

SCREENING OF COLORECTAL CANCER IN SOUTH ASIA – A SYSTEMATIC REVIEW



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INTRODUCTION

Colorectal cancer (CRC) is the third most commonly diagnosed cancer around the world with expanding frequency and mortality rates in Asia. In 2018, Asia had the highest rate (51.8%) and mortality (52.4%) of CRC cases (all sexes and ages) per 100,000 population. [1] Screening-based detection of colon cancer has decidedly improved patient survival over recent years. However, patients face multiple hindrances in the way of early screening and diagnosis such as lack of awareness, fear of unfavorable outcome and various socioreligious factors.[2] Fecal occult blood test ,flexible sigmoidoscopy and colonoscopy are recommended options for colorectal cancer screening in Asia. This systematic review aimed to identify prevalence of CRC screening in Asia so that the burden of this disease may be determined.

STUDY OBJECTIVES

To determine the prevalence of colorectal screening in South Asia

METHODS

This systematic review was done in accordance with Preferred Reporting Items for The Systematic Review and Meta- Analysis (PRISMA) guidelines.

Search strategy

Comprehensive search was conducted in PubMed, Cochrane and google scholar from the study's beginning until the end of August 2020. Combined keywords such as colorectal cancer, screening, diagnosing and names of each Asian country were used for searching. After removing duplicates, a screening of titles and abstracts was performed and eligible articles were selected. Full-text articles were then reviewed and articles that determined prevalence of CRC screening were included. Relevant studies were imported into Endnote X9 (Clarivate Analytics, US) to eliminate duplications

INCLUSION CRITERIA:

Original articles and observational studies (cross-sectional, case control cohort) that describe the prevalence of CRC screening in South Asia.

EXCLUSION CRITERIA:

Articles such as letters to editor, case reports, conference abstracts, editorials, review studies, clinical trials, studies in language other than English and studies not having the full text.

KEYWORDS

- Colorectal cancer screening
- Sigmoidoscopy
- Colonoscopy
- Fecal occult blood test
- South Asia
- Name of each South Asia country separately

SEARCH STRING

(colorectal cancer OR CRC) AND (south asia OR Pakistan OR India OR Nepal OR Bhutan OR Afghanistan OR Bangladesh OR Sri Lanka OR Maldives OR Iran) AND (screening OR diagnosis)

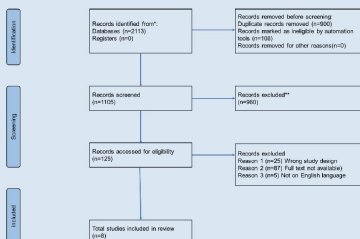
RESULTS

Baseline characteristics: All the selected studies were cross-sectional studies. Sample size ranged from 200 to 1060. Only two studies had predominantly male participants. Eight out of nine studies were based in Iran while only one was based in Pakistan as full text was unavailable for many studies.

Prevalence in Males vs Females: Majority of the studies did not specify which gender got screened for crc more while the two studies which did specify showed females to be more likely screened for CRC.

author(s)	Total prevalence %	Screening method
Hamideh Salimzadeh (2012)	11.00%	6.5% fobt 4.5% colonoscopy
Farzad Bidouei et al. (2014)	4.2	n/a
Kamel Ghobadi Dashdebi et al (2016)	29.9	Fobt
Hamideh Salimzadeh et al (2016)	49.2	Colonoscopy
Arezoo Chouhdari et al (2016)	59	Colonoscopy
Hamideh Salimzadeh et al (2017)	2.7	2.2% colonoscopy, 0.5% fobt
Fariha Hasan et al (2017)	2.6	n/a
Mehdi Mirzaei-Alavijeh et al (2019)	11.1	Fobt

PRISMA FLOWCHART



DISCUSSION

Low- and middle-income countries (LMICs) including Pakistan are facing increased rates of colorectal cancer (CRC) incidence in the last decade and lower 5-year survival rates as compared to high-income countries (HICs) where the screening and treatment services are advanced. A very low screening rate of only 2.6% was reported in a Pakistan based study by Fariha Hasan et al. This could be attributed to the significantly high cost of screening procedures and lack of knowledge and screening facilities in LMIC. Two Studies reported high crc screening rates in females as compared to male participants. A similar finding was reported in a review done in United Kingdom whereas an opposite trend has also been reported in the past. [3]

The higher rate of screening in females may be explained by the fact that females have more opportunities to be screened during their routine visits to the doctor (e.g., menstrual problems, pregnancies). [3] whereas men lack these kinds of health events.

Majority of our included studies were based in Iran. This may be due to the fact that CRC is the 4th most common cancer in Iran. [4]

CONCLUSIONS

Overall prevalence of CRC screening is very low in South Asia. Awareness programs by health care officials, governments and health care organizations can lead to increased knowledge and ultimately to regular participation in screening.



LIMITATIONS

Only cross-sectional studies were included
Most of the studies were from Iran and one was from Pakistan so data doesn't represent all the South Asian countries.

REFERENCES

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