

Awareness, Attitude and Knowledge of Colorectal Cancer (CRC) In Saudi Arabia: A Systematic Review Study

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Abstract

Introduction: Colorectal cancer is one of the most popular cancers according to the World Health Organization at the moment. Its effects are greatly felt across the world but mostly by developing countries across the world. Its prevalence in Saudi Arabia has been on the rise in recent years. This systematic review aimed at determining the awareness, attitude, and knowledge of colorectal cancer in Saudi Arabia.

Methodology: This systematic review was conducted using 5 different electronic databases. These are Scopus, Google scholar, CINAHL, Medline, and PubMed. Articles published between 2014 to 2020 were included in the study. They must have been published in English language. All the relevant articles were reviewed and a data extraction sheet was made for the analysis.

Results: 13 articles met the inclusion and exclusion criteria. All the studies focused on both male and female participants. All the articles had participants aged 18 and above. All the articles illustrated that there was low knowledge of colorectal cancer and its effects. Most of the studies utilized female participants as the majority. Men were better informed about CRC compared to their female counterparts. Furthermore, level of education appeared to be crucial for one to be knowledgeable on CRC. Those with a medical background were more likely to have more knowledge and attitude.

Conclusion: The results of the study illustrated that there was very little knowledge available about CRC and its tests. Its effects were not well known. The tests that are done to confirm its presence were also minimally known amongst the participants of the study and by extension the citizens of Saudi Arabia. These results will aid in the formulation of a public health strategy to address CRC knowledge, awareness, and improve the attitude of the citizens of Saudi Arabia.

Keywords: Colorectal cancer; Awareness; Knowledge; Attitude; Saudi Arabia

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Introduction

Colorectal cancer (CRC) is a global concern to public health worldwide [1]. It is the 3rd most common cancer in males and 2nd in females [2]. In 2018, 1.8 million new cases of CRC were reported [5] and CRC related deaths were estimated to be around 551,269 deaths [3,4]. In epidemiological studies, environmental influences such as cultural, social, and lifestyle-related factors have been associated with CRC [7]. This includes family history, alcohol, smoking, ulcerative colitis, and age advancement [11]. Screening programs are effective at reducing both the incidence and mortality of CRC [8] the available literature indicates that at 40 years of age, the risk of getting CRC is high and sharply rises after 50 years of age [12]. The median age of colorectal cancer

diagnosis in males is 60 years while that for females is 58 [9]. Based on the clinical and pathological stage of diagnosis of CRC, survival can be determined. When CRC occurs at an earlier age in life, survival chances are minimal and disease symptoms and effects are more severe [10].

In developing nations like Saudi Arabia, the incidence of CRC have been on the rise especially in men in recent years due to the sedentary lifestyle that accompanies the economic transition that is currently occurring in the kingdom [6]. CRC there is the 2nd most common malignancy [2] it is the 1st most common cancer in males and 2nd most common in females after breast cancer [3]. There is a general inclination towards treatment as opposed to prevention measures in Saudi Arabia [13]. This approach is

detrimental, especially with a disease such as CRC [14]. Given the danger associated with the onset of CRC earlier in life, the prioritization of preventive measures to is crucial [15]. Despite testing being available in Saudi Arabia, less people are conducting the test compared to tests for cervical and breast cancers [16]. It is crucial to improve this in a bid to save lives and reduce years lived with disability due to CRC. Low testing for CRC is thought to be associated with people’s knowledge, attitudes, awareness, and perception towards CRC. It is proven that health seeking behavior is directly proportional to people’s; (i) level of knowledge and education regarding a certain issue, (ii) ability to embrace chance, and (iii) positive attitude towards treatment they are unfamiliar with [17].

Given the importance of people’s knowledge, attitudes, awareness, and perception towards CRC in reducing the effects of the disease, the aim of this study was to assess the aforementioned regarding CRC, its effects, testing, and recovery in Saudi Arabia via a systematic review of the current literature. This review will greatly help in understanding people’s knowledge, attitudes, awareness, and perception. In addition, it will help other researchers developing strategies and initiatives that targets CRC in a manner that is specific for the Saudi community, and rectify certain factors that are detrimental to tackling the disease and its consequential testing.

Methodology

This systematic review was conducted based on the Cochrane library guideline and PRISMA criteria. The search engines used during the entire systematic review were Scopus, Google scholar, CINAHIL, Medline, and PubMed. The key words used during the search were “colorectal cancer” AND “awareness” AND “knowledge” AND “attitude” AND “Saudi Arabia”.

Articles considered for the systematic review were those; (i) published between 2014 and 2020 only , (ii) written in English (articles published in other languages were excluded), (iii) discussed CRC in Saudi Arabia alone (articles that discussed CRC elsewhere were excluded).

After eliminating duplicate articles, three separate review processes were conducted in order to identify articles relevant to this systematic review: (i) the titles were scanned to ensure their relevance, (ii) the abstracts were scanned to ensure their content met our aims and objectives, (iii) any remaining articles were analyzed through a full reading to ensure if their content had any important information. During each stage of the three review processes, some articles were eliminated. The three review processes found only 13 studies met the inclusion criteria and are relevant for our systematic review. The results of the studies are illustrated in Table 1 below.

Results

All studies used both male and female participants. No single study had participants from one gender. All studies used a cross-sectional survey design. The tool used to collect information in all studies was a self-reported questionnaire. The participants were randomly selected in all studies. According to all studies, there was inadequate knowledge on the effects of CRC. Attitudes

towards its screening methods needed improvement in all studies and the level of awareness was low in all studies as well. Men generally appeared more knowledgeable on matters regarding CRC and were more aware of its testing procedures. They were more receptive of those methods compared to their female counterparts.

Throughout the study, PubMed had the most sources with 44% in the first review process, 42% in the second, and 38% in the final. Google Scholar was second throughout to the end. Medline and Scopus were equal at third, while CINAHILL had the fewest sources (Table 1).

Figure 1 illustrate the age range of the participants in the studies reviewed. Participants between 18-27 years made the majority in 38.46% of the studies, 41 to 74 years were present in 38.46%, and 28-40 were present in 23% of the studies (Figure 1).

Figure 2 illustrate the nature of the participants interviewed based on whether their daily occupation is stated or not. One study used school teachers (8 %), another used primary health care physicians (8 %), two studies used patients (15%), one study used undergraduate students (8 %), and one study used medical students (8 %), while seven studies used members of the general public (54 %) (Figure 2).

Figure 3. Illustrate which gender was targeted in each of the reviewed studies. Four studies mainly had male participants (31%), while six studies had mainly female participants (46%). The remaining three studies had both males and females (23%) (Figure 3).

Discussion

Our search strategy focused on studies conducted between

Table 1. Frequency of studies that were found during the three separate review processes.

Databases	Review process 1	Review process 2	Review process 3
Scopus	6	7	2
Google Scholar	31	12	3
PubMed	43	19	5
CINAHILL	8	3	1
Medline	9	4	2
Total	97	45	13

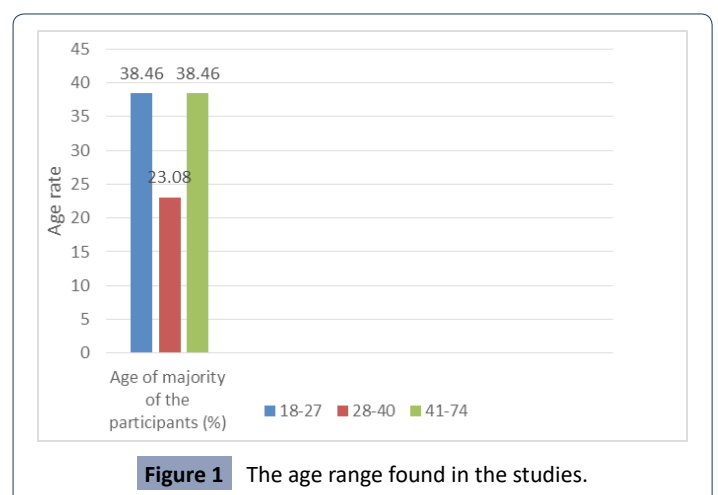
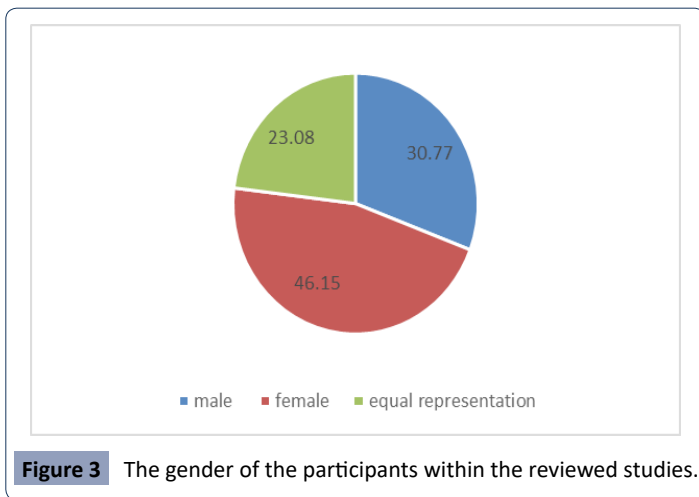
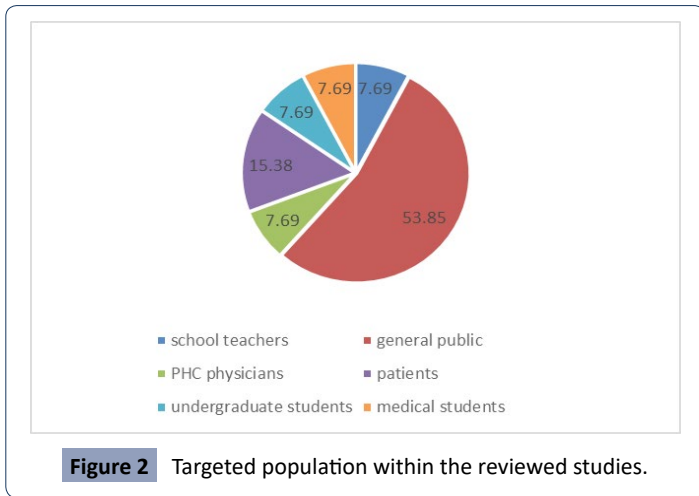


Figure 1 The age range found in the studies.



2014–2020. However, the oldest study found was conducted in 2014 with no studies between that and 2010 [18]. This shows that 2014 onwards, it was realized that CRC became a serious public health concern in Saudi Arabia with researchers working hard to determine the underlying factors for the increase in the burden of CRC cases and the attitudes of people towards it. The main surveys published between 2014-2020 were conducted to understand the knowledge and perception of the general community towards CRC. A few studies published in 2020 illustrated that this disease is not adequately addressed in Saudi Arabia and knowledge and attitudes of people did not achieve desired levels [19, 20].

The variation in participants chosen for the studies helped in providing a holistic picture. The majority of the studies were conducted with members of the general public as the main participants (53.85%) [18-25]. this was crucial, given they were the main population and were the most susceptible to CRC due to their lack of knowledge on the topic. The studies conducted to assess the attitudes and knowledge of health workers and medical students were to understand the variation between those with medical knowledge and those without [26, 27]. Investigating university students helped providing a perspective on how well youths are aware of the consequences of this disease [28]. Patient's perspective was also important, as illustrated in two

studies [19, 29], as they have experienced CRC and it is crucial to understand their experience. Teachers represent an important part of the society due to their responsibility of being the primary educators and the investigation of their understanding provided an important perspective on this disease [30].

The studies investigated a wide variety of age groups. Participants aged 18 - 27 represented the youths who are not yet susceptible to CRC [18, 20, 24, 27, 28]. It was crucial to understand how much knowledge this group has on CRC as it can be a contributing factor in minimizing the effects of the disease or even prevent it altogether by following the recommended preventative measures. Those aged between 28 - 40 years represented young adults who are already in the final years before they become at risk of CRC [21, 25, 26]. It was to assess what progress they had made in terms of knowledge, attitudes, and awareness of CRC. The studies that investigated participants between 40–74 represented the majority; people who are already at higher risk of CRC according to their age group [19, 22, 23, 29, 30]. Their knowledge and attitudes towards CRC were vital in determining the frequency of tests that would be crucial to help them diagnose it early, their response during the onset of symptoms, and the overall effect the disease would have on their lives,.

There are studies that mainly relied on males and others on females. This helped providing some perspective on how both genders perceived and understood CRC. The majority of the studies targeted female participants; this may be attributed to their warm nature and welcoming attitude towards new people and ideas [20, 25, 26, 27, 28, 30]. Less studies targeted men, this may be due to their nature as busy people and dismissiveness to new people and ideas [19, 23, 24, 29]. Even though men were less targeted, they generally seemed more informed about the disease and this may have been due to the nature of their engagements, culture, and movements.

Various perspectives and beliefs were presented regarding CRC. There was widespread and worrying ignorance on the disease which raises an alarm and is a serious issue that should be addressed by all public health personnel immediately [18-30]. People were not well informed about CRC and its screening, effects, and treatment. Their attitude specifically towards various screening techniques was not satisfactory which is probably due to the invasive nature of the tests and equipment, as most people may not accept or may not be familiar with such tests [18,19]. People were also afraid of the machines used in these screening procedures, as they appeared sophisticated. Moreover, they were afraid of taking the tests because they imagined it would subject them to unbearable pain [25]. People with medical education and background obviously portrayed better understanding and more positive attitude towards CRC and its tests [26, 27]. This was informed by the knowledge they acquired in medical school. Generally literate people were better placed regarding their attitudes and knowledge of CRC [30]. This is due to the exposure their education had offered them and the interactions that may have occurred across disciplines.

The majority of the studies used a paper-based approach to respond to the questionnaires [18, 19, 21, 22, 24-30], while only two studies utilized an electronic survey [20, 23]. The use of the

paper based (face to face) approach helped providing a better quality for collecting the data. It was possible for the researchers to help the participants with interpretation of questions that appeared difficult.

To date, few systematic reviews investigated CRC knowledge and attitudes in Saudi Arabia. This review would help providing vital information to the healthcare system to promote CRC. However, there are a few limitations to this review including: (1) studies before 2010 were excluded, (2) the review did not conduct a comparison between other countries in the region (e.g. gulf countries), and (3) articles written in Arabic language were excluded.

Conclusion

In conclusion, the attitudes and knowledge of citizens of Saudi Arabia towards CRC and its tests were not satisfactory. There is a need to improve this urgently because it might assist in minimizing the effects of CRC or even prevent it by following certain measures. All genders and age groups seemed to be poorly informed about CRC. To improve knowledge and better attitudes amongst young people, there is a need to introduce CRC promoting programs in schools, where they spend most of their time. This is more

likely to be passed to homes and have a positive impact on their parents and other relatives. There should be awareness events for the rest of the age groups in places where they spend most of their time. This includes public areas such as parks or shopping malls. Additionally, religious centers can also serve as a good base with religious leaders serving as effective motivators. Older people whose susceptibility rises with age should be informed during their visits to public places such as hospitals, mosques, and traditional markets. The hospital environment should contain written materials to inform the patients about CRC in general, its early detection techniques, and its possible level of severity. Women appear to lag behind in terms of information, and their attitudes concerning CRC appears to be the worst compared to men. To improve their position, there is a need for women friendly methods of disseminating information. Researches should focus on ways to help women advance in terms of knowledge on CRC and improve their understanding. Researches should also focus on improving CRC tests and make it less painful. This will beat the public fear whenever they experience the tests. A course on CRC should be introduced and made mandatory for medical students so that by the time they are out in the world practicing, they offer effective services to the patients.

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