.5	124	40	0.307
	Incorrect	27	14.1	8	10.7	9	20.5	44	14.2	
	Don't Know	79	41.4	48	64	15	34.1	142	**45.8**	
	Total	191	100	75	100	44	100	310	100	
Flexible sigmoidoscopy is effective in reducing colorectal cancer mortality in average-risk patients	**Correct**	102	53.4	26	34.7	16	36.4	144	**46.5**	**0.004**
	Incorrect	18	9.4	6	8	9	20.5	33	10.6	
	Don't Know	71	37.2	43	57.3	19	43.2	133	42.9	
	Total	191	100	75	100	44	100	310	100	
Colonoscopy is effective in reducing colorectal cancer mortality in average-risk patients	**Correct**	115	60.2	40	53.3	28	63.6	183	**59**	0.814
	Incorrect	18	9.4	6	8	3	6.8	27	8.7	
	Don't Know	58	30.4	29	38.7	13	29.5	100	32.3	
	Total	191	100	75	100	44	100	310	100	
Barium Enema is effective in reducing colorectal cancer mortality in average-risk patients	**Correct**	76	40	19	25.3	14	31.8	109	35.3	0.522
	Incorrect	23	12.1	5	6.7	3	6.8	31	10	
	Don't Know	91	47.9	51	68	27	61.4	169	**54.7**	
	Total	191	100	75	100	44	100	310	100	

Table 4 Knowledge of medical students regarding colorectal cancer risks and whether is it a public health problem or not.

Knowledge Questions	Answers	College						Total		P value
		Medicine		Dentistry		Pharmacy		No.	(%)	
		No.	(%)	No.	(%)	No.	(%)			
Colorectal cancer is a public health problem	Correct	96	50.3	26	34.7	17	38.6	139	**44.8**	0.075
	Incorrect	46	24.1	16	21.3	15	34.1	77	24.8	
	Don't Know	49	25.7	33	44	12	27.3	94	30.3	
	Total	191	100	75	100	44	100	310	100	
First degree family relative who has a history of colorectal cancer or polyps is a factor which increases the risk for the development of colon cancer	Correct	119	52.3	39	52	24	54.5	182	**58.7**	0.195
	Incorrect	19	9.9	8	10.7	6	13.6	33	10.6	
	Don't Know	53	27.7	28	37.3	14	31.8	95	30.6	
	Total	191	100	75	100	44	100	310	100	
Inflammatory bowel disease (Ulcerative Colitis or Crohn's) is a factor which increases the risk for the development of colon cancer	Correct	115	60.2	37	49.3	27	61.4	179	**57.7**	0.371
	Incorrect	14	7.3	6	8	6	13.6	26	8.4	
	Don't Know	62	32.5	32	42.7	11	25	105	33.9	
	Total	191	100	75	100	44	100	310	100	
Smoking is a factor which increases the risk development of colorectal cancer	Correct	81	42.4	27	36	28	63.6	136	**43.9**	0.165
	Incorrect	50	26.2	21	28	9	20.5	80	25.8	
	Don't Know	60	31.4	27	36	7	15.9	94	30.3	
	Total	191	100	75	100	44	100	310	100	
Male gender is at higher risk of colorectal cancer	Correct	69	36.1	18	24	18	40.9	105	33.9	0.51
	Incorrect	29	15.2	14	18.7	9	20.5	52	16.8	
	Don't Know	93	48.7	43	57.3	17	38.6	153	**49.4**	
	Total	191	100	75	100	44	100	310	100	

Table 5. Attitude of medical students about colorectal cancer screening

Attitude Questions	Answers	College						Total		P value
		Medicine		Dentistry		Pharmacy				
		No.	(%)	No.	(%)	No.	(%)	No.	(%)	
Would you be embarrassed to have colonoscopy?	**Yes**	99	51.8	40	53.3	19	43.2	158	**51**	0.43
	No	92	48.2	35	46.7	25	56.8	152	49	
	Total	191	100	75	100	44	100	310	100	
Does having colorectal cancer screening give you peace of mind about your health?	**Yes**	144	75.4	54	72	37	84.1	235	**75.8**	0.421
	No	47	24.6	21	28	7	15.9	75	24.2	
	Total	191	100	75	100	44	100	310	100	
Do you think there is no evidence that colorectal cancer screening has any benefits?	**Yes**	78	40.8	34	45.3	17	61.4	129	41.6	0.979
	No	113	59.2	41	54.7	27	38.6	181	**58.4**	
	Total	191	100	75	100	44	100	310	100	
Are you planning to inform your family/ friends about the benefits of colorectal cancer screening?	**Yes**	144	75.4	56	74.7	28	63.6	228	**73.5**	0.165
	No	47	24.6	19	25.3	16	36.4	83	26.5	
	Total	191	100	75	100	44	100	310	100	
Do you think patients believe screening is not effective?	**Yes**	92	48.2	35	46.7	17	38.6	144	46.5	0.296
	No	99	51.8	40	53.3	27	61.4	166	**53.5**	
	Total	191	100	75	100	44	100	310	100	
Do you believe that there is lack or shortage of trained professionals conducting screening?	**Yes**	143	74.9	38	50.7	29	65.9	210	**67.7**	**0.017**
	No	48	25.1	37	49.3	15	34.1	100	32.3	
	Total	191	100	75	100	44	100	310	100	

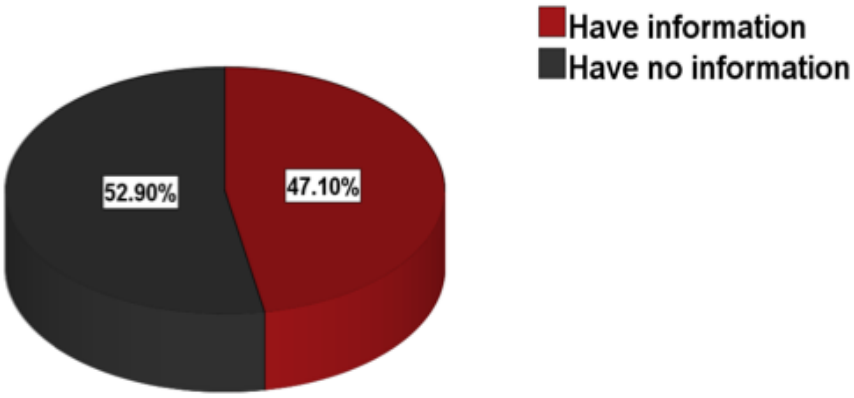

Figure. 1 Distribution of medical students regarding CRC screening informtation.

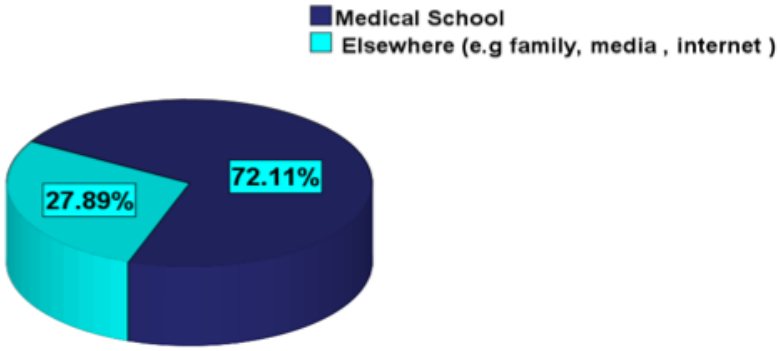

Figure. 2 Distribution of medical students about their source of information regarding CRC screening.

DISCUSSION

We ran the study in order to evaluate the knowledge of medical students at the University of Sulaimani about colorectal cancer symptoms, risk factors, and related screening modalities. From the sociodemographicdata it was concluded that the majority of the participants were students of college of medicine (61.6%). The mean age of the respondents was 20.28 ± 1.7 years. This goes with two studies done among Greek medical students that their respondents and medical students of the University of Lublin [20, 21]. This is due to the fact that it is the common university age. The majority of the students who participated were female (65.8%). This goes with a study done among Polish medical students [20], but in contrast to a study conducted at the University of Athens [21]. This may be due to the fact that the vast majority of the Medical students are usually female especially at the University of Sulaimani. A high percentage of the participants (93.9%) were of moderate socioeconomic level. The majority of the participants were living inside the city (51.6%). In this study a low percentage of the medical students knew colorectal cancer were a major health issue (44.8%), and there was no significant association regarding the P value (0.075). In contrast to a study done among medical students at the University of Athens. [20]. This difference in the percentage may be due to lack of inadequate knowledge among the students on how colorectal cancer is a major health issue, and the fact that colorectal cancer did not gain the public health's attention, or it is not perceived as a serious life-threatening health issue among the general public.

Regarding the whether the participants had any information about colorectal cancer screening, (52.9%) of the participants claimed they had no information about the topic of colorectal screening. Majority of those who had information on colorectal cancer screening claimed to have learned it in medical college. While among Greek medical students a small proportion (38%) of the medical students had received information

material regarding colorectal cancer screening (either within their study curriculum or as a part of information directed to the general public)[20] . The noticeable difference may be due to difference in the medical colleges' curriculums and strategies on giving lectures on colorectal cancer screening. Majority of the medical students wanted to gain further knowledge on colorectal cancer screening (88.03%).

In a conducted study among Greek medical students only 60% of the study group declared an interest to obtain further information. And a similar pattern was reported among medical students at Cairo University in which about more than 90% of the participants strongly agreed or somewhat they were willing to increase their knowledge regarding cancer screening [20, 23]. The high percentage may be due to students' willingness and curiosity for gaining further information on screening and the medical students wanted to learn more about colorectal cancer screening details. Regarding the students' knowledge on 'rectal bleeding being a colorectal cancer related symptom' the correct answer had a high percentage (86.8%), and there was no significant association regarding the P value (0.919). As compared with a study done in Poland the majority of students properly indicated rectal bleeding (79.9 %) [21]. In both studies level of the students' knowledge regarding rectal bleeding as a colorectal cancer related symptom was high, this was probably due to their prior knowledge they gained from the curriculums of their study, and the fact that bleeding is almost always a red flag symptom of any disease.

Concerning the answer of 'diarrhea as a colorectal cancer symptom', (58.4%) of the answers were correct answers. When asked about 'constipation as a colorectal cancer related symptom', (54.2%) of the answers were correct. Regarding 'altered bowel' as a colorectal cancer related symptom a high percentage (70.3%) of the participants answered correctly, there's no a significant association regarding the P value (0.949). In contrast to a study in Poland only (63.0%) of the medical students identified altered bowel, change in stool consistency, and diarrhea as a colorectal cancer related symptom [21]. The prominent difference in the studies' results probably is due to lecture materials that the students took during their studying curriculum. In research a low percentage of the medical students (47.4%) didn't know screening begins at age of 50 in average risk individuals, and there was a significant association regarding P value (0.017), the highest percentage of the students who did not the answer were Pharmacy School Students (47.7%). While in a survey done at Medical University of Lublin, (58.7 %) of the participants agreed age was among the inclusion criteria, but only (25.1 %) of the total students recognized correctly all inclusion criteria for recruitment to the colorectal cancer screening program [21].

The significant difference in students' knowledge about appropriate screening age may be traced to the fact that the students did not have enough academic materials regarding colorectal cancer screening. When the medical students were asked if 'colorectal cancer screening can reduce mortality rate', (58.1%) of the answers were correct, and there was a significant association regarding P value (0.002), a high percentage (64.4%) of the correct answers were by students of the college of medicine. In a research was done in Poland (95%) of the medical students were aware of the fact that CRC screening significantly reduces its incidence and mortality [21].

The prominent difference between the results of the studies may be due to inadequate academic lecture materials focusing on the importance of cancer screening and its probability in reducing mortality rates. Concerning the question about 'FOBT is effective in reducing colorectal cancer mortality in average-risk patients', (45.8%) of the medical students claimed of not knowing the answer, there was no a significant association regarding P value (0.307). In a study was done in Poland (39.8%) of the medical students considered FOBT effective in reducing colorectal cancer mortality [21]. In both studies the level of students' knowledge was not high regarding FOBT effectiveness this could be traced to their focus and level of their information about the other screening modalities. Regarding the question 'Flexible sigmoidoscopy is effective in reducing colorectal cancer mortality in average-risk patients' (46.5%) of the medical students answered correctly, and there was a significant association regarding P value (0.004), a high level of the correct answers were by the students of school of medicine (53.4%). When asked about 'the effectiveness of barium enema in reducing colorectal cancer mortality', (54.7%) of the students didn't know the answer, and there's no a significant association regarding P value (0.522).

Consistent with these results, a study was done in Illinois Medical School emphasized that fewer were aware of flexible sigmoidoscopy and double barium enema being screening options [22]. This might suggest

that the two later screening modalities are not familiar to the medical students and they were not covered appropriately in their curriculum. As for the question 'colonoscopy is effective in reducing colorectal cancer mortality in average-risk patients', high level (59%) of answers were given correctly, and there was no significant association regarding P value (0.814). While in another similar study a noticeable percentage of the medical students (87.3%) considered the effectiveness of colonoscopy in reducing mortality rate.

Among the screening modalities available for colorectal cancer most students were aware that colonoscopy was the recommended test. [21, 22] This explains that the students were aquatinted with colonoscopy and its common use and what were discussed in their curricula were influential in terms of expanding their knowledge. A high percentage of the medical students (58.7%) had the knowledge about the fact that first degree family relative who has a history of colorectal cancer or polyps is a factor which increases the risk for the development of colon cancer, there was no significant association regarding the P value (0.195). In the study that was done in Poland showed a high level of medical students (91.4%) identified polyps as a risk factor and another significant percentage of medical students (80.20%) considered family history of colorectal cancer to be an important risk factor [21].

A relatively high level of the medical students (57.7%) identified 'inflammatory bowel diseases such as ulcerative colitis and cohn's disease to be colorectal cancer related risk factor, there was no significant association regarding the P value (0.371). In comparison to the study that was done in Poland a significant proportion of medical students (70–80%) were informed that ulcerative colitis and a family history of the disease are among the important risk factors [21]. A noticeable difference in the results of the studies can be seen the difference could be due to better access of the other medical students to research materials and the screening programs that are conducted in their country. Regarding the question whether 'smoking is a colorectal related risk factor' a low percentage of the answers were correct (43.9%), there was no significant association regarding the P value (0.165).

In contrast to a study was done among Polish medical students in which a significantly high level of the medical students (73.8%) could identify smoking as a risk factor [21]. As for the question about 'male gender being at a high risk of colorectal cancer' a low percentage of the medical students only (33.9%) answered correctly and identified male gender being at higher risk of getting colorectal cancer and there was no significant association regarding the P value (0.51).

About (80.3%) of students were willing to increase their knowledge in this area, and there was no significant association regarding the P value (0.247). In a study that was done in Greek (68%) of the participants claimed their willingness to increase their knowledge in this area [20]. This could be explained by the importance and the sensitivity of colorectal cancer and the students' perception about their need to increase their knowledge on colorectal cancer screening as future doctors. More than half of students (52.9%) thought that patients do not perceive colorectal cancer as a serious disease, and statistically there was no significant association regarding the P value (0.416). This goes in an opposite pattern with a study of Illinois Medical School in which the vast majority of the participants thought colorectal cancer was considered a serious disease [22]. This is due to the fact that our patients do not have the required awareness and knowledge related to colorectal cancer.

Concerning the question asked about students being embarrassed to do a colonoscopy majority of the students responded to feel embarrassed to have a colonoscopy (83.4%) there was no significant association regarding the P value (0.43). This goes with a study done among Medical Students of Southern Illinois University, School of Medicine that (61.7%) of the students claimed they would be embarrassed to have a colonoscopy [22]. This may be due to cultural differences and the fact that it is an invasive procedure and the person may feel shame while the procedure is performed.

Majority of the students claimed to inform their family/friends about the benefits of colorectal cancer screening (73.5%), and there was no significant association regarding the P value (0.165), this is similar to a research done among Greek medical students in which (78%) of the students claimed to plan informing their family/friends. [20] this may be explained by the role of screening in reducing mortality, early detection of cancer, and increasing the chance of survival.

High percentage of students (53.5%) thought that patients don't believe in the effectiveness of screening, and there was no significant association regarding the P value (0.296). High percentage of students (67.7%) believed that there is lack or shortage of trained professionals conducting screening, and there was no

significant association regarding the P value (0.017). In contrast to a study done in Illinois Medical School about (62.4%) of the students thought there were plenty of trained professionals who could well conduct screenings [22]. This is due to the fact that our country has shortage of personnel and health care professionals to conduct screenings properly.

Conclusion

Majority of students chose correct answers regarding symptoms. More than half of students agreed with that colorectal cancer screening reduce mortality. Two thirds of students agreed with that family history of colorectal cancer is a factor which increases the risk for development of colon cancer. Half of the participants did not know whether male gender is at higher risk of CRC or not. Near half of students thought that CRC is a public health problem majority of the students have positive attitudes regarding CRC screening.

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