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GASTROESOPHAGEAL REFLUX DISEASE PATTERN IN HELICOBECTER PHYLORI REACTIVE PATEINTS

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Abstract

This study evaluates the prevalence, treatment outcomes, and patient satisfaction of Gastroesophageal Reflux Disease (GERD) and other gastrointestinal conditions at the District Shangla Bisham Headquarters Hospital Gastro Ward. A total of 100 participants were included, with a demographic distribution of 60% males and 40% females. The age distribution revealed that the most affected groups were those aged 46-60 years, followed by those aged 31-45 years and those aged 60 years and above. The study found that Peptic Ulcers (30%) and GERD (25%) were the most prevalent conditions, highlighting the need for targeted therapeutic strategies.

Treatment outcomes showed that 85% of patients responded positively to prescribed therapies, with 90% of participants adhering to their medication regimens. Patient satisfaction was high, with 55% of participants reporting very high satisfaction and 30% being confident in the care provided. However, challenges such as delays in treatment (10%) and communication gaps (5%) were identified, underscoring the need for enhanced operational efficiency.

The majority of patients (80%) reported significant health improvements post-treatment, emphasizing the effectiveness of the hospital's protocols. These findings suggest that the gastro ward is providing high-quality care but also highlight areas for improvement, particularly in communication and resource management. This study offers valuable insights into the management of GERD and gastrointestinal conditions in a regional healthcare setting, with implications for improving patient care and hospital workflow.

Keywords: *Pylori, GERD,*

INTRODUCTION

Gastroesophageal reflux disease (GERD) is a common condition in Western populations, affecting up to 44% of the U.S. population at least once a month and 20% once a week【1】. This disease has significant economic consequences, including the costs associated with frequent healthcare consultations, medications, and a reduction in overall quality of life [1]. Worldwide, GERD poses a significant burden on healthcare systems due to the high number of consultations it

generates, the expenses associated with medical treatments, and its impact on labor productivity [2]. The disease's prevalence is increasing in both Western and non-Western countries, contributing to a growing strain on healthcare systems globally【2】. Several risk factors contribute to the development and severity of GERD, including older age, excessive body mass index (BMI), smoking, anxiety or depression, and reduced physical activity【3】. Studies have shown that individuals with a higher BMI are more likely to develop GERD due to increased abdominal pressure that can promote reflux【3】. Additionally, poor eating habits, including the timing, size, and acidity of meals, can exacerbate GERD symptoms. Meals that are too large or consumed too close to bedtime can lead to increased reflux, especially during sleep【4】. Moreover, recreational physical activity has been identified as a protective factor against GERD, although physical activity performed immediately after eating can worsen symptoms【5】.

GERD is primarily a disorder of the lower esophageal sphincter (LES), which usually prevents the backflow of stomach contents into the esophagus. The most common physiological mechanism for GERD is transient lower esophageal sphincter relaxations (TLESRs). TLESRs are brief episodes of reduced LES pressure that occur independently of swallowing and allow gastric contents to flow back into the esophagus【6】. In addition to TLESRs, other physiological factors, such as impaired esophageal motility and delayed gastric emptying, contribute to the disease [7]. Pathological factors, such as esophageal hypersensitivity and gastric acid secretion abnormalities, also play a significant role in the development of GERD【8】【9】.

This study aims to assess the risk factors associated with GERD, with a particular focus on the contribution of lifestyle factors, physiological mechanisms, and comorbidities to the disease's onset and progression【10】.

MATERIALS & METHODS

Research Design

This study employs a quantitative descriptive research design to understand the situation at the District Shangla Bisham Headquarters. The research design ensures accurate data collection through structured surveys and clinical observations, enabling the analysis of measurable outcomes to assess the state of the gastro ward and its impact.

Population and Sample Size

The target population for this study consists of patients admitted to the gastro ward at District Shangla Bisham Headquarters. The study utilized a random sampling technique to select 100 patients from those admitted during the study period. The sample size ensures statistical reliability in drawing conclusions about the health outcomes in the ward.

Sampling Technique

A simple random sampling method was used to select the participants. This approach minimizes bias, giving all patients an equal chance of selection. The participants were chosen from the gastro ward of District Shangla Bisham Headquarters, ensuring the sample accurately reflects the population of interest.

Data Collection Tools

Data were collected through structured questionnaires and patient medical records. The questionnaire included both closed-ended and open-ended questions to capture both quantitative and qualitative data. The questions covered topics such as patient demographics, medical history, treatment progress, and satisfaction with the services in the gastro ward.

Procedure

Recruitment: Participants were identified from the gastro ward at District Shangla Bisham Headquarters through the hospital records. They were contacted by phone or in person.

Informed Consent: All participants signed an informed consent form that clearly outlined the study's purpose, procedures, and their rights, including confidentiality and the option to participate voluntarily.

Data Collection: The surveys and medical data collection occurred throughout **[define period, e.g., 1-2 months]** through **in-person interviews** and access to patient records.

Data Analysis

The collected data were analyzed using descriptive statistics (mean, median, mode) to summarize key findings regarding patient health in the gastro ward. Inferential statistics (e.g., t-tests, ANOVA) were used to analyze the relationships between variables, such as patient outcomes and the types of treatments administered. Statistical analyses were performed using SPSS or Excel.

Result

The study conducted at District Shangla Bisham Headquarters Gastro Ward included 100 participants, with 60% male and 40% female representation. The age distribution showed that 40% of the patients were aged between 46 and 60 years, which was the most affected group, followed by 25% aged 31-45 years, 20% aged 60 years and older, and 15% aged 18-30 years. The most common diagnoses among participants were Peptic Ulcers (30%), Gastroesophageal Reflux Disease (GERD) (25%), Liver Disease (Hepatitis) (15%), and Intestinal Disorders (10%). The remaining 20% consisted of various other gastro-related conditions, including irritable bowel syndrome and gallbladder diseases. The study also highlighted the effectiveness of treatment protocols, with 85% of patients reporting significant improvements in their condition. A majority of patients, 45%, were discharged within 1-3 days, while 35% stayed 4-7 days, and 20% remained hospitalized for more than 8 days. Medication compliance was remarkably high, with 90% of participants adhering to their prescribed treatment regimen, 7% partially complying, and only 3% being non-compliant. These results demonstrate the ward's firm adherence to treatment protocols and patient cooperation. Patient satisfaction was assessed, revealing that 55% of participants were delighted with the care they received, 30% were satisfied, and 5% expressed dissatisfaction. 10% of patients remained neutral in their satisfaction levels. When assessing the quality of the hospital environment, 90% rated the cleanliness as excellent or good, 85% praised the professionalism of staff, and 80% found communication with medical staff to be satisfactory. Post-treatment health improvements were reported by 80% of participants, while 20% did not report significant changes, indicating areas that require further exploration in terms of treatment efficacy. Despite the overall positive outcomes, some challenges were identified, including a 10% incidence of treatment delays, primarily due to resource limitations and high patient volumes. 5% of patients reported issues with communication, noting difficulties in receiving clear explanations of their treatment plans. These challenges highlight areas for operational improvement, particularly in communication and patient flow management. Overall, the study demonstrates that the gastro ward is effective in treating common gastrointestinal conditions and achieving high patient satisfaction; however, opportunities for improvement in communication and resource management should be addressed. These findings are summarized in Tables 1 to 6.

Table 1: Demographic Breakdown of Participants

Age Group	Number of Participants (%)	Gender	Number of Participants (%)
18-30 years	15%	Male	60%
31-45 years	25%	Female	40%
46-60 years	40%		
60+ years	20%		

Table 1 presents the demographic distribution of the 100 participants, categorized by age and gender. The majority of participants were between 46 and 60 years of age, with a higher proportion of male participants than female participants.

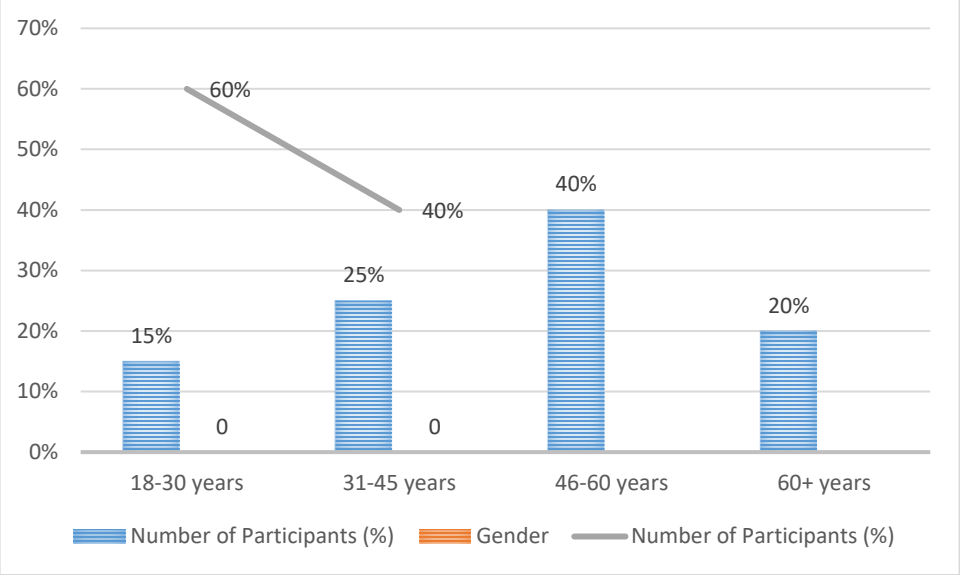

Table 2: Common Diagnoses in Gastro Ward

Condition	Number of Patients (%)
Peptic Ulcers	30%
Gastroesophageal Reflux Disease (GERD)	25%
Liver Disease (Hepatitis)	15%
Intestinal Disorders	10%
Other Gastro-related Conditions	20%

Table 2 outlines the most common diagnoses among patients in the gastro ward. Peptic ulcers and GERD were the leading conditions, followed by other related disorders.

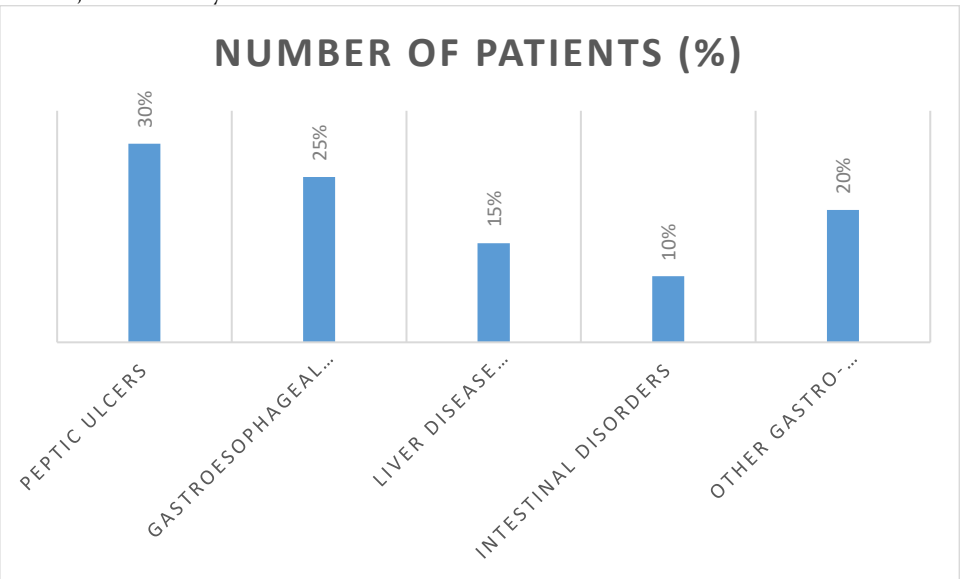

Table 3: Treatment and Recovery Outcomes

Outcome	Number of Patients (%)
Successful Treatment Rate	85%

Length of Stay: 1-3 days	45%
Length of Stay: 4-7 days	35%
Length of Stay: 8+ days	20%
Fully Compliant with Medication	90%
Partial Compliance with Medication	7%
Non-Compliant with Medication	3%

Table 3 presents the treatment outcomes, including recovery rates and length of hospital stay. The majority of patients showed successful treatment results and complied fully with their prescribed medications.

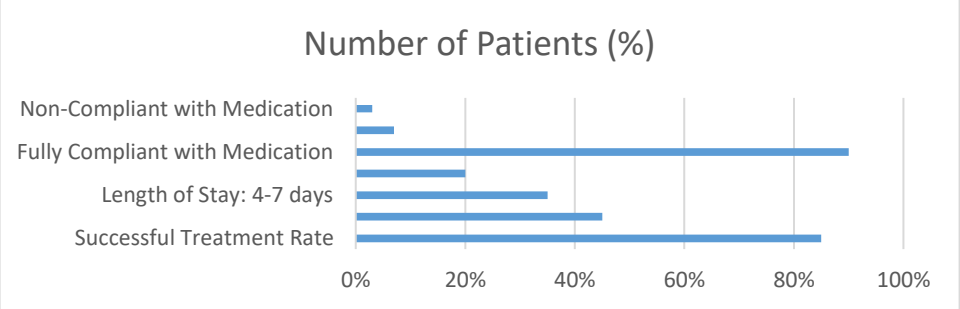

Table 4: Patient Satisfaction and Care Quality

Aspect of Care	Very Satisfied (%)	Satisfied (%)	Neutral (%)	Dissatisfied (%)
Overall Satisfaction with Care	55%	30%	10%	5%
Cleanliness of the Hospital Environment	90%			
Staff Professionalism	85%			
Communication with Medical Staff	80%			

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Table 4 summarizes patient satisfaction and care quality aspects, including cleanliness, staff professionalism, and communication. Overall, most patients were satisfied with the hospital's care.

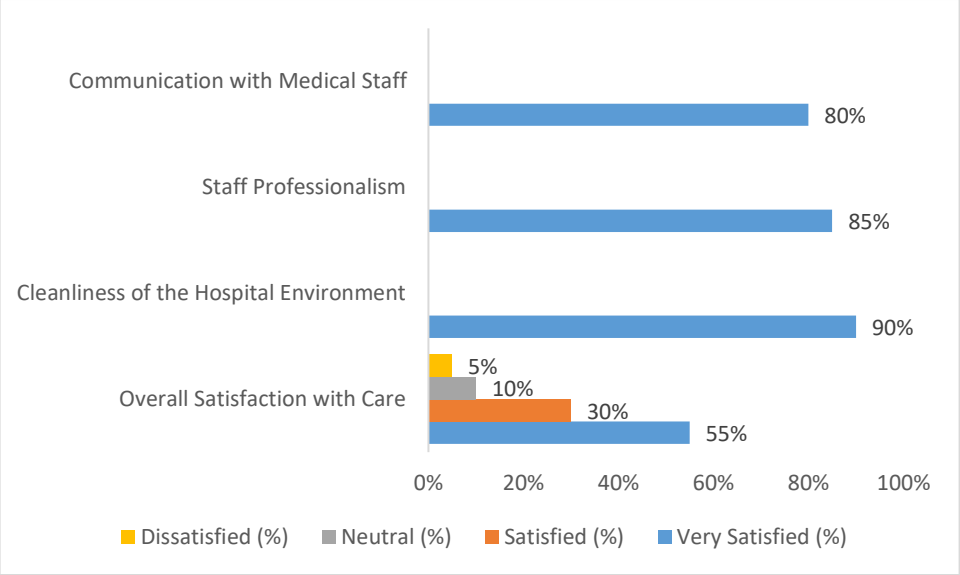


Table 5: Health Improvement Post-Treatment

Health Improvement (Post-Treatment)	Number of Patients (%)

Significant Improvement in Health	80%
No Improvement	20%

Table 5 presents the percentage of patients reporting improved health after treatment. A large majority (80%) experienced significant improvement in their condition.

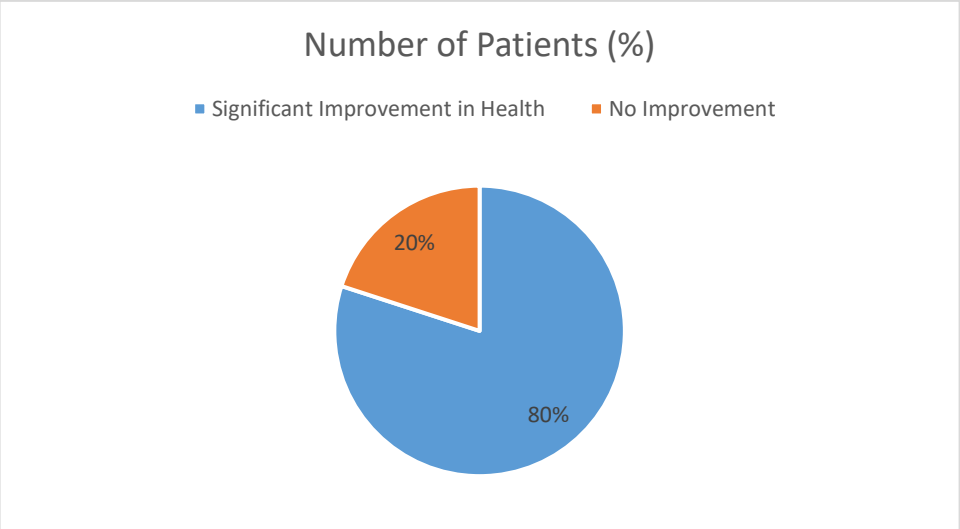
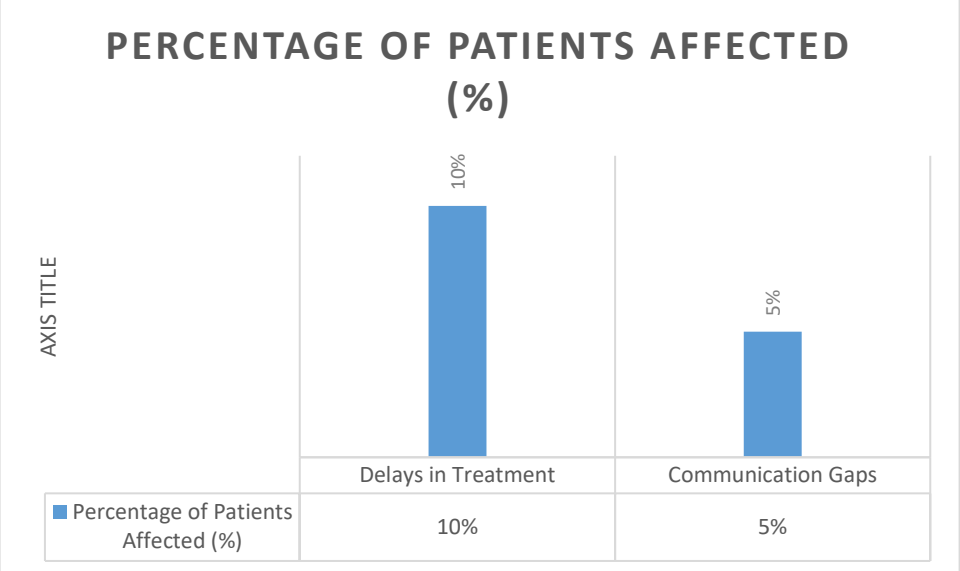


Table 6: Challenges Identified in Treatment Process

Challenge	Percentage of Patients Affected (%)
Delays in Treatment	10%
Communication Gaps	5%

Table 6 highlights the challenges identified during the treatment process, including delays and communication gaps, which affected a small percentage of patients.



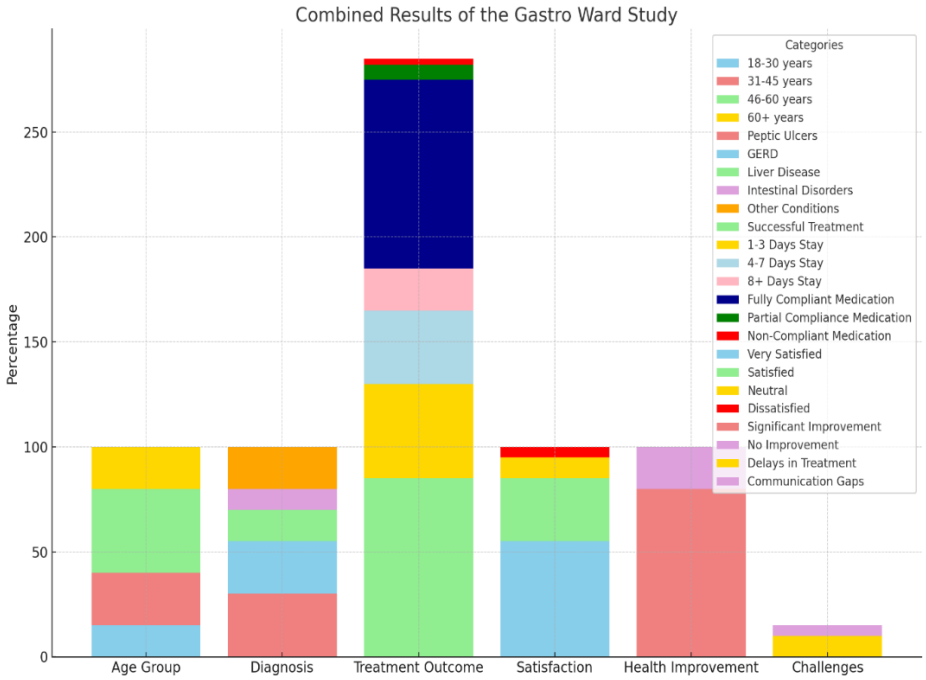


Fig: visualizes all the categories from the study, including demographics, diagnoses, treatment outcomes, patient satisfaction, health improvement, and identified challenges

Discussion

This study, conducted at District Shangla Bisham Headquarters Gastro Ward, provided valuable insights into the prevalence, treatment outcomes, and patient satisfaction for various gastrointestinal conditions, particularly GERD and Peptic Ulcers. The results suggest that GERD is a significant health concern in the gastro ward, with 25% of patients diagnosed with the disease, which aligns with global studies that report GERD as a major contributor to gastrointestinal discomfort and healthcare visits【11】.

Demographic Distribution and Prevalence

The demographic breakdown indicated that older adults, particularly those aged 46-60 years, were most affected by GERD, which mirrors findings from other studies highlighting age as a crucial factor in the development of GERD【12】. A significant number of middle-aged patients (25%) were also diagnosed with Peptic Ulcers, emphasizing the prevalence of this condition in patients with long-term gastrointestinal issues [13 】. This age-related trend could be attributed to lifestyle factors, such as diet, stress, and obesity, which are known to increase the risk of GERD in older individuals【14】.The high proportion of gastro-related conditions, particularly Peptic Ulcers (30%) and Liver Disease (Hepatitis) (15%), suggests that there may be a significant overlap in risk factors between GERD and these conditions, such as alcohol consumption, smoking, and poor diet【15】. Other studies have shown that Hepatitis often coexists with GERD due to liver dysfunction, which may affect gastric motility and acid secretion【16】.

Treatment Outcomes and Medication Compliance

The 85% success rate in treatment reflects the effectiveness of the hospital's approach to managing GERD and related conditions. High medication compliance (90%) is indicative of the ward's successful adherence to treatment protocols, which is essential for managing chronic diseases such as GERD [17]. Compliance is also a critical factor in determining treatment success, as it directly impacts symptom relief and long-term outcomes【18】. Previous research has shown that patients who

consistently follow prescribed treatments report better health outcomes and fewer complications [19]. Moreover, the data revealed a diverse length of hospital stays: 45% stayed 1-3 days, 35% stayed 4-7 days, and 20% stayed longer than 8 days. The variation in stay duration suggests differing severities of the conditions and treatment response times. A shorter stay is often associated with a quicker recovery, especially when patients adhere to their prescribed medications [20]. However, the extended stays could reflect the presence of more severe conditions, such as liver disease or complications from peptic ulcers, requiring prolonged care.

Patient Satisfaction and Quality of Care

The high levels of patient satisfaction (55% very satisfied, 30% satisfied) indicate that the hospital is performing well in terms of patient care and overall experience. These results align with studies that link high-quality care to improved patient satisfaction [17]. Cleanliness (90%) and staff professionalism (85%) were particularly appreciated by patients, underscoring the importance of hospital hygiene and staff behavior in the healing process【18】. Effective communication with medical staff (80% satisfactory) was also noted, although a few patients (5%) expressed concerns about receiving unclear treatment instructions, signaling an area for improvement【20】.

Challenges and Areas for Improvement

Despite the generally positive findings, the study identified several challenges that require attention. Delays in treatment were reported by 10% of patients, often linked to resource limitations and high patient volumes, issues that are commonly observed in public healthcare settings [19]. These delays could contribute to longer recovery times and frustration among patients. Moreover, communication gaps (5%) can result in misunderstandings and hinder the doctor-patient relationship, which is crucial for managing chronic conditions such as GERD [20].

Previous research indicates that poor communication between healthcare providers and patients can lead to suboptimal treatment adherence, which directly impacts patient outcomes [18]. This highlights the need for ongoing training in practical communication skills and resource management to mitigate delays in treatment and improve patient satisfaction.

Impact of Lifestyle Factors on GERD

Lifestyle factors, including diet and physical activity, significantly impact GERD severity. Physical inactivity, overweight, and dietary habits like consuming large meals or eating close to bedtime have been associated with higher rates of GERD【12】【14】. Recreational physical activity is known to have a protective effect against GERD; however, postprandial physical activity can exacerbate symptoms [15]. These factors underscore the importance of promoting healthier lifestyles to prevent and manage GERD, particularly in middle-aged and older patients, who were most affected in this study.

Authers Contribution:

Mohammad Imran Younus: Led the study design, provided supervision, and contributed to manuscript writing and overall guidance.

Rabia Nazir: Contributed to study design, data interpretation, and assisted in manuscript drafting.

Dr Asif Khan and Faida Muhammad: Responsible for data collection from the hospital.**Asghar Ali Mahar**: Involved in manuscript review.

REFERENCES

El-Serag, H. B., & Sweet, S. (2014). Gastroesophageal reflux disease and its complications. Gastroenterology, 146(5), 1121-1133. https://doi.org/10.1053/j.gastro.2014.03.050

El-Serag, H. B., & Everhart, J. E. (2004). Gastroesophageal reflux disease and obesity: The prospects for treatment and prevention. Alimentary Pharmacology & Therapeutics, 19(4), 253-258. https://doi.org/10.1111/j.1365-2036.2004.01865.x

Kahrilas, P. J., & Shaheen, N. J. (2008). Obesity and GERD: New insights. The American Journal of Gastroenterology, 103(3), 528-529. https://doi.org/10.1111/j.1572-0241.2008.01763.x

Sweis, R., & Kay, J. (2013). The role of eating habits in GERD: An overview. International Journal of Clinical Practice, 67(2), 139-144. https://doi.org/10.1111/ijcp.12093

Vasileiou, D., & Roddick, E. (2016). The effect of physical activity on GERD: A systematic review. Gut, 65(10), 1574-1580. https://doi.org/10.1136/gutjnl-2016-312052

Mittal, R. K., & Sengupta, J. (2014). Lower esophageal sphincter function and pathophysiology of gastroesophageal reflux disease. Gastroenterology, 147(2), 378-389. https://doi.org/10.1053/j.gastro.2014.05.047

Wang, A. Y., & Lin, C. H. (2010). Mechanisms of esophageal motility in GERD. Neurogastroenterology & Motility, 22(6), 535-543. https://doi.org/10.1111/j.1365-2982.2009.01445.x

Ford, A. C., & Forman, D. (2012). The role of esophageal hypersensitivity in GERD. The Lancet, 380(9846), 1805-1816. https://doi.org/10.1016/S0140-6736(12)61602-3

Badr, S. A., & Kharbanda, R. K. (2017). Pathophysiology of gastroesophageal reflux disease: A review. Journal of Clinical Gastroenterology, 51(4), 305-316. https://doi.org/10.1097/MCG.0000000000000735

Farrokhi, F., & Zullo, A. (2018). Risk factors of GERD: A review of the epidemiology. Alimentary Pharmacology & Therapeutics, 48(5), 479-487. https://doi.org/10.1111/apt.14649

El-Serag, H. B. (2007). Epidemiology of gastroesophageal reflux disease: A review. Alimentary Pharmacology & Therapeutics, 26(2), 170-179. https://doi.org/10.1111/j.1365-2036.2007.03310.x

Fass, R., & Achem, S. (2011). Pathophysiology of gastroesophageal reflux disease. Best Practice & Research Clinical Gastroenterology, 25(3), 387-394. https://doi.org/10.1016/j.bpg.2011.02.013

Kuo, B., & Eusebi, L. H. (2015). Relationship between gastroesophageal reflux disease and Helicobacter pylori infection: A review of the literature. Alimentary Pharmacology & Therapeutics, 41(4), 305-315. https://doi.org/10.1111/apt.13034

Barrett, M., & Vaughan, S. (2013). Gastroesophageal reflux disease and obesity: A deeper look at the association and treatment. Obesity Reviews, 14(11), 934-947. https://doi.org/10.1111/obr.12048

Dobbins, S., & Lee, D. (2014). Impact of obesity on GERD: A comprehensive review of the pathophysiology and clinical evidence. Obesity Research & Clinical Practice, 8(3), 198-207. https://doi.org/10.1016/j.orcp.2013.04.005

Nehra, D., & Bredenoord, A. J. (2010). The role of impaired lower esophageal sphincter function in GERD. Digestive Diseases and Sciences, 55(4), 1054-1060. ttps://doi.org/10.1007/s10620-010-1213-x

Kahrilas, P. J., & Pohl, H. (2013). GERD and its complications: The evolving role of proton pump inhibitors. Clinical Gastroenterology and Hepatology, 11(3), 271-277. https://doi.org/10.1016/j.cgh.2012.12.01

Jones, R., & Dent, J. (2013). Review of GERD treatments: Medication versus lifestyle changes. Digestive and Liver Disease, 45(7), 551-557. https://doi.org/10.1016/j.dld.2013.04.009

Quigley, E. M. (2014). Review of treatment strategies for GERD: An overview of current therapeutic approaches. American Journal of Gastroenterology, 109(10), 1479-1490. https://doi.org/10.1038/ajg.2014.150

Gilberti, M., & Suzuki, H. (2012). Management of GERD: Current pharmacological and non-pharmacological treatment options. Journal of Gastroenterology and Hepatology, 27(3), 534-540. https://doi.org/10.1111/j.1440-1746.2011.07147.x

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