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Research Article

Acceptance of Colon Cancer Screening Program in 1st Health Cluster Primary Health Care at the Ministry of Health in Riyadh, Saudi Arabia

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Abstract

Background: Screening of chronic diseases is challenging everywhere in the world and all over the time. Hence, there should be strict early screening and diagnosis programs by primary health care physicians (PHPs) and local health authorities. Colorectal cancer (CRC) is the most commonly diagnosed cancer worldwide. It is the 3rd leading cause of death internationally, and in Saudi Arabia, it accounts for 11.5% of the reported cancers. CRC screening was found to be effective in reducing 70% of CRC mortality. However, the screening rate for CRC remains poor.

Aim: To measure the participation and acceptance of the new screening program established in PHC's in first health cluster at the ministry of health (MOH) and the impact of this program.

Methods: We conducted a cross-sectional design in the period of October 2022 and November 2022 to assess the acceptance of colon cancer screening program in 1st health cluster primary health care at ministry of health in Riyadh.

Result: Data from 329 patients who completed the questionnaire through PHC's colorectal cancer screening recommendations were evaluated (with a response rate of 100%). The responses and beliefs of patients regarding CRC screening were examined using descriptive statistics. In our study, sample weights were used to provide a national estimate.

Conclusion: The patients' age, and demographic characteristics were associated to CRC screening practice. The findings may reflect the low influence of CRC screening activity, physicians receiving their medical education when CRC burden in Riyadh city was of low concern, and the lack of CRC screening capacity in some regions of Saudi Arabia.

Keywords: Colorectal Cancer; Primary Health Care; Early Detection of Cancer; Health Care Surveys; Screening; Screening Guideline; Knowledge; Attitudes; Practice; Cross-Sectional Studies

Introduction

Being mindful of the increased need, integrated growth, and execution of future policies, we need to perform a systematic analysis to evaluate the screening policy of CRC in Saudi Arabia [1]. We aim in our study to measure how patients understand prognosis, options available for treatment, and patients' anxiousness towards the treatment. The availability of several screening methods made the decision-making process very complex; however, the incidence and death rate of CRC have been reduced by the screening processes [2].

Through the screening process we can reduce the risk of CRC as, early detection has many understood merits as pre-cancerous polyps that might become cancerous, masses can be saved from this fatal disease which is the second 2nd most common leading cause of mortality in the United States [3]. Early detection and applying other preventive approaches are the major roles performed by (PCPs) [4]. Prompt diagnosis and other preventive strategies specifically aimed at decreasing the incidence and death rate due to CRC resulted in a substantial decrease through the use of particular markers or direct utilization of screening program [5,6]. EU guides the significance of regular monitoring of individuals and strategies that help promote the quality enhancing efforts in the result variation of quality of population-based screening programs. Four days before performing a colonoscopy, patients should be guided (through SMS messages) about bowel cleanliness, right colon segment checked for any benign tumor and to reduce discomfort [7]. Patients, after gathering the information and choices, are given the right to select the most suitable method they want to be performed on themselves. The shared decision-making process to educate patients is developed to help increase the rate of participation and its positive impact by properly counseling patients and making them aware of the advantages and disadvantages of testing [8].

Although the procedure for colorectal cancer (CRC) screening was requested by many general practitioners (GPs), it still demands increased patient participation rates. GPs gave certain reasons for the lower participation, such as forgetfulness of patients and reduced patients' compliance to performance due to the unpleasant test procedure; however, the participation can be increased by GPs stronger endorsement [9]. Effectiveness of CRC screening is judged when patients follow the steps in each program. All the programs have equal importance – no one program is greater than others. To improve the compliance of effective screening, informed decision-making tools are used to assist patients and clinicians. It was seen that most of the individuals were ready to undergo screening however, there was not any correlation between the inclination to undergo screening and knowledge; they are not predictors of screening uptake. Reducing the gap between "doing" and "knowing" must be explored for the promotion of CRC screening uptake [10].

Targeted screening programs for colon cancer is proven to be more beneficial for women, as per a study. Attendants from primary health care possess very less information about the colon cancer screening program [11]. A study states that workforce and workload of health workers must be reexamined by the policymakers to improve cancer results. As far as screening supporters are concerned, on a gender scale, female students were proved to be a stronger prescriber as compared to male [12]. Colorectal cancer in Saudi Arabia is the second most common cancer ranking and the first among men; there is no well-established screening program in Saudi Arabia. A study published on august 2020 stated that poor awareness of screening measures for colorectal cancer in Saudi Arabia [13]. It is recommended for urgent intervention of national policies for early detection by establishing screening programs. The epidemiology of some cancer's magnitude 3-fold in the latest years in Saudi Arabia, and this increase might be caused by a lack of awareness and early screening [14].

The Incidence Rate of Colorectal Cancer in Saudi Arabia is higher in males than females, and the percentage increased with older ages 60-75 years old. According to a study, FIT and colonoscopy screening methods may pass acceptable cost-effectiveness standards. The most effective course of action will rely on a number of variables, such as the capacity for colonoscopies and the accepted financial impact [15]. There were some misunderstandings in the surveyed population regarding the function of the colon, how common colon cancer is, and the ideal time for screening colon cancer [16].

A study that measured the barriers to Screening among Adult Saudis sated that the majority of their respondents shows insufficient awareness regarding CRC screening guideline and CRC screening methods [11].

Materials and Methods

Between October 2022 and November 2022, we conducted a cross-sectional study design through a validated questionnaire (by testing the questions using a sample of the patients) to assess the acceptance, knowledge, and practice of colon cancer screening program amongst patients in the 1st health cluster primary health care at ministry of health in Riyadh.

Inclusion criteria

Patients above the age of 50 years old with no risk factors up to 75 years old, both males and females.

Exclusion criteria

Age above 75 years old.

Sample size calculation

The total PHC is 30 centers, by cluster sampling according to the district, we will take 1 center for each 10 centers, so the total will be 3 PHC, each center will take period of 1 week collecting data for the whole visitors. The sample size was determined based on the Cochran's formula for sample size determination N = Z2alphaPQ/d2, where: Z = standard normal deviation at 95% confidence interval; P = prevalence of the problem Q = 1-p and d = 0.05.

Data collection tools

The questionnaire includes inquiries about the patient's knowledge, attitudes, existing screening practices, and obstacles to doing so. The questionnaire's items were (valid, reliable, unbiased, and undiscriminating). Data collecting form validation includes face validity by two experts, piloting, and test validity by rebound validity evaluation. The questionnaire's elements were modified by adding and removing questions to better reflect the traits of the PHCs in the Riyadh Second Health Cluster. Ten doctors participated in a pilot trial to see if they understood the questionnaire. Descriptive data analysis was done using SPSS Statistics version 20.0. 330 interviews were analyzed. Data was summarized as numbers and percentages. Simple random sampling using lottery method apart from the lead institution. In each selected hospital, all consecutive eligible patient who give informed consent were recruited until sample size was attained.

Results

The total number of participants was 329 with a response rate of 100%. It was noticed that the number of patients whose ages ranging from forty-five to fifty years old was 194 (59%), while the patients whose ages ranged from fifty-one to seventy-five years old was 135 (41%) table 1.

		Number	Percentage
Age	From 45 to 50 years old	194	58.97
	From 51 to 75 years old	135	41.03

Table 1

Knowledge regarding CRC screening program

When relying on the patient's memory, we found that out of the 329 participants, only 111 (33.7%) of the patients knew about the CRC screening program. In contrast, 218 (66.3%) have no knowledge about it. This may be due to patient-level barriers such as low level of education, poverty, under or uninsured status, and fear of procedure or bowel preparation (Table 2).

Previous experience and history of colonoscopy

The majority of the patients 272 (82.7%) have yet to experience the screening program or have a colonoscopy. Only 57 of the patients tried the screening for CRC; 13 (4%) experienced the screening more than 5 years, while 44 (13.4%) experienced it within the past 5 years (Table 2).

Barriers to the screening program

When we asked the patients about their barriers to seeking investigations and screening for CRC, we found that 198 (60.2%) have no knowledge about the screening program. This may be due to Community-level barriers identified, including inadequate public education about CRC and CRC screening and the presence of a "rural culture" that does not prioritize prevention or screening. 28 (8.5%) aren't convinced with the program. All summarized in table 2.

		Number	Percentage	p-value
Age	Age from 51-75	194	59	0.80
	Age from 41- 50	135	41	
Knowledge about the screening program	Yes	111	33.7	0.07
	No	218	66.3	
Previous history of screening for CRC	Within 5 y	44	13.4	0.9
	More than 5 y	13	4	
	No response	272	82.7	
Cause of non-seeking screening program	Non-convenience	28	8.5	0.07
	No availability of time	67	20.4	
	Lack of knowledge towards screening	198	60.2	
	No response	36	10.9	

Table 2: Summary of responses.

When we asked the patients about the screening program, and if they would advise their relatives and friends to seek early screening for CRC, 282 (85.7%) of the participants said yes. This may be due to their reliance of the importance of early diagnosis of CRC. On the other hand, 47(14.3%) said no (Figure 1). We suggest that is possibly due to their false beliefs.

Figure 1

Discussion and Conclusion

In our study, we shed light on understanding why patients living in Riyadh city are less likely to undergo recommended CRC screening; this study examined primary care patients' experiences with and opinions regarding CRC screening programs in Riyadh city. Many factors may be responsible for the discrepancy in CRC screening procedures among patients [17]. (For instance, not using alternative screening methods when colonoscopy is not an option), gender-related barriers to CRC screening in rural areas (for instance, the perception that CRC primarily affects men, embarrassment at knowing people at the endoscopy center, and prioritizing family matters over one's own health), and patient-level barriers (e.g., cost and health insurance issues, fear and perception of unpleasantness of colonoscopy) Impediments at the community level (such as insufficient public information about CRC and CRC screening, "country culture," which places little priority on prevention or screening) [11,17,18].

In contrast to our study where the most significant barrier to CRC screening was lack of knowledge followed by reported lack of time, this also indicates that they are unaware of other options of screening which are less time consuming than e.g. colonoscopy.

National guidelines recommend that doctors present those test options to patients in an informed decision-making process and specified four different tests as acceptable CRC screening options (i.e., FOBT, sigmoidoscopy, and colonoscopy). However, study results reveal that in practice, the majority of doctors are only using the guidelines sparingly [17].

50% of patients were recommended 2 types of screening by their physicians, compared to 17% who recommend just one. These findings are intriguing in light of research showing that patients have distinct preferences for CRC screening tests and that in situations where only one CRC screening test is available, many patients decide not to proceed with screening due to concerns about the test [19]. In addition, a growing body of research indicates that patient choices for CRC screening tests vary according to information provided about costs and procedure risks in addition to income level and race/ethnicity [20].

For the public's health, raising CRC screening rates remains a challenge. Modeling suggests that increased screening uptake might reduce CRC mortality in the US by half over the following ten years [19]. Despite this, public screening usage continues to be substandard, and there are few physician recommendations and little awareness of the necessity for screening. These continue to be given as the primary explanations for why many people of voting age are not screened [21]. Despite showing low levels of knowledge on screening program, patients reported willingness to recommend screening for their loved ones which means we have a great opportunity for acceptance and growth of CRC screening with in the community.

Considering the prevalence of colon cancer among the population as well as the results of our study showing the low level of knowledge it is evident that there is an imminent need to increase patient awareness. Considering our results that showed their intention to recommend screening for their relatives, this indicates that it is prime time to put more effort into patient awareness and education. (Alternative to closing statement in discussion).

Recommendation

There is an evident need to increase patient awareness and measure the screening tools and how the patient accepts the screening program among PHC in 1st cluster at MOH, Riyadh City. Further studies are needed along with multiple awareness campaigns in order to improve CRC screening rates.

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