



**Daffodil**  
*International*  
**University**

## PROJECT REPORT

**“A Survey On “Knowledge And Awareness Of Colon Cancer Among Pharmacy Students Of Private University In Bangladesh”.**

### Submitted To

Department of Pharmacy  
Faculty of Allied Health Sciences  
Daffodil International University

### Submitted By

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**Submission Date: 22 November 2022**

# APPROVAL

The title of this project paper is “A Survey On Knowledge And Awareness Of Colon Cancer Among Pharmacy Students Of Private University In Bangladesh” submitted to the Department of Pharmacy, Faculty of Allied Health Sciences, Daffodil International University, has been approved as its style and content and has been acknowledged as satisfactory for the partial fulfillment of the criteria for the degree of Bachelor of Pharmacy.

## BOARD OF EXAMINERS

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Professor Dr. Muniruddin Ahamed  
Professor & Head  
Department of Pharmacy  
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**Internal Examiner-1**

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**Internal Examiner-2**

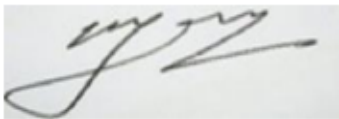
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**External Examiner**

# CERTIFICATE

This is to confirm that the research findings included in this project are new and have never been submitted in full for a degree from this university. The whole existing project, which has been submitted as a research project toward a Bachelor of Pharmacy degree, is based on the findings of the author's (ID: 183-29-140) personal research.

## Supervised By



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Assistant Professor

Department of Pharmacy

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## DECLARATION

I can certify that I have completed my project report in complete satisfaction of the requirements for the degree of Bachelor of Pharmacy at Daffodil International University (DIU) under the guidance of Md. Mizanur Rahman, Assistant Professor, Department of Pharmacy, Faculty of Allied Health Science (FAHS). I can certify that this work is entirely unique to me. I am also stating that this project, or any portion thereof, has not been submitted to another institution for the award of a bachelor's degree or any other degree.

Mostafizur

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Department of Pharmacy

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## ACKNOWLEDGEMENT

I want to express my gratitude to Almighty Allah for giving me the opportunity to complete my project work and focus on this subject.

I'd want to express my deepest gratitude to Dr. Muniruddin Ahmed, professor and chair of the pharmacy department at Daffodil International University.

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I want to thank the other students for their wonderful collaboration with me and pay my respects to all the faculty at Daffodil International University's pharmacy department.

Mostafizur

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**Author**

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## **ABSTRACT**

**Background:** The malignancy of the epithelial cells lining the colon is known as colon cancer. Colon cancer, also known as colorectal cancer or rectal cancer, often develops in the large intestine. Stomach discomfort, Loss of appetite. diarrhea, constipation, or both are symptoms. Colon cancer is classified into phases based on the tumor's sensitivity and metastatic potential. This cancer develops as a result of several acquired mutations. Colon cancer is treated in a variety of ways, ranging from early-stage surgery to patient care in the most advanced stages. We describe the most recent research on colon cancer in this especially.

**Objective:** The major goal of this study was to find out how much knowledge pharmacy students at Daffodil International University (DIU) have on Colon Cancer.

**Method:** From September to October, this offline survey will be conducted among Daffodil International University's pharmacy students. Paper and pens will be provided for self-administered questions. The data for this investigation were collected using conventional sampling techniques. The study's sample size was 100, and response was stopped after the target number got attained.

**Result:** In this survey, 100 students were involved, and 89.2% of them reported having knowledge about Colon Cancer, whereas 10.8% said they did not know. Men made up 73.5% of the participants, while women made up 26.5%. A little more than 60% of IBS participants were aware of the symptoms and indications. Students acquired knowledge of it via teachers, different social media sites, newspapers, television, and other means. More fourth-year students had knowledge about Colon Cancer than first-year students did. The Oxaliplatin medication and the rate 45(44.1%) received the majority of the student responses in this questionnaire. The majority of participants are so aware that Oxaliplatin is used to treat colon cancer.

**Conclusion:** Students' knowledge and awareness of CRC fell short of expectations. Students in their fourth year have some areas where their understanding was better, but overall things are not looking well.





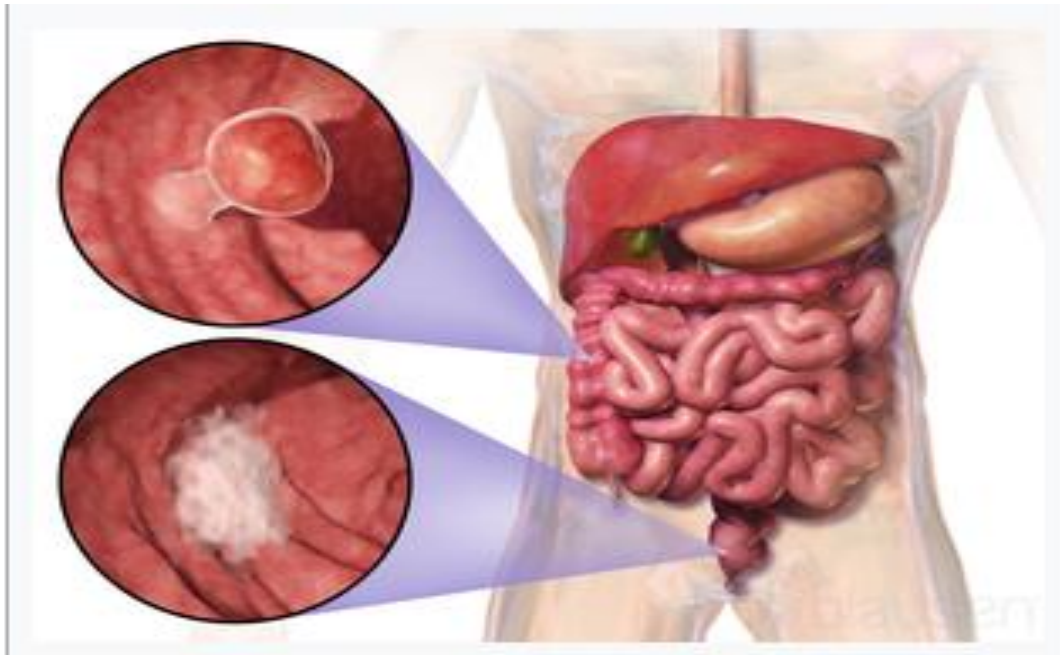
**CHAPTER 1**



**INTRODUCTION**

# 1.Introduction

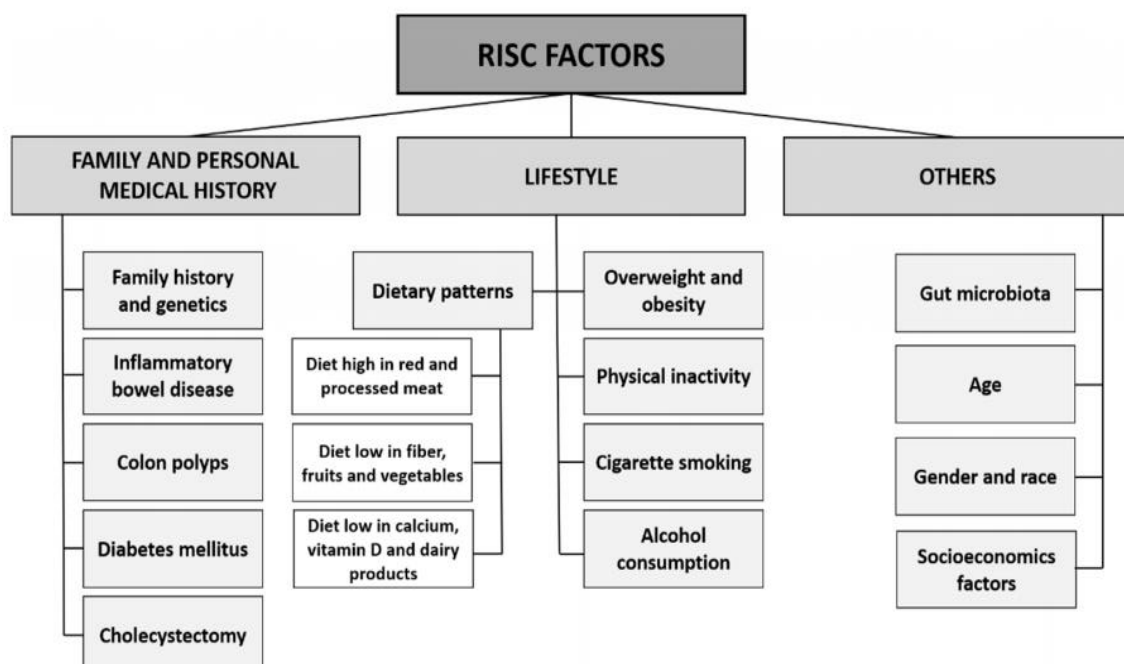
According to oncologic pathology, colon cancer is the third most prevalent kind of cancer. A condition known as colon cancer affects the rectum or colon, which are organs in the digestive system. Colon cancer generally starts in the large intestine and is also known as colon cancer or rectal cancer depending on where it starts. (1) It is generally the much more prevalent malignant cancer of the digestive tract, representing 13 percent of all malignancies. It is really the 2nd most common cause of cancer-related death globally, affecting men and women in the same way in both advanced and developing worlds, and it is predicted to surpass heart disease mortality rates in the future. (2-3) Cancer affects a large number of people aged 65 to 74 years, women being more at risk than men (4). Depending on risk conditions such as obesity, sedentary lifestyle, unhealthy eating habits (high in fat and protein), cigarettes, and the aging of the population, this condition is, nevertheless, most commonly found among younger individuals. Uncontrolled weight loss, nausea, vomiting, discomfort, anorexia, and abdominal distension are some of the symptoms that can be clinically present. Other indications include gastric discomfort, changes in chronic bowel patterns, changes in bowel movements, abdominal distention, and altered bowel patterns. (5) The suppressor or the traditional route and the mutant or variable are two parts of colon cancer, carcinogenic models. (6) The majority of cases of colon cancer begin as polyps in the mucosal surfaces, but it may also manifest as a beginning benign lesion called an adenoma, which has the potential to develop into a malignant lesion based on its histological speech and length. However, 60 percent of colon cancer cases are single adenomas, and 40 percent are multiple adenomas. Untreated polyps give rise to cancer in 24 percent of individuals. Consequently, cancer presents a significant challenge to clinic physicians and researchers who are engaged in this area (7). Cancer in its early detection both extends human life and is essential to the disease's treatment (8). Medical imaging is an important tool for the early detection of cancer and is very successful (9). For cancer diagnosis, diagnostic classification, and segmentation, machine learning, a component of AI, is frequently used in medical image analysis (10). Additionally, Machine learning techniques have been applied to evaluate and interpret medical pictures ever since they were first utilized in the midst of the 1960s (11-12). Figure (24).



**Figure: Colon Cancer**

### 1.1 Causes of Colon Cancer

Cancer develops when a healthy cell splits and multiplies uncontrolled. Most cases of colon cancer first appear in clusters of cells on the lining of the colon, where cells are generally controlled in their development. Polyps are what they are. Multiple polyps are possible, and they are not always a sign of colon cancer. Unfortunately, colon cancer is more likely to strike those with polyps.



## **Risk factors for colorectal cancer**

**Age:** Colorectal cancer risk increases with age. Most cases occur in the 60s and 70s, while cases before age 50 are uncommon unless a family history of early colon cancer is present.

**Genetic conditions:** This is a conditions predispose to getting colorectal cancers. For example, those with familial adenomatous polyposis (FAP) and hereditary non-polyposis colorectal cancer (HNPCC), also known as Lynch syndrome are at a higher risk. FAP affects 1 in 10,000 people. These individuals develop several non-cancerous polyps inside the intestines. These are not cancerous but at least one of them may turn cancerous. Almost all people with FAP will have bowel cancer by the time they are 50 years of age.

**Inherited factors:** A first- or second-degree cousin who has colon cancer doubles the risk, and 2 relations who also have the disease quadruple the dangers.

**Diet-related factors:** A diet heavy in processed and red meat and low in dietary fiber has been linked to an increased risk of colon cancer, according to several studies. People who consume more than 90 g (cooking volume) of red and processed meat per day should cut down to 70 g, according to the Health Authority.

**Obesity:** People with a BMI of 40 or higher are twice as likely to develop colon cancer. Obese women have a little risk of colon cancer, while severely obese people have a 50 percent higher risk than women who are of an ideal weight.

**Alcohol and smoking:** Cigarettes increase the risk of developing colon cancer by 25 percent. There is evidence that several compounds in nicotine are dangerous or increase cancer risk in general. Large investigations have demonstrated a link between colon cancer and heavy alcohol use.

**Physical Inactivity:** Both inactivity and activity have been linked to colon cancer. If a person exercises vigorously for an hour, their chance of developing colon cancer may drop by up to 50%.

## **1.2. The main symptoms of colon cancer**

Beginning colon or rectal cancer may not show any symptoms. The tumor's stage, position, and degree of dissemination all influence the signs. Guidelines from the National Institute for Health and Professional Excellence have been issued to help medical professionals recognize people who are at increased risk for cancer. Rectal bleeding, abdomen masses, constipation, loose stools, loss of weight, and metal anemia are all associated with the suspicion of Cancer and the subsequent transfer for a diagnostic (13). But it's also important to highlight other symptoms that are not located, such as unexpected appetite loss and deep vein thrombosis. An evaluation for associated symptoms, signs, or findings in connection with these signs may assist determine which cancer is most likely to be treated and may also provide for an immediate examination or a suspect cancer route referral (14). Additionally, all positive and negative probability rates (PLR and NLR) show that the chance of detecting Cancer is unaffected considerably by the presence or absence of indications (15). (16-17) A detectable intestinal mass on evaluation, as well as reports of rectal bleeding that is dark red or gastrointestinal bleeding accompanied by losing weight and altered bowel habits (18).

### **Initial symptoms:**

- ✓ Blood stains on the bowels or blood in the feces. This might be a deep crimson color.
- ✓ Mucus secretion with stools.
- ✓ More than three weeklong episodes of constipation or diarrhea.
- ✓ inflammation in the abdomen
- ✓ Constant pain
- ✓ Bloating in the abdomen.
- ✓ Appetite decrease
- ✓ Unaccounted is losing weight.

### **Advanced symptoms:**

- ✓ High sensitivity
- ✓ Reduced levels of red cells in the blood cause anemia.
- ✓ Colorectal obstructions - Liver enlargement, also known as liver failure, and hepatitis, are symptoms of malignancy that have progressed to the liver.
- ✓ Rare problems might appear as the first signs of established cancer. Deep-vein thrombosis, ischioanal abscesses, and gastro colic fistulas are a few of them.

### 1.3. Diagnosis of Colon Cancer

The stage, the precision of the monitoring or diagnosis test, and the participant's signs all factor into a colon cancer diagnosis. A tumor sample is taken during the colonoscopy as the first step in the evaluation. Diagnostic tests are run on the patient's chest, stomach, and pelvis to ascertain the degree of the disease if cancer is confirmed to be present. These exams include MRIs, PET scans, and X-rays. According to the TNM system of categorization, the doctor can determine cancer's stages based on these findings.

**Family background:** The participant is questioned about the family background of colon cancer if they show signs. In-depth questions are also asked about the symptoms' past. For instance, the occurrence of local signs near the anus suggests colon cancer.

**Examination of the body:** Then a physical examination known as a digital rectal examination is performed (DRE). In a DRE, the doctor carefully inserts a protected, moistened fingertip into the anus before moving it up the colon. A topical anesthetic gel is used to numb the surrounding region. The inspection is usually not too painful. DRE examines the colon and anus for tumors. An estimated 40 to 80 percent of colon cancer patients have this.

**Sigmoidoscopy:** A sigmoidoscopy is defined as the following procedure. In order to examine the inside surfaces of the bottom part of the digestive tract on the display, an extremely thin pipe with a camera on its head must be inserted. A Sigmoidoscopy is what we're referring to here.

**Colonoscopy:** All of the big intestines are inspected during a colonoscopy. A colonoscopy is a device that employs a longer tube. Using specific diets and diuretics, the intestines must be totally empty before a colonoscopy may be performed. The colonoscopy, like a sigmoidoscopy, may be used to take a sample and transmit pictures of any suspicious areas in the walls of the digestive tract. An outpatient colonoscopy typically takes an hour to complete.

**Biopsy:** Colonoscopy and sigmoidoscopy diagnostic materials are delivered to the examiner, who then cuts the material into microscopic-thin slices, stains it on a microscopic slide, and examines it under a microscope. For the detection of colon cancer, this is frequently confirmed.

**Barium Enema:** In some situations, a barium enema may be required before a colonoscopy or sigmoidoscopy. An X-ray of the colon is taken after consuming a radiopaque barium

beverage at predetermined intervals. As the radiopaque dye travels through the big intestine, the bulge is visible on an X-ray.

**Blood Test:** In addition, colon cancer could be found during normal fecal occult blood tests. Full blood count, assessments of kidney and liver function, carcinoembryonic antigen (CEA) testing, and carbohydrate antigen 19.9 are some of these examinations (CA19.9). Pretreatment CEA levels in infected people with stage C (stage III) illness and stage B (stage II) disease indicate a return.

## 1.4. Treatment for Colon Cancer

The progression of colon cancer affects cancer treatments much like it does with other cancers. Treatment has a mostly curative effect in the initial stages. When cancer has spread to later phases, doctors often manage their patients by attempting to keep them peaceful & alive (19).

### **Colon cancer early stage surgical treatment:**

Your doctor could suggest a safe and effective technique for treatment if the colon cancer is extremely tiny. Examples include:

**Colonoscopy procedure for eliminating polyps (polypectomy):** Depending on its size, location, degree of containment inside a polyp, and phase, your doctor might be able to entirely eliminate your cancer during a colonoscopy.

**Mucosal resection using endoscopy:** A treatment known as endoscopic resection may be used after colonoscopy to remove larger polyps. This operation involves removing the polyp and a tiny portion of the colon's inner lining.

**Laparoscopic surgery:** Laparoscopic surgery can be used to eliminate polyps that cannot be eliminated during a colonoscopy. Through a series of tiny incisions in your stomach wall, your surgeon carries out this treatment while introducing devices with cameras attached, which show your colon on a video screen. Additionally, the surgeon could remove tissues from lymph glands close to the site of the tumor.

**Surgery:** Surgery is performed on patients with locally advanced colon cancer to remove the tumor. Laparoscopy, a minimally invasive surgery, or laparotomy are both options for doing the operation. Other malignancies that have spread surgically to the lungs or liver are eliminated (20)

**Chemotherapy:** Medicines are used in chemotherapy to kill cancer cells. If the disease is more advanced or has reached the lymph nodes, chemotherapy for colon cancer is typically administered following surgery. Chemotherapy may do this by eliminating any cancer cells that are still present in the body and lowering the likelihood of tumor recurrence. (21) In order to make a large malignancy easier to remove during surgery, chemotherapy may also be given before the procedure. Additionally, colon cancer problems that cannot be treated surgically or have migrated to other parts of the body can be treated with chemotherapy. It occasionally includes radiation treatment. (22) A few people with stage III colon cancer at minimal risk may be able to have less chemotherapy following surgery. In comparison to a standard course of chemotherapy, this method may be less harmful while still being just as successful.

**Radiation Therapy:** To destroy cancer cells, radiation treatment makes use of potent power sources like electrons and X-rays. During surgery, it could be used to reduce the size of a large tumor to make removal easier. Radiation treatment may be used to treat symptoms, such as discomfort when surgery is not an option. Chemotherapy and radiation are occasionally combined. Combining radiotherapy and chemotherapy might be beneficial. Due to the bowels' high levels of radiation sensitivity, however, this is typically not employed as a therapeutic method (23).

**Biological Treatment:** Cetuximab, bevacizumab, and panitumumab are examples of monoclonal antibodies, a more recent class of drugs. This specifically targets the epidermal growth factor receptors, which are unique proteins found on the surface of cancer cells (EGFR). Biological therapies can aid in halting the spread of tumors since EGFRs, which bind certain proteins, promote cancer growth.



## 1.5 Prognosis of Colon Cancer

A cancer patient's prognosis is frequently based on a number of factors. Among these are mortality rates, the likelihood of surviving for at least five years following diagnosis, the ability to survive without diseases or cancer progressing (referred to as "advancement survival"), etc.

### **Five-year survival rates:**

The number of people who survive for at least five years after being diagnosed with cancer is known as the five-year survival rate. If cancer is detected early, many people can and do live for much longer than five years.

Many times, survival rates are determined by the past prognoses of several patients who experienced the condition. They are estimates and cannot forecast an individual's survival estimate.

### **Colon Cancer survival rates:**

The stage can be used to predict overall survival rates for colon cancer. This information was obtained from a study of the SEER database of the National Cancer Institute, which examined more than 28,000 cases of colon cancer identified between 1998 and 2000.

- 74percent of stage 1 patients survive five years.
- Stage 2A-67% five years of patients survive rates.
- 59percent 5-year Survival Rate in Stage 2B.
- Stage 2C has a five-year survival rate of 37percent.
- Stage 3A has a five-year survival rate of 73percent,
- whereas Stage 3B has a five-year survival rate of 46percent.
- Stage 3C - 28percent five-year Survivability Rate
- The 5-year Survival Rate at Four stages is six percent.

## 1.6 Prevention of Colon Cancer

The three main methods of preventing colon cancer are maintaining a good lifestyle, taking the right medications, and doing routine screenings. Following are a few of the preventative measures:

**Healthy Diet:** Numerous studies demonstrate a decreased risk of colon cancer with diets high in fiber and low in trans fats. Diets high in fiber often contain at least 5 servings of fresh produce per day, along with entire grains.

**Regular Exercise:** Daily physical exercise and movement lower the chance of acquiring colorectal cancer. Adults should engage in at least 150 minutes (2 hours and 30 minutes) per week of aerobic training at a comfortable level (such as quick bicycling or walking).

**Maintenance of healthy weight:** Obese and overweight people are more likely to get colon cancer. The possibility of colon cancer is decreased by maintaining a healthy body weight.

**Reduction of smoking:** Smokers have an increased chance of developing colon cancer. To lower the risk of colon cancer, they must stop.

**Monitoring and Screening:** While colon cancer screening cannot kill cancer, it can aid in the early detection of the disease. This increases the likelihood that cancer treatments will be successful.



**CHAPTER 2**



**OBJECTIVES**

## **2. Objectives**

### **2.1 General objective of this study**

The purpose of this investigation was to examine private Universities in Bangladesh of Pharmacy students' knowledge of Colon cancer.

### **2.2. Specific objectives of this study**

- ❖ To understand the pathology of colon cancer.
- ❖ To Identifies the causes and risk factors.
- ❖ To Understand the numerous types of colon cancer treatment options, including preventative actions.
- ❖ It will be known which food they prefer in the diet.
- ❖ To understand barriers and challengers in implementing and sustain a colon cancer screening system.
- ❖ To identify knowledge about Colon cancer among male and female participants and also identify knowledge about Colon cancer among 5th year and 1 st year students.
- ❖ To correctly and confidently identify colon cancer in daily clinical practice with a high level of specificity and sensitivity.



**CHAPTER 3**



**METHODS**

## **3. Methods**

### **3.1. Period and target population**

The target population for this study was comprised of pharmacy department students, and it was carried out at Daffodil International University. Between September and October 2022, this took place.

### **3.2 Study Design**

This offline study was carried out at Daffodil International University in Bangladesh by arranging structured question for pharmacy students. The study was conducted entirely offline, with self-administered surveys supplied in paper and pen formats, and the target audience was contacted and requested to reply with questions on paper. Participant responds offline.

### **3.3. Questionnaire development, pretesting, and validation**

A prototype questionnaire was created after a thorough literature and book study focusing on people awareness of Colon cancer, which was previously published in different publications and is available in Daffodil International University's library. To test the quality of the questions, this was checked with the questions of the various literature which were previously published from India, Japan, USA, Saudi, and many European countries. This question was evaluated by a professor from Daffodil International University before being assigned as the final question. The final question was divided into four sections: participant demographic profile, knowledge, attitude, and practice. A trial survey was conducted on 15 students prior to the final survey to ensure that the questionnaire was intelligible, effective, and contained reliable data.

### **3.4. Inclusion Criteria**

This survey was open to graduate and undergraduate pharmacy students at Daffodil International University.

### **3.5 Sample size and sampling technique**

Data from this study were collected through a convenience sampling technique.

The sample size in this study was 100 and feedback was stopped when the target of 100 was met.

### **3.6 Strategical analysis**

Students return completed forms, which are then gathered and examined to determine the results. MS Excel was used for the statistics in order to achieve the results. Frequency and percentages were used to express the final data.



**CHAPTER 4**



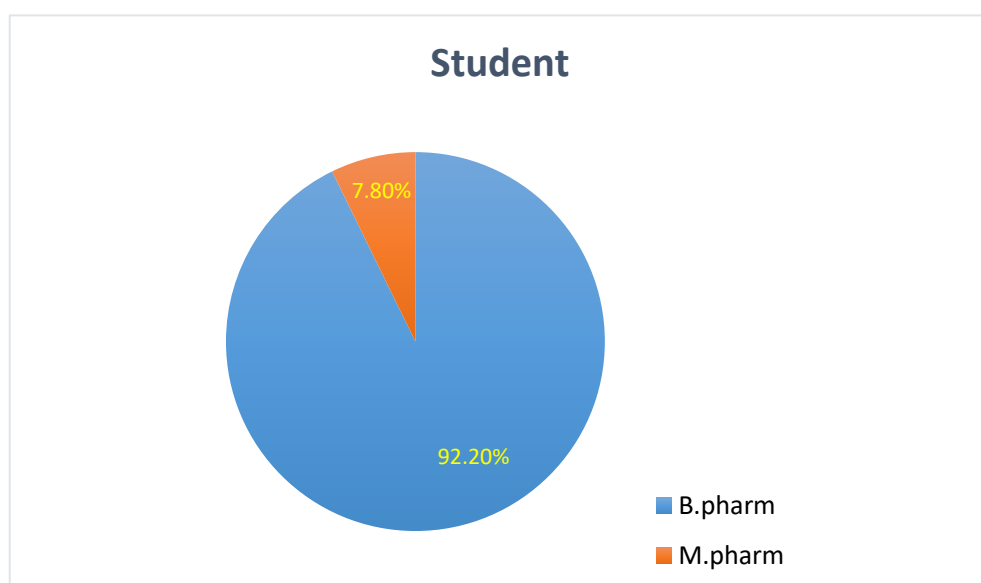
**RESULTS & DISCUSSION**



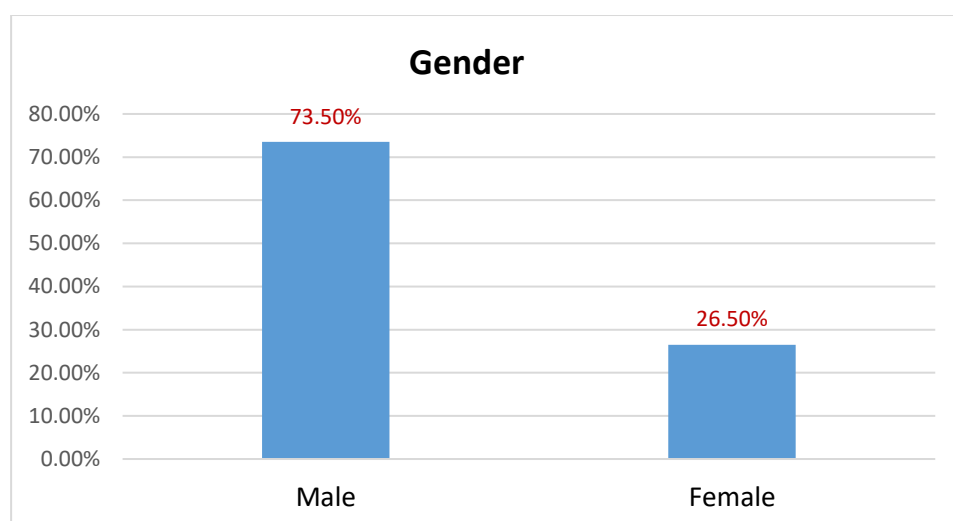
## 4. Results & Discussion

### 4.1. Demographic profile of students.

The question paper was issued to 200 students, with 102 responding. Because the purpose of this study was 100 replies, 100 were obtained, and the data was processed without one response to avoid errors. There were 92.20% B. Pharm students and 7.80% M. Pharm students. Out of the 100 respondents, 73.5% were men and 26.5% were women.

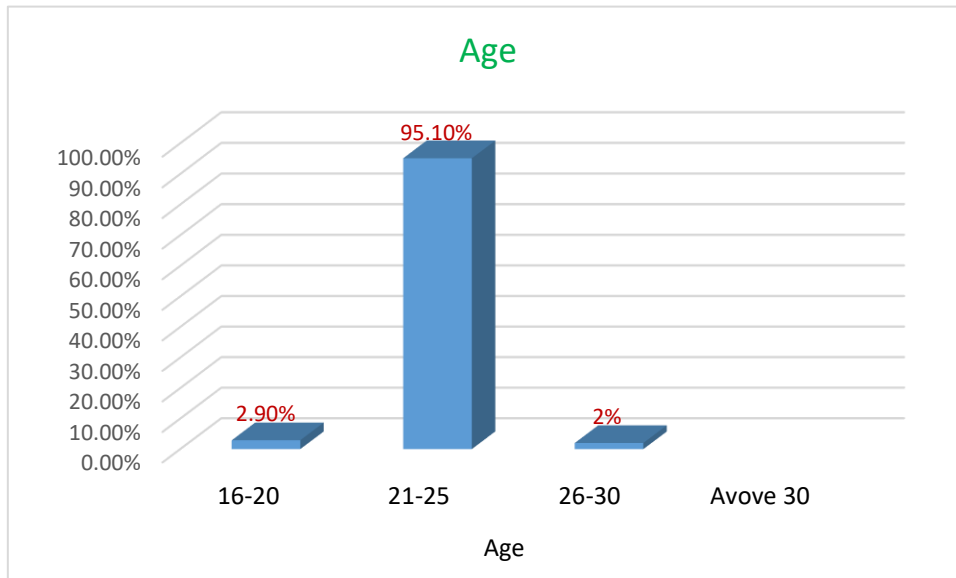


**Chart 1: % of B.pharm & M.pharm Respondents.**



**Chart 2: Participants of Gender**

In this study, the majority of participants (46.1%) were fourth-year students, with the majority of respondents (95.1%) being between the ages of 21 and 25. The marital status, religion, and other demographic profile of participant is described in more detail in Table 1.



**Chart 3: Age**

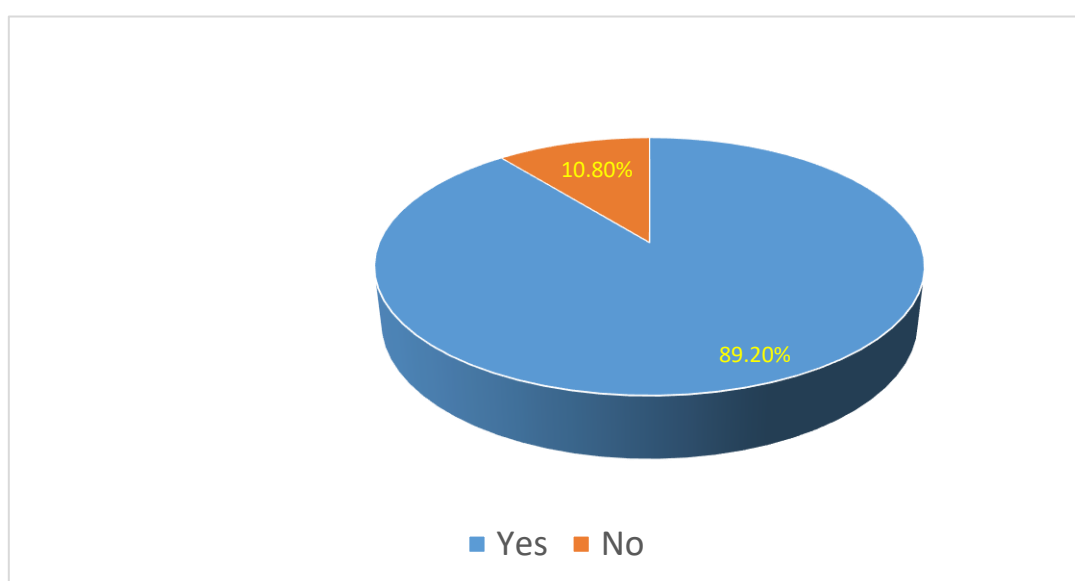
**Table 1: Demographic profile of students.**

Characteristic	Rate of response (%)
<b>Student</b> B. pharm M.pharm	92.2% 7.8%
<b>Gender</b> Female Male	26.5% 73.5%
<b>Your age (in years) –</b> 16-20 years 21-25 years 26-30 years Above 30 years	3(2.9%) 97(95.1%) 2(2%) 0(0%)

<b>Level of save-</b> 1 <sup>st</sup> year 2 <sup>nd</sup> year 3 <sup>rd</sup> year 4 <sup>th</sup> year 5 <sup>th</sup> year	17(16.7%) 8(7.8%) 22(21.6%) 47(46.1%) 8(7.8%)
<b>Marital status</b> Married Unmarried Divorced	8(7.8%) 92(90.2%) 2(2%)
<b>Religion</b> Muslims Santayana dharma Buddhists Others	91(89.2%) 10(9.8%) 0(0%) 1(1%)

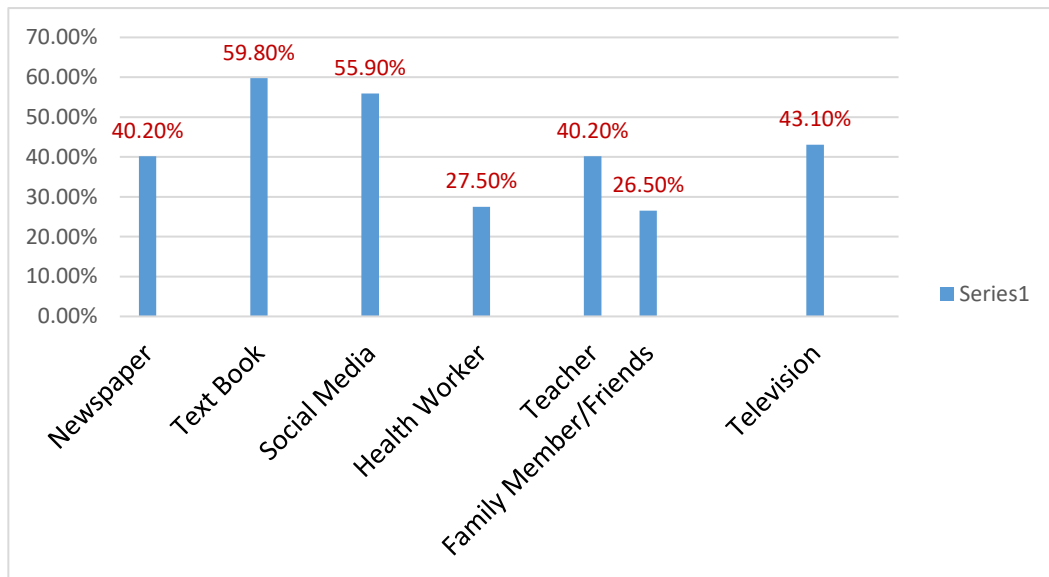
#### 4.2. Knowledge about Colon cancer among students

In this study, it was shown that 89.2% of participants were aware of Colon cancer, compared to 10.8% who claimed not to be. 89.2% students directly know the colon cancer and 10.8% students do not know about colon cancer.



**Chart 4: Students known about Colon cancer**

40.20% of students learnt about Colon cancer via newspapers, whereas 59.80% of students learned from Textbook.40.20% students learn about their teacher and Social media 55.90%, Health worker 27.50%,



**Chart 5: Colon cancer participant views are first heard.**

**Table 2: Student’s knowledge about Colon cancer.**

Characteristics	Rate of response (%)	
	Yes	No
1.Do you know about colon cancer?	89.2%	10.8%
2. Has a parents, brother, sister or child of yours ever had Colon Cancer?	18.6%	81.4%
3. Have you ever been screened for Colon Cancer?	26.5%	73.5%
4. Have you heard of any medical tests to find colon cancer?	51%	49%
5. Colon cancer treatment has some disadvantage like high Cost-	85.3%	14.7%

**Table 3:**

<b>Characteristics</b>	<b>Rate of response (%)</b>	
	<b>False</b>	<b>True</b>
Colon cancer affects the digestive system.	<b>92.2%</b>	<b>7.8%</b>
Sigmoidoscopy, which is a less invasive form of colonoscopy.	<b>71.6%</b>	<b>28.4%</b>
Fluorouracil Injection are use in Colon cancer?	<b>73.5%</b>	<b>26.5%</b>
Is vitamin C good for Colon cancer?	<b>71.6%</b>	<b>28.4%</b>
Fish and Colorful Fruits are best Foods to Prevent Colon Cancer?	<b>85.3%</b>	<b>14.7%</b>

### **4.3: Students knowledge about Colon cancer risk factor**

Smoking is a very risk for colon cancer patients. Should be avoid alcoholic drinking water. All the risk factors are must be avoiding for colon cancer patient.

**Table 4: Risk factor**

Characteristics	Rate of response (%)
<p><b>Which one of the following is probably the most important environmental risk factor for colon cancer?</b></p> <p>Diet</p> <p>Smoking</p> <p>Carcinogens present in drinking water</p>	<p></p> <p><b>34(33.3%)</b></p> <p><b>30(29.4%)</b></p> <p><b>38(37.3%)</b></p>
<p><b>Which of the following is true about gender differences in colon cancer risk?</b></p> <p>Rectal cancer is more common in women than men</p> <p>Rectal cancer is more common in men than women</p> <p>Rectal cancer affects roughly equal proportions of men and women</p>	<p></p> <p><b>31(30.4%)</b></p> <p><b>42(41.2%)</b></p> <p><b>29(28.4%)</b></p>

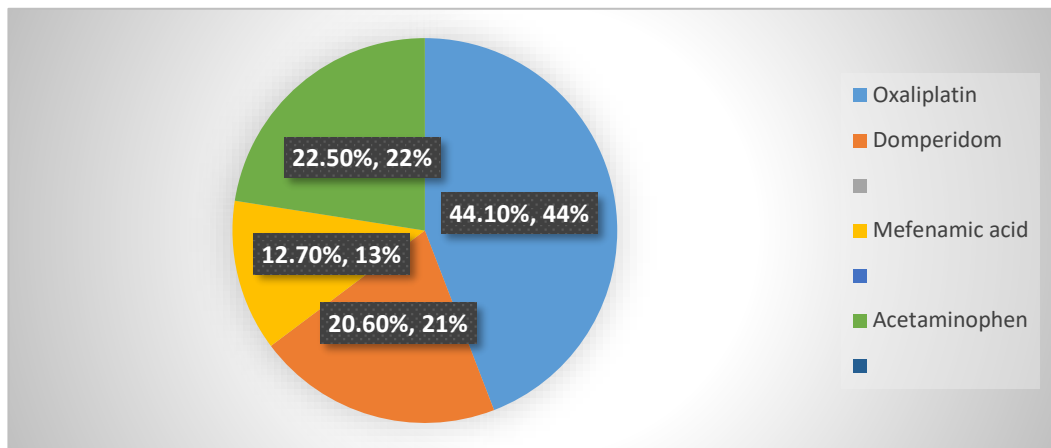
#### 4.4: Foods and Vitamins

**Table 5:**

<b>Characteristics</b>	<b>Rate of response (%)</b>
<b>What is the best food to fight colon cancer?</b> Beans and legumes Fish Milk All of the above	  <b>33(32.4%)</b> <b>8(7.8%)</b> <b>10(9.8%)</b> <b>51(50%)</b>
<b>What foods to avoid if you have colon cancer?</b> Legumes Beans Fish Coffee	  <b>21(20.6%)</b> <b>13(12.7%)</b> <b>10(9.8%)</b> <b>58(56.9%)</b>
<b>Which nutrients helps to fight Colon cancer?</b> Omega 3-fatty acids Vitamin Calcium Flavonoids All of the above	  <b>31(30.4%)</b> <b>10(9.8%)</b> <b>5(4.9%)</b> <b>4(3.9%)</b> <b>52(51%)</b>
<b>What is the best vitamin for Colon cancer patients?</b> A B C D	  <b>15(14.7%)</b> <b>27(26.5%)</b> <b>44(43.1%)</b> <b>16(15.7)</b>

#### 4.5: knowledge about Colon cancer drug

The Oxaliplatin medication and the rate 45(44.1%) received the majority of the student responses in this questionnaire. The majority of participants are so aware that oxaliplatin is used to treat colon cancer.



**Chart 6:** Participants known about colon cancer drug



#### 4.6: Survival rate and symptoms

Table 6:

<b>Characteristics</b>	<b>Rate of response (%)</b>
<b>What is the overall five-year survival (i.e., the rate of survival at five years for all stages combined) after colorectal cancer?</b>	
40%	<b>26(25.5%)</b>
50%	<b>26(25.5%)</b>
60%	<b>38(37.5%)</b>
75%	<b>12(11.8%)</b>
<b>What kind of symptom do you think is the most important in patients with Colon cancer in your country?</b>	
Diarrhea	<b>10(9.8%)</b>
Constipation	<b>11(10.8%)</b>
Abdominal pain	<b>16(15.7%)</b>
Weakness and fatigue	<b>4(3.9%)</b>
All of the above	<b>61(59.8%)</b>

#### 4.7: Colon cancer detection test and treatment.

**Table 7:**

<b>Characteristics</b>	<b>Rate of response (%)</b>
<b>What is a common test useful in early detection of colon cancers?</b>	
Colonoscopy	<b>54(52.9%)</b>
Blood test	<b>6(5.9%)</b>
X-ray	<b>7(6.9%)</b>
Stool DNA	<b>5(4.9%)</b>
All of the above	<b>30(29.4%)</b>
<b>What is the standard treatment for colon cancer?</b>	
Surgery	<b>24(23.5%)</b>
Radiation therapy	<b>10(9.8%)</b>
Chemotherapy	<b>15(14.7%)</b>
Cryosurgery	<b>8(7.8%)</b>
All of the above	<b>45(44.1%)</b>

Participants knew about 82% of the methods for detecting colon cancer and just 18% did not. Colonoscopy and the rate 54 (52.9%) received the majority of the student responses, however all of the participants are aware of colon cancer screening techniques.

78% of participants were aware of the colon cancer treatment procedure, compared to 22% who were unaware of it. However, 24% of individuals respond to surgery, and 45% respond to a different type of therapy.



**CHAPTER 5**



**CONCLUSION**

## **5. Conclusion**

This study is an attempt to identify the level of awareness among the DIU Pharmacy students so that the results can be utilized to design measures to improve the awareness. In conclusion, we found that the majority of students had positive attitude toward concept of cancer screening. Students in their fourth year have some areas where their understanding was better, but overall things are not looking well. It worth to establish health education campaign to increase awareness of CRC as it is one of the commonest cancers in Bangladesh.



**CHAPTER 6**



**REFERENCES**

## 6. REFERENCES

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