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Original Research Article

UNDERSTANDING PATIENT AND DOCTOR PERCEPTION TOWARDS ELECTRONIC CONSULTATION: A QUALITATIVE ANALYSIS FROM A TERTIARY CARE INSTITUTE OF HARYANA, INDIA

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ABSTRACT

Background: Telemedicine has gained prominence in healthcare delivery, with electronic consultation (e-consultation) platforms bridging the gap between patients and doctors. Understanding the perceptions of both stakeholders is crucial for optimizing these services. **Objective:** This study explores patient and doctor perceptions of e-consultation, focusing on accessibility, ease of use, effectiveness, and challenges.

Materials and Methods: A qualitative study was conducted among patients and doctors by in depth Interviews. Key aspects assessed included satisfaction, technological barriers, communication quality, and the perceived impact on healthcare delivery.

Results: Patients appreciated the convenience and reduced travel time associated with e-consultations, but concerns regarding technical issues and the lack of physical examination persisted. Doctors acknowledged the platform's efficiency but highlighted challenges related to diagnosing conditions accurately and maintaining patient rapport. Both groups emphasized the need for improved integration of past medical records and enhanced digital literacy for optimal utilization.

Conclusion: While e-consultation is valued for its convenience and accessibility, addressing technological limitations and enhancing patient-doctor interaction is essential for its long-term success. Strengthening digital infrastructure and training can improve adoption and effectiveness in routine healthcare practice.

Keywords: eSanjeevani, teleconsultation, internet based treatment.

INTRODUCTION

India envisages its path toward Universal health Coverage that is based on assured range of comprehensive primary care which is linked to robust secondary and tertiary care (both in public as well as private) and increased public investments is integral to this approach. eSanjeevani - National Telemedicine Service, an initiative by Ministry of Health and Family Welfare, Government of India is a step towards digital health equity to achieve Universal Health Coverage (UHC). In 2018, under the Ayushman Bharath scheme, the Government of India committed to modifying existing primary health centers and subcenters into 1,55,000 health and wellness centers (HWCs) in India, where teleconsultation service is available in all HWCs.[1]

In-person health care is challenging in India, particularly due to its large geographical distances. Telemedicine as defined as 'The delivery of health care services, where distance is a critical factor, by all health care professionals using information and communication technologies for the exchange of valid information for diagnosis, treatment and prevention of disease and injuries, research and

evaluation, and for the continuing education of health care providers, all in the interests of advancing the health of individuals and their communities' is a welcoming step. In the last few years, communicable diseases are increasing, meanwhile we witnessed the COVID pandemic. In such scenarios, in person consultation is not much convenient. There comes role of Telemedicine - using electronic information and telecommunication technology to get the health care while practicing social distancing. It limited the contact of healthcare facilities, with patients to reduce the risk of communicable diseases.

WHO recommended doctor- population ratio is 1:1000.[2] Doctor-population ratio in India is 0.62:1000.[3] This gross difference in healthcare demand vs. delivery further widens due to various restrictions imposed in lieu of COVID-19 pandemic. "eSanjeevani outpatient department OPD - Stay Home OPD' is based on Government of India's flagship telemedicine technology. eSanjeevani had its genesis on 25th March, 2020 when the erstwhile Medical Council of India (MCI) and NITI Aayog jointly released the telemedicine practice guidelines. These guidelines enable Registered Medical Practitioners (RMPs) to provide healthcare remotely using digital platforms. Soon after, on 13th April, 2020, the Ministry of Health and Family Welfare (MoHFW) launched eSanjeevani, a platform that offers remote health services.[3-4] It is first of its kind online OPD service offered by a country government to its citizens. Even people living in remotest areas can avail to health consultations just sitting at their home. It reduces wait time for services. It saves their time and money, and also bring transparency in the system. One of the major advantages of telemedicine can be for saving of cost and effort especially of rural patients, as they need not travel long distances for obtaining consultation and treatment. In this type of scenario, telemedicine can provide an optimal solution for not just providing timely and faster access.[5] Telemedicine has been mostly used in past for specialty services like tele-neurology, tele-cardiology, tele-orthopedics, tele-pediatrics, palliative care etc. but there is not much literature available for general OPD patients.[5]

There are some unanswered challenges to the telemedicine platform; one being mandatory requirement of a smartphone or laptop with an internet connection for video based consultation. [5] Another was disease wise trend of consultation revealed the platform mainly used by patients for consultations regarding musculoskeletal system (19%) followed by skin (18.4%) and gastrointestinal system (16%).[6] However experience of health care providers using eSanjeevani services and their patients is limited. Hence this study was planned to explore the experiences of patients and healthcare providers.

Objective

To explore the experience and perceptions of patients (users) and service providers regarding eSanjeevani, with a focus on identifying facilitators, barriers, and satisfaction levels associated with its use.

MATERIALS AND METHODS

Study setting – The present study was conducted in ESIC Medical College and Hospital, Faridabad, Haryana (which caters to the insured population under Employees State Insurance (ESI) scheme) and its attached field practice area (Urban and rural health training centers). The scheme under the Act provides social security, sickness benefits, maternity, temporary or permanent disablement benefits to workers. The workers here stand for those working in non-seasonal factories (employing 10 or more persons) and other organised employment covered under ESI Act and his/her monthly wage is 21,000 INR or less. E.S.I. Scheme is contributory in nature and all the employees in the factories or establishments to which the Act applies are insured. The employee and the employer contribute to the ESI Corporation at a specified rate. The medical benefits are provided to these workers through ESI hospitals or empanelled hospitals only. Every insured person (IP) receives cashless card-based services at the ESI health centres allotted to his area. The study setting is a tertiary care hospital which joined eSanjeevani on 28.12.2021 and all the doctors working in this institute were enrolled on eSanjeevani for teleconsultations.

Study type and design – A qualitative research approach using phenomenological study paradigm was chosen and was used to explore the experiences and understand the barriers and facilitators to usage of eSanjeevani. The in depth interviews were conducted in the months of August and September 2022. Prior to our qualitative study, there was a period of more than one year where the use of eSanjeevani was strongly encouraged among doctors and awareness programmes on eSanjeevani for patients have been done in the hospital setting and its attached field practice area. The institute provided for the computer system with audio visual arrangements to conduct teleconsultations. More than 2500 teleconsultations were conducted before the commencement of study.

Study population – To understand doctor and patient perception on eSanjeevani, purposive sampling was used to identify the doctors enrolled on electronic consultation and had used eSanjeevani in the last month. We subsequently used convenience sampling to interview patients attended Out Patient Department (OPD) between the study duration at the tertiary hospital and its field practice areas. Sampling continued until thematic saturation was reached patients. In-depth Interviews were conducted using a guide with a sample of patients (users) and the service providers using eSanjeevani OPD.

Study tools and Data Collection – Prior to data collection, in depth interview guide was designed. It was further face validated and reviewed frequently.

List of doctors who were frequently conducting consultations through eSanjeevani was prepared. Doctors were contacted and those who consented to be part of the study were enrolled and interviewed at their convenient time. Patients who were attending in person OPD during the study period were approached and were asked for whether they have ever consulted through eSanjeevani. The patients who have used the platform were further interviewed after consent. In-depth face to face interviews (IDIs) were carried out both for doctors and patients in the hospital and at the centers. Each interview lasted for 15-20 mins. Interviews were conducted by two of the co authors in language preferred by the study participants. In-depth interviews were continued till data saturation was achieved.

Data management & analysis - The responses during in-depth interviews were recorded and transcribed within 24 hours into English by three co authors independently. Expanded notes, transcripts, and all information sheet related to the data collection event were used for developing the code book. After transcribing the data, the primary author and coauthor worked intensively with the text, annotating it closely ('coding') for insights into the participants' experience and perspective on eSanjeevani. Descriptive and in vivo process of coding was used. Further the emerging codes were catalogued and subsequently looked for patterns in the codes which were then grouped into categories. Categories were rearranged to create themes.

Ethical Approval - Ethical permission was obtained from Institutional ethical committee (IEC no 134X/11/13/2022-IEC/36) prior to the study. Informed consent was taken from every participant.

RESULTS

We interviewed a total of 15 doctors and 16 patients who use eSanjeevani from different departments of the tertiary health care centre. Among the patients, 10 (62.5%) were females and 6 (37.5) were males. Age ranged from 20 -35 years. (Table 1)

Table 1: Participants Demographics

Characteristics	Doctors N (%) Total=15	Patients N (%) Total=16
Gender		
Male	6 (40)	9 (56.3)
Female	9 (60)	7 (43.7)
Age (years)		
25- 34	8 (53.4%)	3 (18.8)
35- 44	5 (33.3%)	8 (50.0)
45-55	2 (13.3%)	5 (31.2)
Years in profession (for doctors)		
<5	6 (40%)	-
6-10	7 (46.6%)	-
>10	2 (13.3%)	-
Average Tele consultations done per day in the last one month		
1-10	6 (40%)	16 (100)
11-20	3 (20%)	-
21-30	5 (33.3%)	-
>30	1 (06.7%)	-

Most of the consultations are for minor common ailments. We identified 4 analytic themes across the transcripts pertained to using eSanjeevani – Availability, Acceptability, Accessibility, and Affordability. (Figure 1)

Figure 1: Themes emerged from the in depth interviews

Theme 1: Availability

A 26-year-old male patient found the platform easily available. Another 36-year male patient reported the medium to be user-friendly. The service providers' perspective was mixed different as they found a lack of awareness among the general population about e Sanjeevani leading to less usage and also an advantage for them in the form of reduced patient load.

"Easily available and free of cost."(Patient #1)

"It is very easy to use since the whole family can be consulted from the ID of one family member."(Patient #2)

"It is easy to use since we can consult patients even when traveling, and it skips the fuss we see in regular OPD."(Female Dermatologist)

"….. It is not being used much since patients are not aware about eSanjeevani. It is not much popularized."(Male Psychiatrist)

Theme 2: Accessibility

Easy Access to Application from phone and access of doctors was found to be a facilitator by a patient. On the other hand, doctors felt that many patients lacked access to smart phones with video calling option and lacked eSanjeevani application compatibility. One of the females a 50-year-old patient found language a hindrance in using the platform independently or with ease. She suggested it to be available in regional language. Another patient aged 55 years was dependent on his son for internet on his phone as he/she did not have such technology accessible to him.

"Patient not having smartphones is the biggest barrier in accessing eSanjeevani."(Male Physician)

"I think this app should be in Hindi and other regional languages as I have to depend on or take help from others to use this app." (Patient #4)

"Don't have internet facility on my phone. I have to plead with my son to use his phone."(Patient #5)

Theme 3: Acceptability

Patients find comfort in the platform when they feel their problem is non serious or when they are far from the hospital and teleconsultation can alleviate their problem. However, one of the respondents (40-year-old male) reported a mistrust in teleconsultation as they feel they may miss some information to report to the doctor which the doctor may observe while in consultation. Waiting time or queue in the online platform was also a barrier reported by a male patient aged 38 years old. Doctors felt illiterate patients from remote areas were unable to understand how to use the platform even after they made them aware. Barriers like technical glitches and patients' not able to upload their reports took lot time in connecting with the patients with doctors.

"When we don't want to visit a doctor and we think the problem is non-serious."(Patient #15)

"As the hospital is far from home, especially when there is no one to accompany me, it's the best thing."(Patient #11)

"I feel sometimes we might miss to tell a symptom or important finding that the doctor could catch."(Patient #10)

"There is a long queue at times [even in online consultation], and the time it will take to let me into the online doctor's room is not shown in this app."(Patient #7)

"Since many patients come from remote and rural areas, they don't understand how to use eSanjeevani."(Female Gynaecologist)

"We don't have access to all the consultation reports unless a patient uploads them manually. Since not all patients are literate, most don't upload their past consultations." (Male Chest Physician)

Theme 4: Affordability

Doctor felt this platform as a facilitator in bridging the gap of desired doctor patient ratio and being able to consult more patients as compared to in person OPD. Reduction of travel costs was seen as a facilitator by the patients. Another physician also felt overburdened with this extra task with already running OPD and In-patient department (IPD) jobs. Many patients who were not able to afford large amount of internet data per day kept their video off while consulting hence reducing the quality of consultation felt by both doctor and patient. Unable to clinically examine patients was also a barrier perceived by the doctor.

"In a country like India, where the doctor-patient ratio is quite low, it is the best way to compensate for the gap." (Female Paediatrician)

"We keep the video mode off to minimize data usage in the app."(Patient #16)

"We can consult more patients via eSanjeevani than in regular OPD."(Male Physician)

"We cannot examine the patient, and without an examination, many diseases can be missed. Patients may overlook important signs helpful for diagnosis."(Male Surgeon).

DISCUSSION

This study gathered perspectives from telemedicine users to understand facilitators and barriers to using eSanjeevani. General perspective about eSanjeevani was good among the participants. Mostly patients have used eSanjeevani for minor elements like fever, cough, and abdominal pain as many doctors said that they have never seen any patient with a serious complaint, just minor ailments.

Many of the barriers to telemedicine acceptability identified in this study are consistent with previously reported findings.[7-8] These barriers include technology challenges, language challenges. Patients and Doctors reported that there are sometimes glitches in the app as reported by both service providers and users which could be improved for better utilization of eSanjeevani. India is a country with 70 % of its population from rural area. Most patients come from rural and remote areas which either don't have internet accessibility or have poor connections, hence patients have difficulty in assessing eSanjeevani. There are technical glitches in app as reported by patients that call cuts in between the consultation. As a lot of patients' login the portal at same time so the patient and doctor load increased on the server and the server slows down. As a result, the technical issues are being faced by users and service providers. In 2024 the proportion of Indian population using smartphones was estimated to be seven percent.[9] In such a scenario people don't have a smartphone hence can't access eSanjeevani. Technical difficulties were reported by 47.1% of participants, with poor connectivity being the most common issue (97.8%). Additionally, there were concerns regarding confidentiality and data privacy during teleconsultations in the study conducted by Yap TE et al.[10]

Only 38% of households in India are digitally literate; it is higher in urban areas (61%) as compared to 25% in rural areas.[11] Difficulty in using a smartphone and internet services due to lack of digital literacy serves as a barrier in utilising eSanjeevani. The application

and its instructions are available only in English, which again is a barrier in country with many regional languages. The elderly patients have to depend on their younger family members for the use of application. Arighi A et al., in their study on patients with cognitive impairment found that having younger generation in family was a success for elderly patients for video consultation during pandemic.[12]

As told by the doctors since clinical examination cannot be done in eSanjeevani, they don't get satisfaction or are convinced fully. Patients may skip many signs which are important for diagnosis. A doctor can make out a lot even from the gait of a patient about his health status but all this is not feasible in eSanjeevani. Survey on patient and doctor's perception of telemedicine during COVID 19 from Poland highlighted that many patients preferred in-person consultations, particularly when a physical examination was necessary or when the diagnosis was unclear.[13] Oncologists from Morocco regarding their experience of teleconsultation reported the same limitation during pandemic of not performing a physical examination directly limited their ability to correctly diagnose and treat the patient.[14] Since there is no access to past prescriptions, doctors find it as a scope of improvement to improve the prescription and diagnosis. It is also suggested by doctors that this app is very useful in case of follow-up of patients as the diagnosis is already made and they have to get prescription for getting medicines. This is a good option for those who don't have any fresh complain.

eSanjeevani platforms permit multiple users to videoconference simultaneously. It is easy to access, readily available, can connect and take consultation at desired time and comfort. The acceptability, usability are also discussed by several authors in their studies. Telemedicine can be used to improve the patient and family experience by including them in consultations.[15] Yap TE et al., through their survey from Philippines reported that the Oncologists perceived that teleconsultation could be effectively used for various purposes such as the first visit, diagnostic workup requests, treatment explanations, follow-up care, and chronic disease management.[10]

CONCLUSION

eSanjeevani has emerged as a significant platform for telemedicine services. Addressing availability, acceptability, accessibility, and affordability remains the key areas for improving its utilization and ultimately the health outcomes. However, its effectiveness can be further strengthened by integrating a robust system for linking past patient records for continuity of care and enabling better clinical decision-making. eSanjeevani needs to be advertised and popularized to improve its utility.

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