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RELATIONSHIP BETWEEN THE STUDENT'S LEVEL OF KNOWLEDGE AND THEIR ATTITUDES TO AVOID RISK FACTORS IN COLORECTAL CANCER AT THE FACULTY OF MEDICINE, PELITA HARAPAN UNIVERSITY

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ABSTRAK
Kanker kolorektal (KKR) merupakan kanker dengan angka mortalitas dan insidensi yang tinggi. Kanker kolorektal awalnya sering terjadi pada individu usia paruh baya dan lebih tua, tetapi mulai lebih sering terjadi pada individu muda. Hal ini disebabkan oleh kurangnya pengetahuan dan kesadaran populasi muda mengenai kanker kolorektal. Oleh karena itu, penelitian ini bertujuan untuk mengetahui hubungan antara pengetahuan dan sikap terhadap pencegahan faktor risiko pada mahasiswa Fakultas Kedokteran Universitas Pelita Harapan. Untuk mengeksplorasi hubungan antara tingkat pengetahuan dan sikap terhadap pencegahan faktor risiko kanker kolorektal pada mahasiswa Fakultas Kedokteran Universitas Pelita Harapan. Penelitian ini merupakan penelitian potong lintang dengan menggunakan data primer yang dikumpulkan melalui penyebaran kuesioner. Kuesioner disebarkan kepada 162 mahasiswa Fakultas Kedokteran Universitas Pelita Harapan. Data primer dikompilasi melalui Microsoft Excel dan dianalisis dengan SPSS Statistik menggunakan metode Chi Square dan Continuity Correction. Di antara 162 responden yang diteliti, 29 (17,9%) memiliki tingkat pengetahuan yang baik tentang KKR dan 122 (75,3%) memiliki sikap yang baik dalam menghindari faktor risiko KKR. Hubungan antara tingkat pengetahuan tentang KKR dan sikap menghindari faktor risiko pada mahasiswa Fakultas Kedokteran Universitas Pelita Harapan ditemukan tidak signifikan dengan nilai p=0,206 pada uji Koreksi Kontinuitas (IK 95% = 0,755-7,128). Tidak terdapat hubungan yang signifikan antara tingkat pengetahuan tentang KKR dan sikap menghindari faktor risiko pada mahasiswa Fakultas Kedokteran Universitas Pelita Harapan.

Kata kunci **:** faktor risiko, kanker kolorektal, tingkat pengetahuan, sikap

ABSTRACT
Colorectal cancer (CRC) is a cancer with a high mortality rate and high incidence rate. Colorectal cancer initially often occurred in middle and older age individuals but is starting to occur more often in young individuals. This was caused by lack of knowledge and awareness in young population regarding colorectal cancer. For this reason, this study aims to determine the relationship between knowledge and attitudes towards preventing risk factors among students at the Faculty of Medicine, Pelita Harapan University. To explore the relationship between the level of knowledge and attitudes towards preventing colorectal cancer risk factors for students at the Faculty of Medicine, Pelita Harapan University. This was a cross-sectional study using primary data collected through the distribution of questionnaires. The questionnaire was distributed to 162 students of Universitas Pelita Harapan Faculty of Medicine. Primary data were compiled through Microsoft Excel and analysed with SPSS Statistics using the Chi Square and Continuity Correction methods. Among the 162 respondents studied, 29 (17.9%) had a good level of knowledge of CRC and 122 (75.3%) had a good attitude towards avoiding risk factors for CRC. The relationship between the level of knowledge of CRC and the attitude of avoiding risk factors in students of the Faculty of Medicine, Pelita Harapan University was found to be insignificant with a value of p=0.206 in the Continuity Correction test (95% CI = 0.755-7.128). There is no significant relationship between the level of knowledge of the CRC and the attitude of avoiding risk factors in students of the Faculty of Medicine, Pelita Harapan University.

Keywords ***:*** *colorectal cancer, level of knowledge, attitudes, risk factor*

INTRODUCTION

Colorectal cancer (CRC) is the third most common type of cancer and the second leading cause of cancer-related mortality in the world. In 2020, 1,93 million new cases of CRC were found, and it had reached 916 thousand deaths worldwide. The incidence of CRC was also reported to occur in 12,4 out of 100.000 people in Indonesia in 2020 (Kementerian Kesehatan Republik Indonesia, 2025). It is estimated that in 2030, the incidence of CRC in the world will continue to increase to reach 60% increase in cases with a calculation of 2.2 million new cases and 1.1 million deaths due to CRC. A nation's economic situation has an inverse relationship with the rise in CRC incidence and death; the worse the economy, the higher the rise in CRC incidence and mortality, and vice versa (Arnold et al., 2017; World Health Organization, 2020).

Initially, CRC was reported to mostly attack the age group of 50 years or older. Prevention efforts with screening or early detection are limited and only recommended for those aged 50 years or older in some countries. Over the last four decades, the incidence of CRC in those under 50 years of age has continued to increase in western countries (Bailey et al., 2015). According to current trends, the number of cases of colon cancer, rectal cancer, and CRC in the 20–34 age group is predicted to rise by 90%, 124%, and 124% in 2030 (Arnold et al., 2017). The absence of regular screening for young adults and older is believed to be the cause of this change in the CRC trend. Significant contributors to the rise in incidence among young people include factors related to lifestyle, such as smoking, eating habits, obesity, body mass index (BMI), and other behaviours that are currently emerging in this age group (Campos, 2017). However, it has not been possible to specify which risk factors play the biggest role in increasing the incidence of CRC in young adults. Therefore, the best effort that can be done now is to increase awareness of CRC in the community (Kyaw & Sung, 2016).

Lifestyle factors such as smoking, diet, obesity, and others are risk factors for CRC. Smoking can raise the risk of colorectal cancer by 10,8% because carcinogens like nicotine found in cigarettes can easily enter the intestines and form polyps. Furthermore, a diet high in red meat, processed meat, grains, and soda can increase the risk of CRC through several mechanisms. Twenty-nine studies also showed that every 5 kg/m2 increase in body mass index (BMI) increased the risk of CRC by 24% in men and 9% in women. This suggests that obesity may be a significant risk factor for CRC (Kyaw & Sung, 2016; J. Wang et al., 2016). Knowledge has six distinct levels: knowing, understanding, application, analysis, synthesis, and evaluation. Individuals have varying levels of knowledge. Knowledge levels are also influenced by several factors, such as education, occupation, experience, beliefs, and socio-cultural context. Meanwhile, attitudes are statements of evaluation toward a certain thing, whether it is an object or an event. Views or feelings about a thing can be considered attitudes. Attitudes themselves are also influenced by several factors, such as personal experience, the influence from people who are considered important, culture, mass media, emotional factors, educational and religious institutions (Manurung, 2021; Notoatmodjo, 2018).

Students at Faculty of Medicine, Pelita Harapan University (UPH) are among those at risk for colorectal cancer. With lifestyles increasingly adopting Western practices, particularly in dietary patterns, an increased risk of CRC incidents is possible. Because CRC is a cancer with a relatively high incidence and mortality rate, it has become a new trend among young people. This study aims to determine the relationship between knowledge and attitudes towards preventing risk factors among students at the Faculty of Medicine, Pelita Harapan University.

METHOD

This research is a cross-sectional study. This study used two questionnaires, specifically the knowledge questionnaire and the attitude questionnaire (Manurung, 2021). The Cronbach's

Alpha test showed an alpha value of 0.834 for the attitude questionnaire and 0.719 for the knowledge questionnaire. The range of Cronbach's Alpha test values that can be used must have a value > 0.7, which indicates that both questionnaires in this study have a good level of internal consistency. The sample of this study was UPH Faculty of Medicine students who had met the inclusion criteria and had agreed to participate in this study. Total sample was 162. The primary data obtained will be tabulated using Microsoft Excel. Data analysis was performed using Statistical Package for the Social Sciences (SPSS) 26. This study was statistically tested using the chi-square method.

RESULT

A total of 162 samples, 40 (24.7%) males and 122 (75.3%) females, were selected from the UPH faculty of medicine students. The samples age were 19 years old on average. Of the 162 samples, 29 (17.9%) had good knowledge of the CRC (with a score range of 8-10), 87 (53.7%) had fair knowledge of the CRC (with a score range of 5-7), and 46 (28.4%) had poor knowledge of the CRC (with a score range of <4). A total of 122 (75.3%) samples had a good attitude toward avoiding risk factors for CRC, with a score ranging from 31 to 40. With scores ranging from 21 to 30, a total of 40 (24.7%) samples had a fair attitude toward avoiding risk factors for CRC. No samples had a poor attitude. The characteristics of the samples can be seen in table 1.

Table 1. Samples Characteristic

Variable	N(%)
Sex	
Male	40 (24,7%)
Female	122 (75,3%)
Age	
17-year-old	1 (0,6%)
18-year-old	34 (21%)
19-year-old	43 (26,5%)
20-year-old	41 (25,3%)
21-year-old	39 (24,1%)
22-year-old	2 (1,2%)
23-year-old	2 (1,2%)
Level of knowledge	
Good	29 (17,9%)
Fair	87 (53,7%)
Poor	46 (28,4%)
Attitude	
Good	122 (75,3%)
Fair	40 (24,7%)
Poor	0 (0%)

This study used the Chi-Square method for sample analysis. The Chi-Square test requires that each cell in the contingency table have an expected count value > 5. In this study, three cells were found to have expected count values < 5. To meet this requirement and ensure the validity of the Chi-Square test results, the Fair and Poor categories were combined into a Fair-Poor category. The reason for combining the Fair and Poor categories is because the Fair and Poor categories indicate a lack of adequate knowledge or attitude. Thus, the Chi-Square test results are expected to provide valid results. The analysis with two categories can be seen in the table below. Since the Chi-Square test results indicate 0 cells with an expected count value < 5, the Continuity Correction test was used.

Table 2. Analysis of the Relationship Between the Level of Knowledge and Attitudes to Avoid Risk Factors in CRC at Faculty of Medicine, UPH

Level of knowledge	Attitudes to avoid rick factors in CRC		p- Value	OR
	Good	Fair-Poor		(95%) CI
Good	25	4	P=0,206	2,320
Fair-Poor	97	36		(0,755-7,128)

Based on the bivariate analysis results in table 2 using the Continuity Correction test, there was no significant relationship between the level of knowledge and attitude toward avoiding risk factors in CRC, with a p-value of 0.026.

DISCUSSION

Knowledge and attitudes both have factors that influence the formation of CRC. Several factors in the formation of knowledge and attitudes are overlap (Manurung, 2021). Therefore, it is hoped that the development of knowledge and attitudes can occur simultaneously. This study examines the level of knowledge about CRC and its relationship to attitudes toward avoiding risk factors. CRC is a preventable cancer, through primary, secondary, and tertiary prevention. CRC has several risk factors, including smoking, alcohol consumption, low physical activity, and being overweight. Primary prevention of these risk factors is expected to reduce the incidence of CRC in the wider community (Brenner & Chen, 2018). A total of 87 (53.7%) samples of UPH Faculty of Medicine students were found to have a fair level of CRC knowledge. The other samples showed knowledge levels in the good and poor categories. Meanwhile, most attitudes in this study were in the good category, as many as 122 (75.3%) samples. This demonstrates that several factors can influence differences in a person's level of knowledge and attitudes, even within the same environment.

The relationship between the level of CRC knowledge and the attitudes toward avoiding risk factors of CRC was previously investigated in a study conducted by Brahmantya et al in 2018. The results of that study differed from the results of this study. Their study showed a significant relationship between the knowledge level and attitudes toward avoiding risk factors of CRC. In that study, respondents with a good level of knowledge about CRC also had a good attitude toward avoiding risk factors (Brahmantya et al., 2018). This study found no significant relationship between the level of knowledge about CRC and the attitude toward avoiding CRC risk factors. These results indicate that the attitude toward avoiding CRC risk factors among UPH faculty of medicine students is not influenced by their knowledge. Most of the students had a fair or poor level of knowledge about CRC, but they also had a good attitude toward preventing CRC risk factors.

The findings in this study aligns with the research conducted by Manurung et al in Sumatra, which found no significant relationship between the level of knowledge and the attitudes toward avoiding risk factors of CRC (Manurung, 2021). Furthermore, this study aligns with research by Alotaibi NF et al. in Saudi Arabia, which found that the majority of respondents had a positive attitude toward the concept of cancer screening, but their knowledge and awareness of colorectal cancer were low. In the Saudi Arabian study, most respondents were willing to participate in early CRC screening and prevention, but most respondents were unaware of the warning signs of CRC, so it is necessary to increased knowledge from the mass media and educational institutions (Alotaibi et al., 2020). The lack of a significant relationship between knowledge and attitude in this study is likely due to the fact that the majority of respondents had a positive attitude, even though their knowledge was categorized as fair or poor. This is highly likely because, when referring to factors that influence attitudes, knowledge is not the only factor that can influence a person's attitude. Attitudes can be influenced by various factors, such as the influence of important person, culture, mass media,

educational institutions, religious institutions, and emotional factors (Alotaibi et al., 2020; M.-Y. Wang et al., 2017). In this study, the attitude of avoiding risk factors of CRC was largely related to changes in daily habits and lifestyle. Therefore, attitudes that are categorized as good can emerge even if the level of knowledge is not considered good.

CONCLUSION

There was no significant relationship between the level of knowledge and the attitude towards avoiding risk factors of CRC among students at the Faculty of Medicine, Pelita University. Although, most of the students had fair or poor level of CRC knowledge but they had good attitudes towards avoiding CRC risk factors.

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