

# A Cross Sectional Descriptive Research On Prevalence Of Digestive Diseases In Moroccan Population

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## **Abstract:**

**Background:** *Gastrointestinal diseases are a real public health problem, that decreases the quality of life. The aim of the present study is to investigate gender and age differences in the sociodemographic and clinical profile of digestive diseases in Morocco.*

**Methods:** *We conducted a cross sectional descriptive study including 569 patients, during a period of four years, from January 2016 to December 2019. We included all patients with digestive disorders, at the gastroenterology department of a Moroccan Hospital in Rabat. Subjects were selected through simple random sampling method. Data was collected using questionnaire. The studied parameters were the age, the gender and the type of disease.*

**Results:** *During the period, we registered 569 cases of digestive diseases. Men were more affected, 53% were male and 47% were female with a sex-ratio of 1.13. Moreover, the most concerned age group was [45-65 [ years then  $\geq 65$  years. The average age was  $56.8 \pm 22.8$  years. The most common digestive diseases in our target population were Crohn's disease (39 % of cases), gastritis with 32%, followed by colitis (10 %) and cirrhosis with 8 %. There is a statistically significant association between age and type of disease ( $\chi^2 = 227, p=0$ ). These diseases mainly affect the age group between 45 and 64.*

**Conclusion:** *The chronic nature of many of these diseases result in a significant impact in terms of medical care utilization, direct and indirect economic costs, and quality of life.*

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## I. Introduction

The digestive system made up of the gastrointestinal tract (GI), liver, pancreas, and gallbladder helps the body digest food. Digestion is important for breaking down food into nutrients, which your body uses for energy, growth, and cell repair. Some digestive diseases and conditions are acute, lasting only a short time, while others are chronic, or long-lasting [1].

Digestive diseases are disorders of the digestive tract, which is sometimes called the gastrointestinal (GI) tract. The digestive tract is made up of the esophagus (food tube), stomach, large and small intestines, liver, pancreas, and the gallbladder. the most common symptoms of digestive disorders include bleeding, bloating, constipation, diarrhea, heartburn, pain, nausea and vomiting. Accurately diagnosing digestive disorders involves collecting a thorough medical history and conducting a physical examination. Some patients with digestive disorders may need more extensive diagnostic evaluations, including endoscopic procedures, lab tests and imaging. Tests for digestive problems can include colonoscopy, upper GI endoscopy, capsule endoscopy, endoscopic retrograde cholangiopancreatography (ERCP), and endoscopic ultrasound. many surgical procedures are performed on the digestive tract. These include procedures done using endoscopy, laparoscopy, and open surgery. Organ transplants can be performed on the liver, pancreas, and small intestine.

Organic disorders occur when there are structural abnormalities in the digestive systems, which prevents it from working properly. In functional disorders, the gastrointestinal tract appears to be structurally normal but still does not function well. They are common, heterogeneous in cost and utilization, and collectively exact a significant financial burden on the adult population [3].

Globally, in 2019, there were 88.99 million DALYs (disability-adjusted life-years) due to digestive diseases (3.51% of global DALYs). Digestive diseases were the 13th leading cause of DALYs globally in 2019. Cirrhosis and other chronic liver diseases constituted the highest proportion of categorized digestive disease DALY burdens globally. From 1990 to 2019, the global age-standardized DALY rate of digestive diseases decreased from 1570.35 in 1990 to 1096.99 in 2019 per 1,00,000 population [4].

## **II. Methods**

### **Design and study area**

This research was a cross sectional study undertaken from January 2016 to December 2020 at the gastroenterology department of a Moroccan Hospital in Rabat. Subjects were selected through simple random sampling method.

Data was collected using questionnaire. Participants who agreed to participate in the study were included in the sampling pool. The patients were selected by the simple random sampling method.

Data were collected through the patients' files on a data processing form. We used Microsoft Excel 2016 software for statistical analysis of the data. The data were converted into percentages, averages or medians. Sample size was determined by  $p=0.05$  and confidence interval 95%.

### **Questionnaire**

Data was collected using a questionnaire whose validity was obtained using the content validity. The questionnaire included items on various aspects as follows:

1. Socio-demographic component: age, gender;
2. Type of the digestive disease.

### **Data collection**

Data was collected by a trained research doctor. It was based on patient record.

### **Data analysis**

Data were analyzed using IBM SPSS 19.0 for Windows. Descriptive as well as analytical analyses were employed to determine epidemiological profile of patients and to describe the most common gastrointestinal diseases in the Moroccan population. The results are expressed in terms of numbers for the qualitative variables and on average  $\pm$  standard deviation for the quantitative variables. Differences between categorical groups were determined by using ( $\chi^2$ ) test. P-values  $<0.05$  were considered to be statically significant in all analyses.

## **III. Results**

### **Description of socio demographic variables**

Between January 2016 and December 2020, we administered questionnaire to 569 patients with digestive diseases.

53% were male and 47% were female, sex ratio was estimated to 1.13, in favor to the males [Figure 1].

The mean age of participants was  $56.8 \pm 22.8$  years, with extremes ranging from 04 to 96 years. The most concerned age groups were [45-65 [ years old followed by the age group  $\geq 65$  years old [Figure 2].

### **Type of disease**

Gastrointestinal diseases were most frequent in men that in women. Regarding the type of disease, we found that the most common diseases were (39 % of cases), with 32%, followed by colitis (10 %) and cirrhosis with 8 % [Figure 3].

In our population, we found that there is a statistically highly significant association between disease types and patient age (chi-square 227,  $p = 0$ ) [Figure 4].

Crohn's disease and gastritis mostly affected the age between 45 and 64 years. The youngest was the most affected by colitis [Figure 4]. There is a statistically significant association between age and type of disease (chi-square = 227,  $p=0$ ). These diseases mainly affect the age group between 45 and 64.

## **IV. Discussion**

This is a retrospective study that included 569 patients over 4 years, who were followed up with a median duration of 4 years. In our sample, male and female, two in five have Crohn's disease.

Gastrointestinal diseases by their frequency have become a major public health problem. Indeed, of the all patients, we find a male predominance, these results are consistent with the results of the literature [5].

In our study we found that there is a statistically highly significant association between patient age and illness with an average age of  $56.8 \pm 22.8$  years, these results are similar to those of the literature, indeed the age is the most important factor. There are notable differences in the age distribution among diseases. The distribution by age is similar to the literature [6].

we found that the most common diseases were Crohn's disease, gastritis, followed by colitis ulcerative disease and cirrhosis. These results are known par literature data [7].

Digestive diseases effect on mortality and morbidity are quite high. The chronic nature results in a significant impact in terms of medical care utilization, direct and indirect economic costs, and quality of life.

### V. Conclusion

Digestive diseases represent a diverse group of clinical conditions that impact the population. Their heterogeneity in classification, presentation, acuity, chronicity, and need for drug therapy presents a challenge when comparing and contrasting the burden associated with these conditions. Determining the etiology of these patients is important to establish the treatment strategy in the primary care setting.

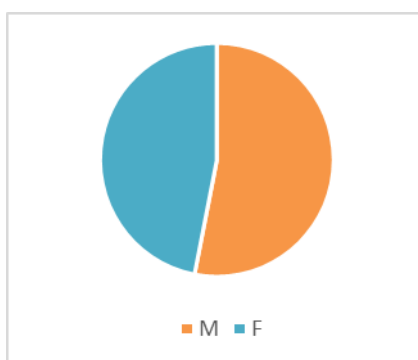
### VI. Declaration

Ethics approval and consent to participate:

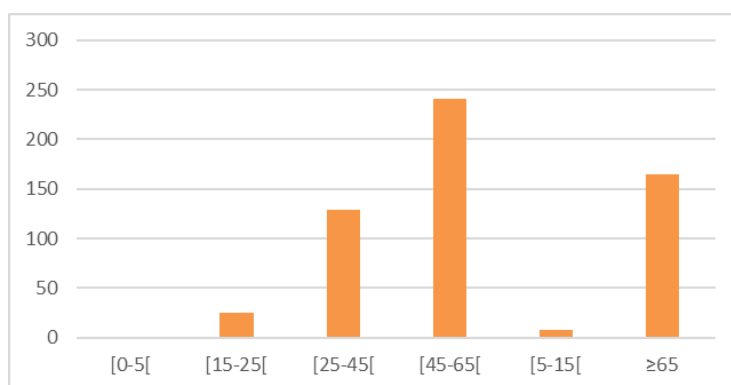
Permission to conduct the study at the hospital was received from the hospital administration.

Availability of data and material: The data sets during and/or analyzed the current study available from the corresponding author on reasonable request.

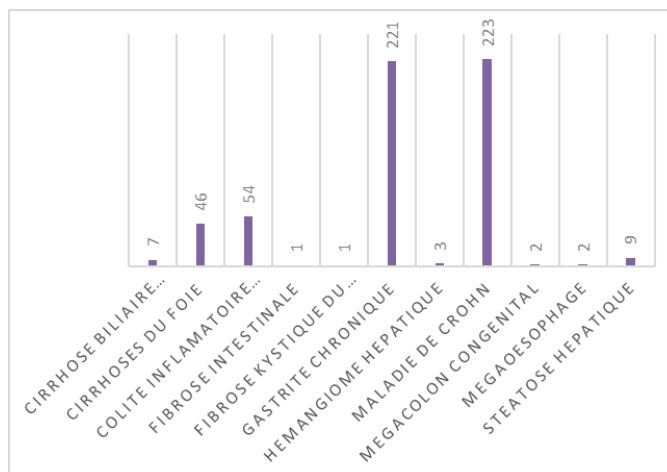
Competing interests: The authors declare that they have no competing interests



**Fig. 1: Description Of Participants By Gender (N=569).**



**Fig. 2: Description Of Participants By Age Range (N=569).**



**Fig. 3: Description Of Participants By Type Of Digestive Disease (N=569).**

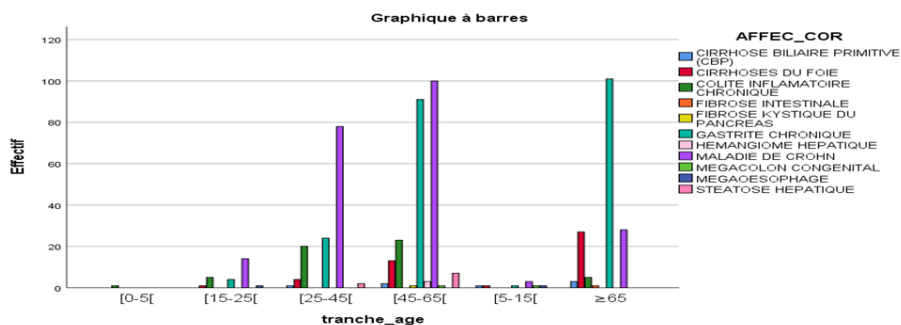


Fig. 4: Distribution Of Digestive Diseases By Age Of Patients, (N=569).

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- [7] Neurogastroenterol Motil 2023; 29(1): 102-112 <https://doi.org/10.5056/jnm22027> Diarrhea-Predominant Irritable Bowel Syndrome-Like Symptoms In Patients With Quiescent Crohn's Disease: Comprehensive Analysis Of Clinical Features And Intestinal Environment Including The Gut Microbiome, Organic Acids, And Intestinal Permeability