



Research Article

A STUDY OF PATIENTS' PERSPECTIVE TOWARD TELEMEDICINE SERVICES IN PUNJAB

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ARTICLE INFO

Article History:

Received 14th November, 2017

Received in revised form 6th

December, 2017

Accepted 18th January, 2018

Published online 28th February, 2018

Key words:

Telemedicine, E-healthcare, Patient attitude, Healthcare.

ABSTRACT

Telemedicine has emerged as new platform to serve healthcare services to people residing in remote and rural area of Punjab. It has various merits in its credit and proves to be more economical and time saving. Despite of fare list of merits of the telemedicine, it has not able to achieve expected level and remain unpopular among the masses. The present study is an attempt to analyze the patients' perspective for telemedicine services, what they think about it and how they feel about its various services. The study aims to identify critical factors which may constitute to the success or failure of the telemedicine services in Punjab. A survey was conducted in Punjab where study covered several of telemedicine centres. The responses of 320 telemedicine Patients were recorded through questionnaire. The questionnaire was designed to access awareness level, attitude of patients and past experience with telemedicine services. The study identified those significant factors which need to be addressed in order to improve status of the telemedicine services. The patients' perspective reveals that telemedicine has gain faith among the masses and gradually people like to get treatment thorough telemedicine services.

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INTRODUCTION

It is well known fact that healthy human capital contribute at large extends to growth of the economy. Providing healthcare facilities to common people is primary responsibility of the government. The nation like India, where population has cross 1.324 billion, serving such huge population with limited resources is a big deal. The government has taken In the modern era, the healthcare service provider's major focus is on patient's satisfaction. The patient's satisfaction is one of the yardsticks to access success of services being provided in the hospitals. Telemedicine focuses on patient's satisfaction in terms of quality of timely availability services, cost of treatment, infrastructure, comfort and emotional support (Hamid A. *et al.* 2008). Telemedicine involves the use of ICT based technology to deliver health services to remote patients and to facilitate exchange of medical information between different healthcare units located at a distance (Sharma L. K. *et al.* 2009). In order to improve good quality health care service through telemedicine services, patient's perspective and patient's oriented services need to be explored. The present study aimed to explore various factors directly or indirectly associated with patient's satisfaction and patient's perspective about the services being provided in the telemedicine centres in Punjab.

In the present study, the questionnaire was designed to analysis the patient's perspective towards telemedicine. The questionnaire was designed to into four sections namely section-I (Economical-social It covers those respondents who have visited telemedicine centre. The questions asked to them were related to awareness, satisfaction, willingness to avail the services and problem being faced by them.

Patients Perspective

Telemedicine is significantly contributing more patients' perspective good quality healthcare. The primary health institution i.e. hospital will remain the major source of healthcare service provider but emergence of Telemedicine has brought new hope for the patients who are living in remote or rural area and remain deprived from healthcare services. Telemedicine healthcare provides various factors which contribute towards its success.

- Patients have to travel less to reach nearby telemedicine centre as compare to the district hospital.
- There is no need to stay at hospital for observation and consultation as patient can stay near to his place.
- There are substantial risks to the patient of acquiring infection in the hospital and telemedicine service minimize the stay duration of patient at the hospital.

The consultation through telemedicine to super specialist is very low and traveling cost heal to TM centre is cost effective.

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- Patients' missed face to face physician appears in front of doctor.
- There is a chance of miss communication between patient and doctor while consultation over the video conference.
- There is a chance that patients would still need to be seen by physically by the specialist.
- Patients may be in doubt about the quality of Telemedicine services.
- Immediately consultation is possible only when specialist is available online.
- The effective cost of Tele-consultation is measured very low to extremely high.

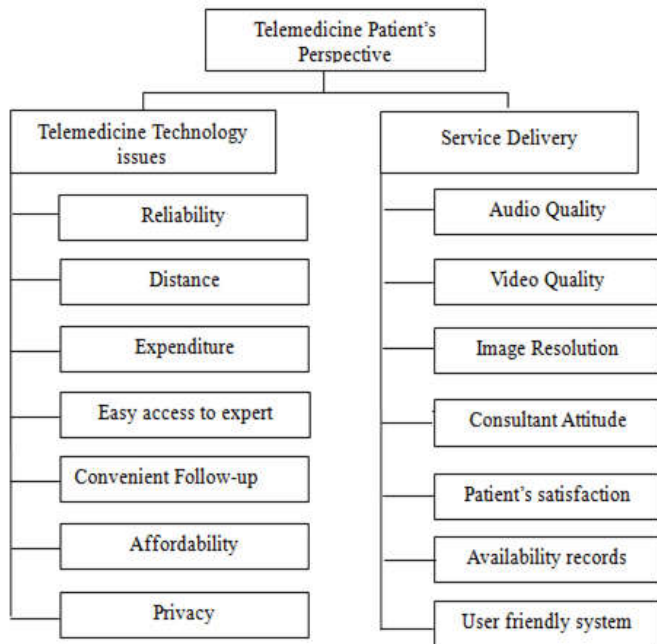


Figure 1 Factors consider study service providers' perspective

Factor	Description
1. Reliability	Represents how patients feel about reliability of TM system
2. Easy access to the experts	Whether the patients can access expert easily through TM centres?
3. Proximity from residence	How far telemedicine centre situated from resident of patient?
4. Awareness about TM	Whether patients are aware about telemedicine?
5. Types of population	Rural ,Population
6. Chronic diseases	Whether telemedicine centre helpful for Chronic diseases
7. Convenient follow up	Is it convenient to follow up for treatment?
8. Average waiting Time	How much time patient have to requires waiting to start communication with medical expert?
9. Patient e-records keeping	Digitalization of patients' records
10. Cost effective treatment	Whether the treatment is cost effective through telemedicine centre.

Reliability: Telemedicine has emerged as new platform and most of the patients have got treatment first or second time. It is obvious that patients may have doubt about the reliability of the system. The reliability count found during the survey was 46.1% which is marginally low but as its new system patients, it will take time to gain confidence of the patients about telemedicine services.

Easy access to the experts: Video conferencing enables patients at telemedicine centre to communicate with experts. It proves to be more easy and convenient access to the experts. The patient can talk face to face and share medical records with helps of telemedicine operator.

Types of population: The survey reveals that patients from both rural and urban availed the telemedicine services but major share of telemedicine patients belongs to rural population. The urban population belongs to weaker section were found more interested.

Convenient follow up: To completely cure from the diseases it is good to follow up the treatment and consult the doctor at regular interval. Generally, patients avoid to travel frequently to meet the doctor but in case of treatment at telemedicine centres, it has been observed that patients were regular and have shown keen interest in follow up.

Proximity from residence: It has been observed in the survey that majority of telemedicine centres are located at district level hospitals. As result majority of patients living near by the hospitals approached for the treatment.

Awareness about TM: Awareness about telemedicine service emerged as prominent factor in the study. It has been observed that majority of patients were unaware about the telemedicine services.

Data analysis and interpretation

The primary was collected from telemedicine centres of the Punjab. The questionnaire was designed to understand view point of patients who have availed telemedicine services. There were total 320 respondents. The questions asked to them were related to awareness, satisfaction, willingness to avail the services and problem being faced by them. The open ended questions were also asked to understand problems are being faced. The majority of respondents' complaint about the delay in response from the experts and few are advised to upgrade the audio video system in the telemedicine centres.

There were 173(54.1%) male and 147(45.9%) female respondents. Majority of respondents i.e.189 (59.1%) were from the rural background and 131(40.9%) were from urban region. The respondents provided the information through 5 point likert scale having intervals ranging from 1=strongly disagree, 2= disagree, 3= neither agree nor disagree and 4= agree and 5=strongly agree.

Following are few prominent factors which are considered to understand the attitude and awareness of patients:

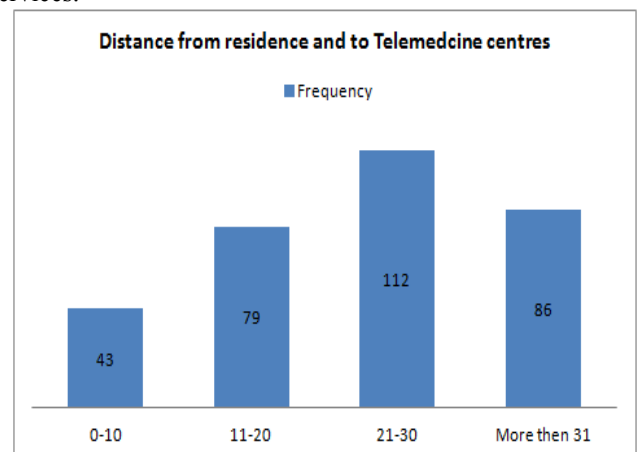


Figure 2 Shows proximity from residence of patients

It also has been observed that government has not taken significant steps to bring awareness along the masses.

Average waiting Time: Performance of telemedicine centres heavily dependent on waiting time in response from the experts. If expert is not available for video conference at scheduled time and take comparatively long time, patient lose faith in treatment and shift to other means of treatment. It is very important to stick with schedule and rapid response is appreciated, otherwise, it may affect the treatment of the patients. The average time delay in majority of telemedicine centres is 2-3 days. In some cases, it does not affect the treatment but in some cases patients have to treat with prescription of local physician still the response received from the experts.

Patient e-records keeping: Digitalization of patient's records such as X-Rays, MRI, blood reports and history helps patients to take better treatment and it also helpful to physician to diagnosis the diseases. It also helpful in follow up the treatment, patients need not to carry all the records every time while visiting the telemedicine centres.

Cost effective treatment: Low cost in treatment has proved to be a root cause of success of the telemedicine in Punjab. It not only safe traveling expenditure but also save money spend expert reviews.

Limitations of Telemedicine services: There are few limitations of the telemedicine services which came into light during the survey. Consultation through telemedicine is an efficient and cost cutting method in rural and remote areas but there are few cases where telemedicine may not prove to be most effective method of consolation and treatment. During the survey and data collection phase, there were few suggestion received from the physician which reveled few facts about the limitation of telemedicine system. Following list explores these facts about the telemedicine services. There are many cases where Patient needs to consult physically to the specialist.

Face-to- face contact: Patients miss the face-to- face contact with healthcare provider. Sometime patient feel sympathetic treatment which is hard to achieve in telemedicine centre through telemedicine consultation

Low level of Trust: The survey reveals that there is low level of treat between patients and doctors sitting physically apart.

Difficulty in diagnosis: Some time physician faces difficulty in underrating problem of the patients over the video conferencing. Specially incase of children who may not express properly and doctor also want to touch and feel about the patients.

Emotional therapy: Emotional touch is also missing in the telemedicine treatment. In clinical practice, patients feel emotionally strong and consultation of doctors is more effective as compare to telemedicine.

Communication problem: In some remote and backward areas, communication over the internet is also some time appeared as hindrance in diagnosis the patients.

Hesitation of patients: In some cases it has also been reported that patients hesitate to discuss problem over video conferencing due to recoding of video conversation over the internet. They have fear to lose the privacy over the internet.

CONCLUSION

Telemedicine has emerged as new hope for rural and weaker section of the society. Government has taken various initiatives and people are taking treatment from these facilities. The present study reveals that telemedicine has important step towards health care to huge masses. The survey was conducted keeping patients perspective in mind and revolved around idea that what patients feel about telemedicine services. Various factors were addressed in the study such as timesaving, economical, emostional and political. Despite of various merits telemedicine also have area of limitation where it need to be improved. It has been observed through secondary Delay in response time and privacy need to be address. The patients need to be taken in confidence while disclosing personal problem with doctors. The study concluded that patients were satisfied with telemedicine service and it has bright future in Punjab.

Reference

1. Hamid, A. and Sarmad, A. (2008), "Evaluation of e-health services: user's perspective criteria", *Transforming Government: People, Process and Policy*, Vol. 2 No. 4, pp. 243-255. Telemedicine in India.
2. L. K. Sharma and M. Rajput, "Telemedicine: socio-ethical considerations in the Indian milieu," *The Medico-legal journal*, vol. 77, no. 2, pp. 61-65, 2009.
3. Saroj Mishra, K. Ganapathy and Baljit Singh Bedi (2008), "The Current Status of eHealth Initiatives in India", *The eHealth Connection*, 1-11.
4. Bedi BS. Telemedicine in India: Initiatives and Perspective, *eHealth 2003: Addressing the Digital Divide-17th Oct. 2003*.
5. Mishra, S.K., Singh, I.P. and Chand, R.D. (2012), "Current status of telemedicine network in India and future perspective", *Proceedings of the Asia-Pacific Advanced Network*, Vol. 32 No. 1, pp. 151-163.
6. Murthy, B.K., Srivastava, P.K., Cheema, A.S. "Implementation challenges of hospital information system in super specialty hospital "A case study of PGIMER, Chandigarh", in *Global Humanitarian Technology Conference - South Asia Satellite* pp.77-82 2014 .
7. P. G. Paul, R. Raman, P. K. Rani, H. Deshmukh, and T. Sharma, "Patient satisfaction levels during teleophthalmology consultation in rural south India," *Telemedicine Journal and eHealth*, vol. 12, no. 5, pp. 571-576, 2006.
8. The report (2012), *The health care delivery system provided by Punjab institute of health and Family*
9. www.mohfw.nic.in (Last accessed Feb. 12, 2017).
10. www.cdac.in (Last accessed January 12, 2017).
