

Education, knowledge of family cancer history, and colorectal cancer screening among U.S. adults



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Summary

- This study investigates whether individuals' knowledge of family cancer history is associated with colorectal cancer screening amongst U.S adults and if family cancer history knowledge influences CRC screening uptake independent of formal educational attainment.
- This study revealed that those with college degrees had increased odds of being screened for colorectal cancer and are more likely to have well knowledge of family cancer history.
- Knowledge of family cancer history did not influence CRC screening independent of formal education

Introduction

It is well known that a family history of colorectal cancer (CRC) is associated with an increased risk of the disease. Therefore, knowledge of family cancer history is very important for optimal cancer prevention efforts. However, it is uncertain if knowledge of family cancer history influences CRC screening uptake and if that association is independent of formal educational attainment.

Aim: To evaluate the role of knowledge of family cancer history and educational attainment on CRC screening among adults in the United States.

Methods

We used the 2018 Health information National Trends Survey (HINTS) 5 cycle 2. We identified 2,276 respondents (weighted population size = 132,125, 477) who gave information regarding their highest formal educational attainment and responded to whether they knew their family cancer history well and whether they have been screened for CRC. We used survey weights in all analyses to obtain national estimates and used logistic regression analyses to calculate odds ratios (OR) and 95% confidence intervals (CI). Our fully adjusted model included age, sex, race, BMI, smoking, marital status, and health insurance.

Table 1: Colorectal cancer screening uptake by educational status and knowledge of family cancer history

Educational Status	Lack knowledge of family cancer history		Knows family cancer history	
	% screened for CRC	Multivariate OR (95% CI)	% screened for CRC	Multivariate OR (95% CI)
High school or less	53.9%	Reference	64.4%	Reference
Some college/vocational training	58%	1.21 (0.53-2.78)	64.1%	1.01 (0.58-1.76)
College graduate	72.1%	3.21 (1.31-7.85)	73.2%	1.74 (1.00-3.02)

Results

A total of 644 (33.8%) respondents had high school education or less, 715 (40.4%) had some college / vocation school education while 917 (25.8%) were college graduates. Overall, 1,494 (64.1%) respondents reported that they knew their family cancer history well. Respondents with college degrees were more likely to know their family cancer history (74.2%) versus 64.8% among those with some college / vocational training versus 55.5% among those with high school education or less (P value for trend <0.001).

By education status, college graduates were more likely to have been screened for CRC (72.9%; OR=2.27; 95% CI: 1.40-3.68) as compared to 62%; OR= 1.13; 95% CI: 0.71-1.81) among those with some college or vocational training when compared to 59.7% among those with high school education or less (P value for trend = 0.017) regardless of knowledge of family cancer history. Overall, 1,494 (64.1%) respondents reported that they knew their family cancer history well and were more likely to have been screened for CRC (66.9% versus 58.9%; OR = 1.48; 95% CI: 1.04-2.10). However, formal education had more influence on CRC screening than knowledge of family cancer history (Table 1).

Conclusions

Formal educational attainment significantly influences CRC screening uptake among adults in the United States. However, acquisition of the knowledge of family cancer history should be encouraged among the general population.