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Awareness, Knowledge And Attitude Of Colorectal Cancer Among Undergraduate Students

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ABSTRACT

Colorectal cancer (CRC) is a common cancer in Malaysia which can be prevented through lifestyle and early intervention. It mostly affects men and people over the age of 50. The purpose of this research was to study awareness, knowledge and attitude of the undergraduate students in SEGi University towards CRC that has a high mortality rate in the country. This cross sectional study was conducted among first year health science and non-health science students. A total number of 200 participants were randomly chosen from the school of medical, dentistry, business and engineering. The results showed that the participants were not very much aware of CRC and they had little knowledge of CRC. The attitude of participants on CRC was not also of the best. In conclusion, awareness was fairly poor; knowledge was disturbingly low with a not so good attitude about CRC. Hence, we suggest that we should improve the awareness, knowledge and attitude of our Malaysian undergraduate students towards CRC. This is because CRC has a high mortality rate in the country and lack of awareness, knowledge and attitude are the main contributing factors to its emergence.

Keywords: Colorectal cancer (CRC)

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INTRODUCTION

Cancer is one of the leading causes of death worldwide, accounting for 8.8 million deaths in 2015 [1].Among the cancers, colorectal cancer (CRC), also known as bowel cancer, has been considered as one of the leading causes of death, and has become the third most common cancer worldwide after lung and breast cancer [1-2].Geographically, the incidence varies as much as 10-fold. The highest estimated rates are in Australia/New Zealand, and the lowest in Western Africa. Mortality is higher with more deaths in the less-developed regions of the world, reflecting a poorer survival in these regions. There is less variability in mortality rates worldwide, with the highest estimated mortality rates in both sexes in Central and Eastern Europe, and the lowest in Western Africa [3]. In Malaysia, The CRC was reported to be the second most common cancer after breast cancer. It is also second most common cancer in male and female in Malaysia [4].In Peninsula Malaysia**,** CRC is the most common cancer among men and the third most common cancer among women [5].It has been reported that overall survival of Malaysian CRC patients with comparable diagnostic staging was lower than the CRC patients who live in developed countries [6]. Moreover, many Malaysians have poor awareness, knowledge and attitudes on CRC and have poor appreciation on the common symptoms, available diagnostic measures for early detection and lack of knowledge on a etiology of CRC [6]. Hashim *et al*., (2011) conducted a survey on knowledge about CRC among patients presented with bleeding per rectum. Their study reported that most of the patients had poor knowledge of risk factors and symptoms of CRC [7].

Despite realising increasing trend of CRC, health promotion regarding this disease is not highlighted by the Malaysian Ministry of Health compared to that of other cancers such as lung, cervical and breast cancer. Furthermore, no national screening program was adopted for CRC. Therefore, it is important to measure the awareness, knowledge and attitudes towards CRC in the Malaysian population as a basis for considering possible changes in practice [8-10]. Hence, the present research was conducted to study awareness, knowledge and attitude of the undergraduate students in SEGi University towards CRC which has a high mortality rate in the country as lack of awareness, knowledge and attitude are the main contributing factors to its emergence.

MATERIALS AND METHODS

This cross sectional study was conducted among first year health science and non-health science students in SEGi University, Kota Damansara. A total number of 200 participants were randomly chosen from the school of medical, dentistry, business and engineering. Each of the participating students was given the consent form which has been approved by the Review Board of SEGi University Ethical Committee and signed by the participants.

A modified validated colorectal cancer (CRC) awareness, knowledge and attitude measured questionnaire was given randomly to 200 participants, each of whom was requested to answer all the questions. The questionnaire papers were collected and statistical analysis was carried out using Statistical Package for the Social Science software (SPSS) version 22.0 [11-12].

RESULTS

Demographic characteristics

Table 1 shows the demographic characteristics of participants according to gender, age, nationality, faculty/ course and level of education. Male students outnumbered the female students. Out of the 200 students, fifty four percent (54%) were male students and the female students were composed of forty six percent (46%). A larger percentage of participants were between 18 and 20 years of age (58.5%), followed by the age group of 21-24 years old (38.5%) and the lowest percentage were in the age group of below 18 and above 25 years (1.5%). Regarding nationality, (18%) were Malay, (37%) Chinese, (10.5%) Indian and (34%) were classed as others. The number of students in health science and non-health science were 50% each.

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Table 1: Showing the demographic data.

Characteristics	Frequency	Percentage
Gender		
Male	108	54.0
Female	92	46.0
Age group		
Below 18	3	1.5
18-20	117	58.5
21-24	77	38.5
Above 25	3	1.5
Nationality		
Malay	36	18.0
Chinese	74	37.0
Indian	21	10.5
Other	69	34.0
Faculty of participant		
Health science	100	50.0
Non-health science	100	50.0
Level of education		
Degree	198	99.0
Other	2	1.0

Awareness of participants on colorectal cancer

Figure 1A, 1B, 1C and 1D show awareness of participants on colorectal cancer (CRC). Out of 200 participants, only (55.5%) of the students had heard of CRC, while, (44.5%)had never heard of CRC. Out of the 200 participants, (47.5%) of them first came to know about CRC at school, (24.0%) from the internet, (3.0%) from television, (11.0%) from friends, and (14.5%) from campaigns. Regarding question, 'Is colorectal cancer a health problem in Malaysia?'(34.0%) of the participants answered Yes, (5.5%) of the participants answered No, and the remaining (60.5%) answered "I don't know". The participants were also asked 'Do you know how common colorectal cancer is in Malaysia?'.(13.0%) of the participant answered Yes, (25.5%) answered No, and (61.5%) answered "I don't know".

Knowledge of participants on colorectal cancer

Figure 2A, 2B, 2C, 2D, 2E, 2F, 2G, 2H, 2I and 2J show knowledge of participants on colorectal cancer (CRC). (30.5%) of the participants thought that CRC was preventable, (10.5%) did not think it was preventable and (59%) were unsure about this.

Regarding the questions on cause of the CRC, (36%) of participants thought that bacteria was the main cause of CRC, (20%) chose virus as the cause of CRC, (3%) believed that fungi as the main cause of CRC and (41%) thought that bacteria, virus and fungi were not the main cause of CRC.

For the modifiable risk factors, diet and lifestyle (smoking and alcohol consumption) had a higher number of participants in which (55.5%) and (56%) were able to recognize that diet, smoking and alcohol consumption were risk factors of CRC respectively. There were (44.5%) of participants who did not know diet could cause CRC and (44%) of participants did not think that smoking and alcohol consumption were the risk factors of CRC. For overweight and stress, the results showed (37%) and (26.5%) of the participants believed that overweight and stress were the risk factors of CRC respectively. While, the majority of participants did not think being overweight (63%) and stressed (73.5%) could cause CRC. Among the non-modifiable factors, family history was the most recognizable factor for which (46.5%) of participants answered Yes, followed by age factor in which (39%) of participants answered Yes and lastly for gender factor (19%) answered Yes. The remaining (53.5%), (61%) and (81%) of participants did not count family history, age and gender as the risk factor of CRC respectively.

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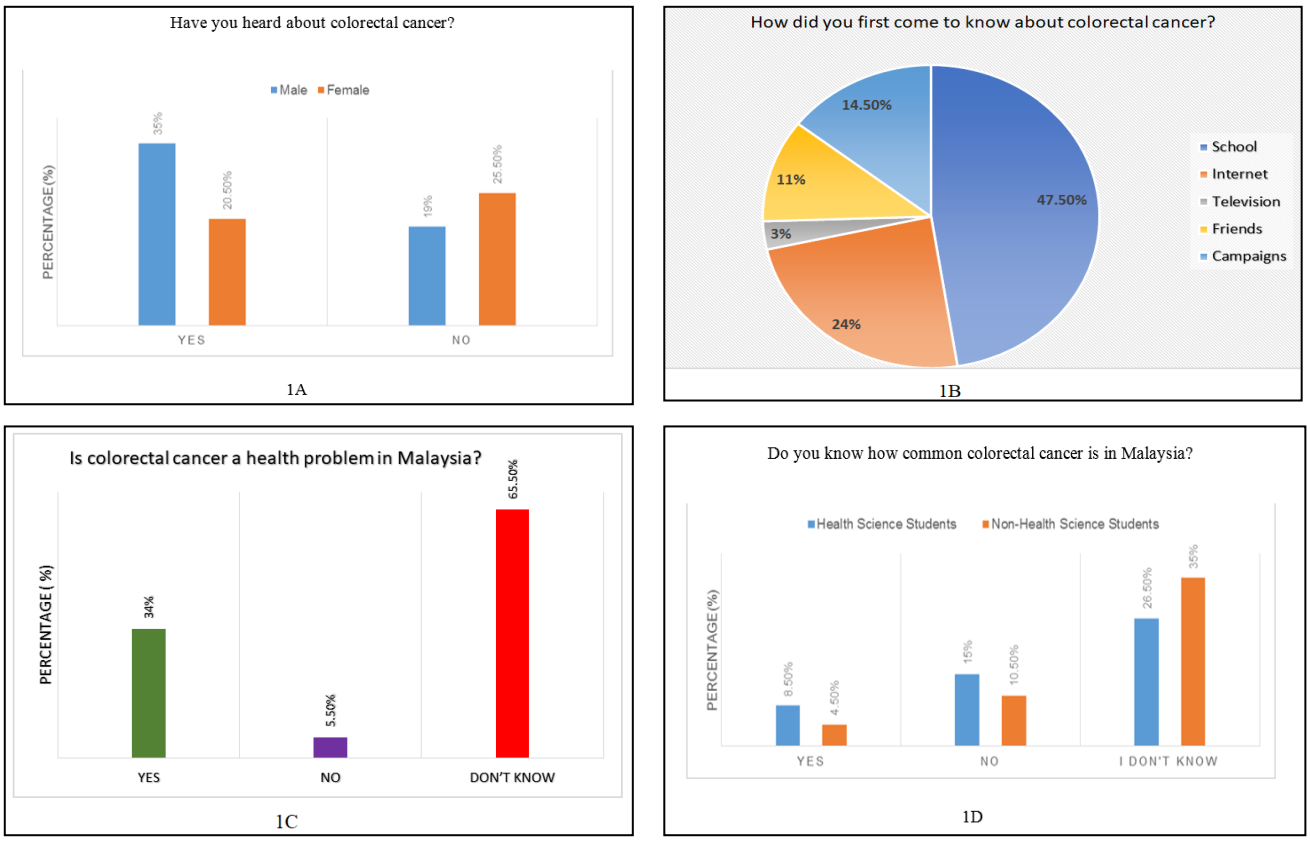

Figure 1A, 1B, 1C &1D: Showing awareness of participants on colorectal cancer

Regarding the question 'Which age group is more at risk of getting colorectal cancer?'. Most of the participants, (48%) thought that people between the ages 30-50 years old had a higher chance of getting CRC. (34.5%) of participants chose the age group 50 and above followed by (14.5%)of participants chose age group 18 -30 and lastly 3% of participants chose the age group bellow 18 years old.

Signs and symptoms of CRC were also one of the main scores for the knowledge section designed in the questionnaire in which (53.5%) of participants were able to recognize rectal bleeding as a warning sign and symptom of CRC and (46.5%) did not. For weight loss, (43.5%) of participants believed that it was a sign and symptom of CRC and (56.5%) did not. Moreover, (41.5%) of participants thought CRC could cause a change in bowel habits and (58.5%) of participants did not think so. Anaemia had the least score among the signs and symptoms part, followed by nausea/vomiting. Only (21%) and (28%) thought anaemia and nausea/vomiting wereas the signs and symptoms of CRC and the rest (79%) and (72%) did not accept them as signs and symptoms of CRC respectively. There were (37%) of participants who believed that CRC could cause a lump in the abdomen and (63%) of the participants did not count this as a sign and symptom for CRC. Lastly, on the feeling of incomplete emptiness of bowel and diarrhoea, results showed that (36.5%) and (38.5%) of respondents supported them as signs and symptoms of CRC respectively. However (63.5%) and (61.5%) did not count incomplete emptiness of bowel and diarrhoea as signs and symptoms for CRC respectively.

Regarding the question as to whether CRC is curable, most of the participants (51.5%) did not know the answer. However (38%) of participants thought that it was curable and only (10.5%) of participants assumed that CRC could not be cured completely.

Management or treatment of disease is the most important part for every single disease. Regarding the question on management or treatment of colorectal cancer, surgery was the first thing that came to the mind of participants which scored (62.5%), followed by chemotherapy (56%), radiotherapy (44.5%), antibiotic (20.5%) and herbal product (16%).

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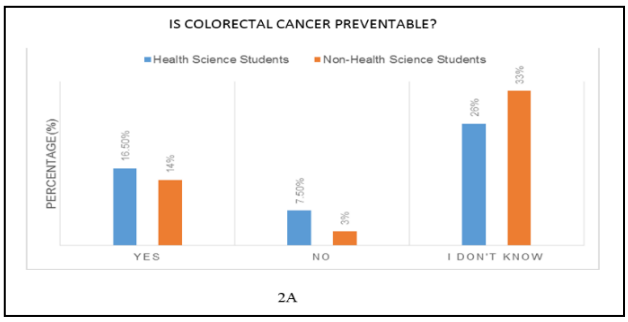

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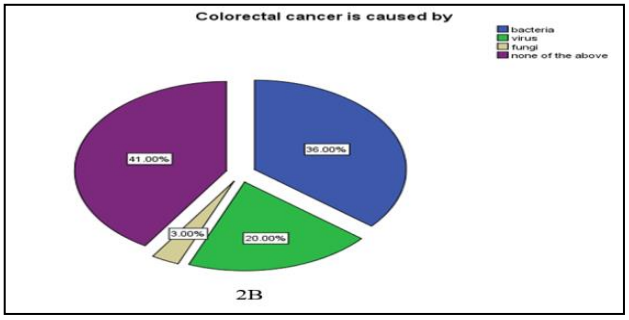

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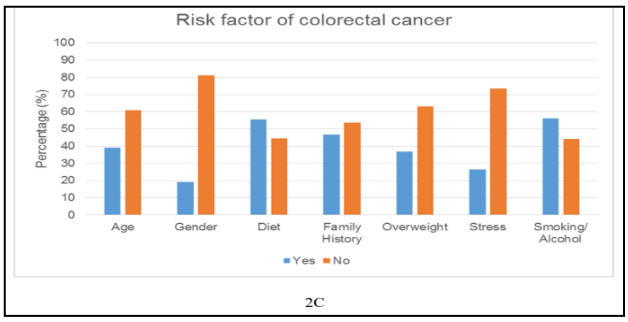

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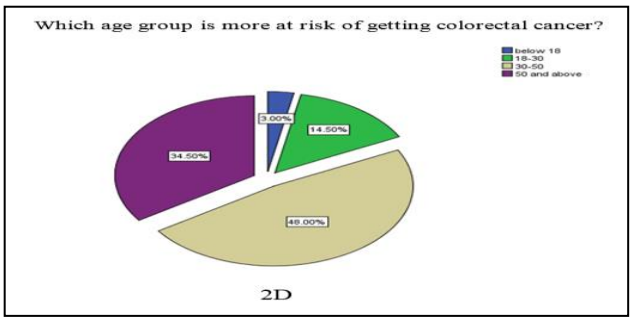

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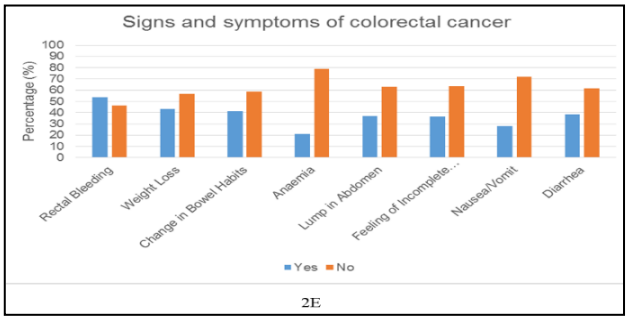

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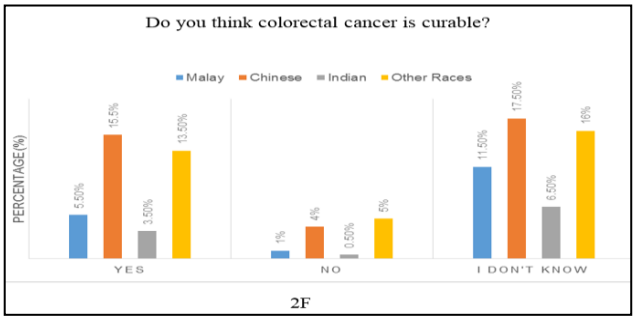

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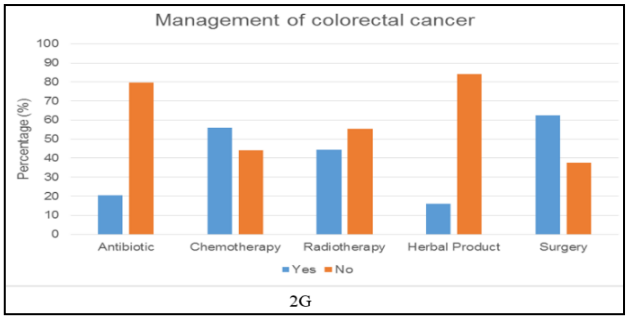

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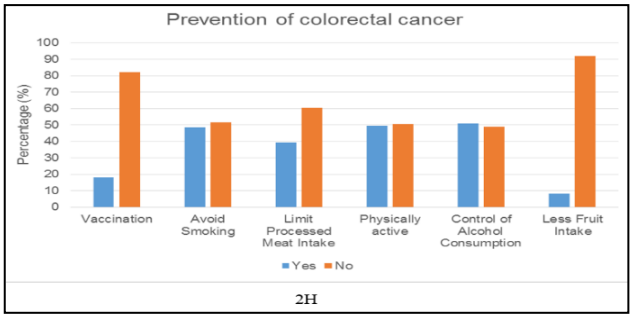

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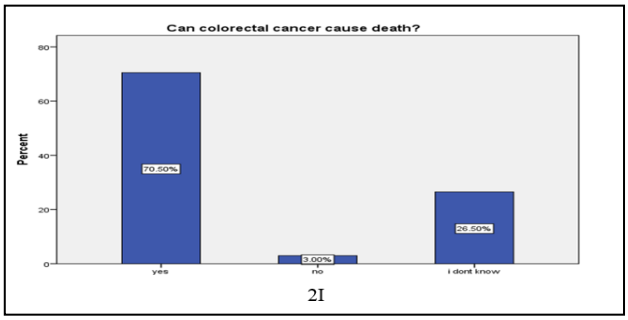

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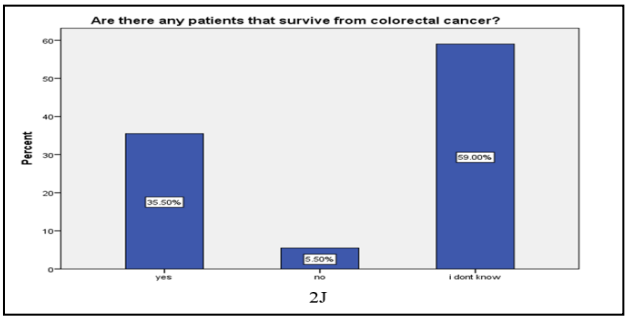

2J

Figure 2A, 2B, 2C, 2D, 2E, 2F, 2G, 2H, 2I & 2J: Showing knowledge of participants on colorectal cancer

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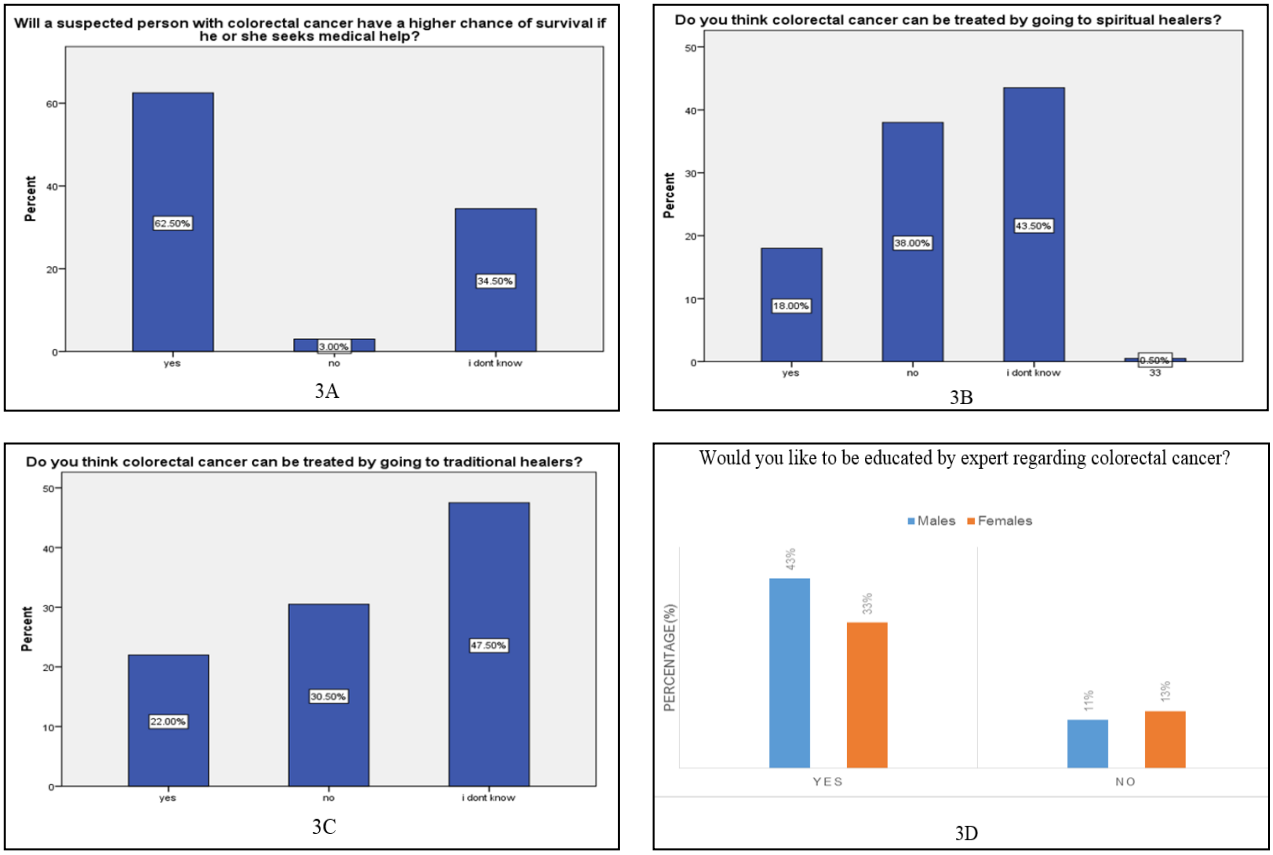

Figure 3A, 3B, 3C &3D: Showing attitude of participants on colorectal cancer

Regarding the questions related on prevention of colorectal cancer, control of alcohol consumption had the highest number of score which was (51%) followed by being physically active (49.5%), avoid smoking (48.5%), limit processed meat intake (39.5%), vaccination (18%) and less fruit intake (8%).

Regarding the question 'Can colorectal cancer cause death?' most of the participants (70.5%) believed that CRC was a deadly disease and could cause death. Only (3%) of the participants thought that CRC could not cause death and the rest (26.5%) of participants did not know.

Regarding the questions 'Are there any patients that survive from colorectal cancer?' majority of the participants (59%) did not know answer about this question. There were (35.5%) of participants who believed that patients could survive and the other (5.5%) of participants did not believe so.

Attitude of participants on colorectal cancer

Figure 3A, 3B, 3C and 3D show attitude of participants on colorectal cancer (CRC). Regarding the question 'Will a suspected person with colorectal cancer have a higher chance of survival if he or she seeks medical help?' out of the 200 participants,(62.5%) responded as Yes, while (3.0%) responded as No and (34.5%) responded as "I don't know".

Out of the 200 participants, (18%) of participants answered Yes, (38%) answered No, and (44%) answered "I don't know" for the question 'Do you think colorectal cancer can be treated by going to spiritual healers?'

Regarding the question 'Do you think colorectal cancer can be treated by going to traditional healers?' (22%)of participants said Yes, (30.5%) said No and (47.5%) said "I don't know".

Regarding the question 'Would you like to be educated by expert regarding colorectal cancer?' (76%) of the participants answered Yes and (24%)of them answered No.

DISCUSSION

The present study was carried out to investigate the awareness, knowledge and attitude toward colorectal cancer (CRC) among undergraduate students in SEGi University, Kota Damansara. Our results showed that the participants were not very much aware of CRC and they had little knowledge of CRC. The attitude of participants on CRC was not also of the best. Similar finding were reported that many Malaysians have poor awareness, knowledge and attitudes on CRC and have poor appreciation on the common symptoms, available diagnostic measures for early detection and lack of knowledge on aetiology of CRC [6]. Hashim *et al*., (2011) also conducted a survey on knowledge about CRC among patients presented with bleeding per rectum. Their study pointed out that most of the patients had poor knowledge on risk factors and symptoms of CRC [7]. Similar findings were also reported by other researchers in which they had mentioned university students had poor knowledge towards the CRC [13-15]. Other research conducted on attitude about CRC also supported the findings of our present study [16].

CONCLUSION

In conclusion, awareness was fairly poor; knowledge was disturbingly low with a not so good attitude about CRC. Hence, we suggest that we should improve the awareness, knowledge and attitude of our Malaysian undergraduate students towards CRC. This is because CRC has a high mortality rate in the country and lack of awareness, knowledge and attitude are the main contributing factors to its emergence.

COMPETING INTERESTS: The authors declare they have no competing interests.

AUTHOR CONTRIBUTIONS: Conceived and designed the experiments: KTO NSS SRD WML. Performed the experiments: BD ESY MM MSAA. Analyzed the data: BD ESY MM MSAA SAM. Wrote the paper: KTO NSS SRD. Revised the paper: KTO NSS SRD WML ATK KAJ RM SYAK JZ RSYW SAM. All authors read and approved the final manuscript to be published.

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