

Integrating Telemedicine and Pharmacists in Chronic Gastrointestinal Diseases: A Critical Role During the COVID-19 Pandemic

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Abstract

New developments have made it easier for Telehealth to connect healthcare services in faraway places. Telehealth (TH) has become essential during the COVID-19 pandemic, changing how healthcare is provided. It has been vital in providing care to patients and making it easy for them to get to while following social distancing and quarantine rules for people with chronic stomach diseases. By sending medical care directly to people's homes, TH makes it safer for patients and healthcare workers. During the outbreak, TH made it easy to get medical supplies to people who needed them, putting COVID-19 care first and handling non-COVID health needs through remote methods. Quickly responding, doctors have started using TH for initial evaluations, cutting down on pointless emergency room trips. This change shows that TH will now play a more significant role in health care, including specialized and urgent treatments, making it much more helpful. Some of TH's drawbacks are that it can be hard to do thorough physical exams and get diagnostic tests and images. These problems show that TH needs to keep improving and developing new ideas. The 2020 pandemic significantly affected telemedicine, but it also led to some significant advances and laid the groundwork for future medical care in chronic gastrointestinal illnesses. To fully utilize TH's potential in modern medical care, healthcare professionals must face its limits and ongoing problems.

Keywords: Pharmacists, Telemedicine, Chronic Gastrointestinal Diseases, COVID-19.

1 INTRODUCTION

Telemedicine is a way to get medical care that uses new technologies. It has come a long way, especially in the last few years, thanks to better virtual videoconferencing and text messaging (Alenoghena et al., 2023). Telehealth (TH) used to mean phone calls between patients and doctors, but now it includes many different services (Oh et al., 2022). It has shown its importance during significant events like the COVID-19 pandemic.

Before the COVID-19 pandemic, many healthcare workers worldwide used TH, mostly in times of emergency or disaster (Garfan et al., 2021). After the world epidemic started in 2020, many more people started using it. Because people had to keep their distance from each other and save safety gear, healthcare centers quickly adopted telemedicine as the primary way to provide medical care. This change had to be made to keep healthcare services going while lowering the risk of spreading viruses in people with chronic gastrointestinal illnesses. Asynchronous TH services, which allow healthcare

professionals and customers to talk to each other immediately, became the most popular method. Using existing hardware like cell phones, tablets, and smartwatches allowed for ongoing outpatient care and discussions for medical problems that were not urgent. There were many benefits, such as better outcomes for patients, higher levels of satisfaction, and less time spent in crowded clinical spaces.

Medical experts, especially cardiologists, know how to use devices like the Apple Watch to track heart rate and the Mobile to find problems with rhythm (Bonini et al., 2022). These gadgets provide critical data that enhance healthcare results. During the COVID-19 pandemic, doctors worldwide extensively utilized videoconferencing to deliver medical treatments to individuals during imposed lockdowns. A cardiologist group in Italy successfully managed signs of heart failure through telemedicine, using calls, video calls, and texts to ensure patients adhered to goal-directed treatment without in-person appointments (Freedman et al., 2021). Of the 103 individuals participating in the study, 58% employed telemedicine services for treatment. Among these individuals, 51% had alterations in their treatment choices. Notably, none of those participants got COVID-19 in chronic gastrointestinal diseases during the three-month research period.

2 MATERIALS AND TECHNIQUES

Research Methodology

An anonymous survey, including electronic and paper questionnaires, was done in March 2021 with 925 pharmacy patients. Data collection using a survey utilizing Google® Forms. Involvement was both voluntary and confidential. The article version of the questionnaire was exclusively designed for individuals who do not employ technology, and its application was significantly restricted due to health concerns during the COVID-19 pandemic (Wang et al., 2021). The pharmacist administered the survey while maintaining social separation; the findings were recorded electronically in chronic gastrointestinal diseases.

Ethical Authorization

The research used the ethical principles established and its subsequent modifications. The Ethical Committee at the Medical School authorized the project on chronic gastrointestinal diseases.

Questionnaire Explanation

The survey had 16 questions. The initial component of the survey examined demographic and educational variables. The demographic variables encompassed sex (male, female), age, and education levels (higher, supplementary, primary, professional, trainee). The survey encompassed information regarding medications for chronic illnesses, access to healthcare, participation in preventive tests during the COVID-19 pandemic, the adoption of e-prescriptions, consumer happiness with TH services, and ways to obtain medical information for patients in the absence of personal interaction with a physician (the web, pharmacy technician, nurse, relatives, and physiotherapists) (Goli & Migliardi, 2024). The research inquired about patients' involvement in medical meetings, their readiness to broaden the scope

of medical treatment, their satisfaction with the pharmacist's counsel, and their preferred location for COVID-19 vaccination (healthcare or ambulatory, pharmacies, not applicable, I do not wish to be immunized).

Statistical Evaluation

Statistical analyses were conducted using Statistica v14.0 (Cho et al., 2021). The chi-square test developed by Pearson was employed to analyze the disparities among the various categories.

3 FINDINGS AND ANALYSIS

Demographic Attributes

The research was conducted with patients aged eighteen and above. The dataset comprised opinions from 925 clients, with 75.4% identifying as female and 24.6% as male. A significant number of women participated in the survey; the cohorts of women and men were analyzed independently in the statistical evaluation. Most older patients are not online users and require a paper form of the questionnaires, which posed significant risks during the COVID-19 pandemic.

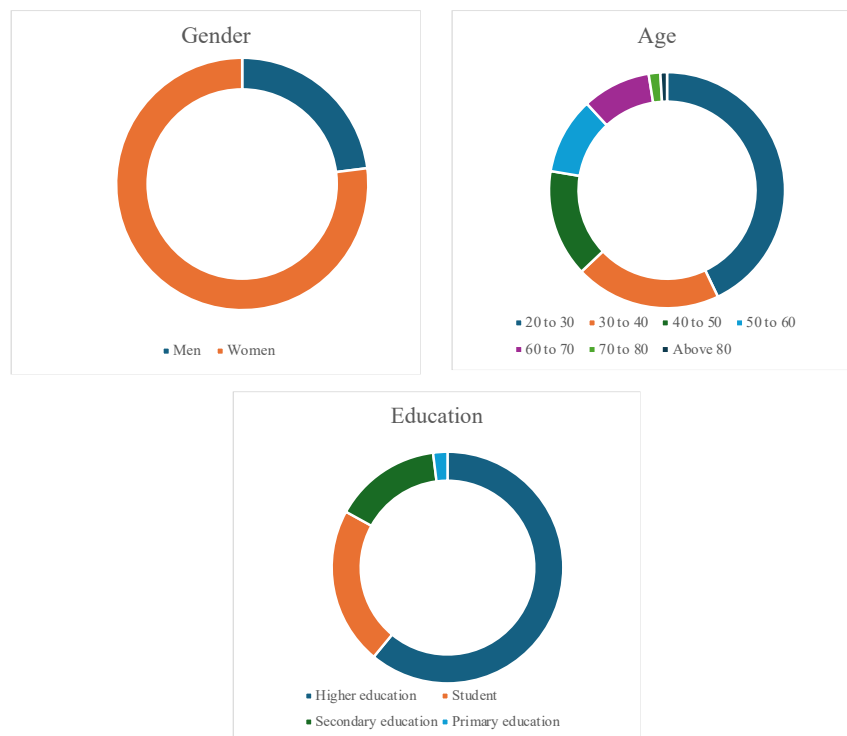


Figure 1: Study Characteristics

Patient Welfare

The majority of participants, 63.2%, do not take medicines for chronic illness, whereas 36.8% consistently use medication (Figure 2). In the analyzed population, women exhibit a higher prevalence of chronic disorders. The link was computed independently for the groups of women and men. The COVID-19 pandemic has impacted the global populace, including individuals with chronic conditions such as diabetes, high blood sugar levels, osteoarthritis, asthma, and cancers. A significant prevalence

of chronic illnesses and a considerable degree of disability among elderly individuals were noted. Individuals with chronic diseases necessitate continuous communication with a physician, adherence to prescription regimens, and routine evaluations. Individuals with diabetes exhibited modifications in behavior during the COVID-19 pandemic and required sufficient help to sustain proper glycemic control in chronic gastrointestinal diseases.

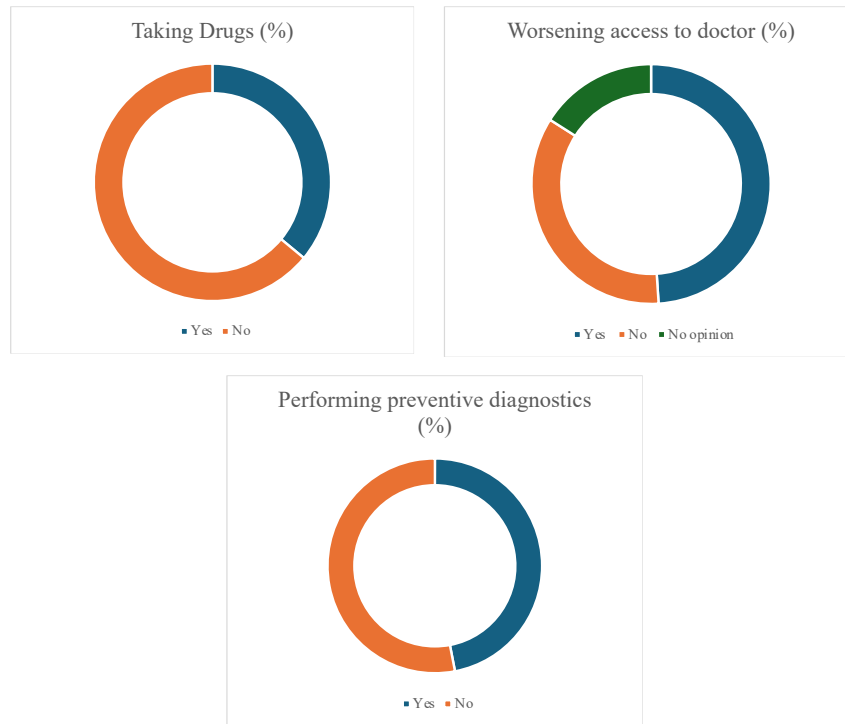


Figure 2: Health Habits of Participants Analysis

TH

Nearly half of the patients expressed dissatisfaction with a tele-consultation selection, totaling 44.5%. It was the solution most commonly selected by patients. 28.5% had no opinion, whereas 26.4% reported satisfaction with teleconsultation medical advice. The study indicates that women exhibited higher levels of satisfaction. A correlation between client happiness with teleconsultation and a cohort of individuals consistently undergoing medicine ($p < 0.02$, $r = 0.8$) has been demonstrated. Most individuals (87.3%) express satisfaction with implementing online prescriptions for chronic gastrointestinal diseases. The highest level of contentment with electronic prescribing (85.3%) is noted among those aged 20-30 and 30-40 (Figure 3). In the 40-50 age demographic, acceptance of e-prescriptions is notably high at 80%, whereas satisfaction declines for individuals beyond 50 years of age. This indicates that elderly individuals encounter more significant challenges in utilizing electronic devices.

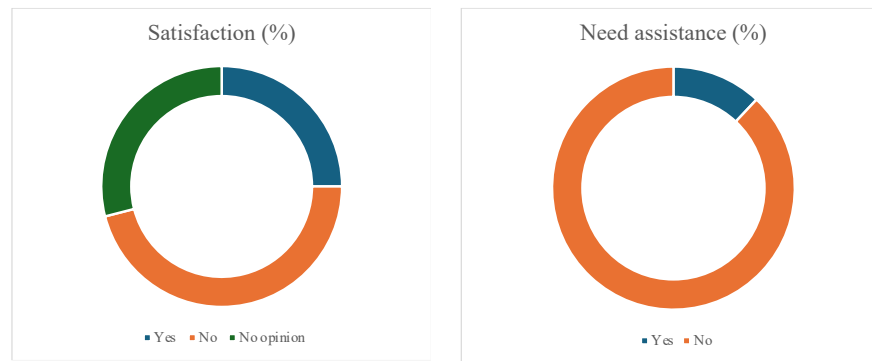


Figure 3: Satisfaction Analysis

Access to Medical Data and Pharmaceutical Consultation

Among the 925 people who finished the surveys, 37.3% identified the Internet as a source of medical guidance without consulting a physician. A pharmacy technician is the initial source of healthcare guidance for 25.8% of patients. 13.2% and 6.8% reported close friends and relatives (Figure 4). A markedly more significant proportion of patients express satisfaction with the guidance offered by pharmacists (48.3% vs. 6.8%, $p < 0.04$). 46.5% of consumers anticipate an enhancement in the advice provided by pharmacists in the future. Pharmacies can significantly contribute by prescribing symptom treatment for mild diseases, ensuring timely prescription refills, and minimizing unnecessary hospitalizations, hence reducing the risk of COVID-19 exposure. The International Pharmacological Forum, a leading worldwide organization for pharmacists, addresses the COVID-19 pandemic by focusing on treatment alternatives, vaccinations, disease testing, and infection mitigation and management in chronic gastrointestinal diseases.

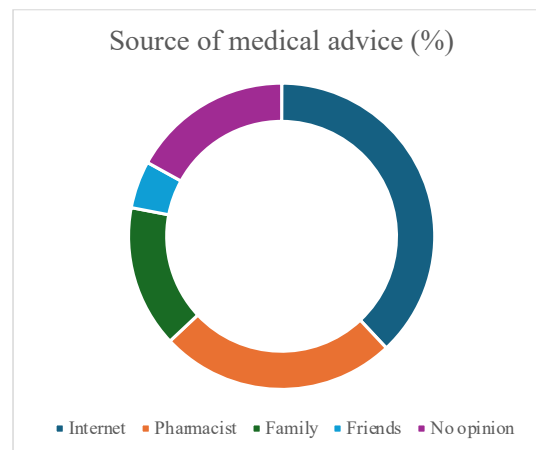


Figure 4: Source of Medical Advice Analysis

4 LIMITATIONS AND FUTURE SCOPE

Constraints of Telemedicine for Healthcare

Telemedicine, in contrast to traditional treatment methods, presents numerous potential disadvantages. It does not replace the existing healthcare system but complements it for specific

functions. Hacking individuals' medical data poses a significant threat, mainly when patients use TH over public networks or unencrypted channels in chronic gastrointestinal diseases. In emergencies, technological advances impede the timely administration of medication, primarily because a physician cannot provide life-saving treatment or conduct laboratory testing remotely. State rules vary, and doctors cannot practice medicine beyond state lines depending on their licensure state and the state of their patient's residence.

Physicians must ensure their telemedicine solution is secure, robust, and compliant with privacy regulations. Caregivers must prioritize patient self-reports throughout telemedicine meetings and require physicians to pose additional inquiries to obtain a comprehensive medical history. Medications are compromised if a patient neglects to disclose a critical symptom that could have been identified during in-person care in chronic gastrointestinal diseases. A significant disadvantage is the lack of availability and price. Establishing and managing these can be expensive for the supplier. Telemedicine might be excessively costly for smaller healthcare institutions despite being a necessary and beneficial service. Inadequate communication will render the provision of dependable care unfeasible.

The Prospective Evolution of Telemedicine within the Healthcare Industry

In the future, individuals will schedule a visit with their preferred physician following a brief and uncomplicated enrollment procedure. Patients will submit their medical information, verification papers, medical records, and previous prescriptions rather than typing. The patient's interaction is an essential feature that enables the physician to formulate an urgent care plan. It summarizes the patient's medical and personal documents, aiding the physician in deciding chronic gastrointestinal diseases. Local medical personnel can be rapidly deployed to provide both urgent and non-urgent services.

This will enable physicians to focus on high-demand, complex situations in person instead of low-level situations managed remotely. In the future, ambulance companies will utilize online discussions to triage patients, resulting in the early discharge of non-emergency cases. There is a reduction in emergency diversions and an enhancement in patient conditions. Numerous healthcare organizations are implementing telemedicine applications to anticipate future needs. It linked cardiologists with people seeking care at the rural clinic. They will also reduce the duration needed for subsequent meetings and enhance the standard system. Remote handling of patients has emerged as a pivotal factor in virtual medical care, presenting substantial prospects for numerous enterprises.

5 CONCLUSION

The COVID-19 epidemic has imposed considerable pressure on healthcare systems, transportation networks, and the treatment of patients. Amid these challenges, telemedicine has emerged as a transformative force in healthcare. It offers the exceptional capability to swiftly and securely treat both COVID-19 sufferers and provide routine treatment for chronic gastrointestinal diseases. In 2020, a notable transformation in healthcare delivery occurred as digital technology was adopted extensively

by public and governmental entities. This appreciation has enabled virtual care's ongoing advancement and broader integration into standard medical practices. The advent of telemedicine enhances medical staff's capacity to deliver efficient therapy remotely, ensuring continuous, high-quality care for sufferers. This period signifies a response to a catastrophe and a notable progression in healthcare delivery. It allows medical providers to meet patient needs through virtual means effectively.

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