

Role of Digital platforms in Healthcare System in India: An Empirical Study

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Abstract

Digital platform is a business model that is enabled by technology and help to exchange information between the agents that are interacting and also represent the link between the two. Its applications in the healthcare sector are significant due to rapid growth and popularity of delivering the health services through digital world. It is important to know the diffusion of online health services from the view point of human decision process so that it can be developed in much better way. In the world of internet, the health services are acquiring “offline-to-online” nature and offering its services through digital platforms. The technology is playing very important role in digital platforms where it is empowering the service providers and the service user both and also encouraging them to interact and share their resources. Sample of 203 respondents were surveyed to find the role and significance of digital platforms in the health care sector and Mean and t-test was applied was applied to get the appropriate results. The study concludes that there are so many different roles of digital platforms that are very significant for the health care system in India.

Keywords: Digital platform, Health care system, Technology, Sustainability, Online platform

Introduction

Digital platforms in health care system are very different from traditional solutions that are based on information and technology and do not possess in-built and by-default properties for the user on the supply side to extend and commercialize their services. These digital platforms have the “software code” that can be built up by the company and also can be used by the consumer as well. There are so many digital forms that have emerged over last few years in different business sectors but it is seen that efforts are made to implement these digital platforms in the health care system only. **Chen (2014)** found in the study that “Apple Health” and Google Fit” are making efforts to give life to the industries. There are very few platforms that can affect the day to day life of the patients and help them in their treatment process. They have boosted the access to “information” and “knowledge” resources through which the users are improving their understanding and awareness level regarding medical related issues and involving them in the health care system.

Digital platform is helpful in boosting the involvement of the people that are there to perform as active entities. They are cooperating and activating the network interactions and it is

considered that in the healthcare system, digitalization is an important tool which is helpful in developing the systems. According to **(Irving & John, 2016)**, number of advantages has been produced by modern technologies for the health care sector which is very important to improve the healthcare services. The problem of information asymmetry which is affecting the relation between the doctors and the patients can be reduced gradually with the help of digital platforms. Digital platforms are very helpful in collecting and processing huge amount of data of health information system **(Bates et al., 2014 and Mettler, 2016)**. It also collects and processes the data from “medical devices, from patients/family members and from external applications (internet of things, social platforms, telemedicine) etc.”

There is a great probability to draw up accurate diagnosis and adapt effective treatments with the help of digital platforms and it also increases the overall capacity of the healthcare system and guides the consumers in much better way. **Kvedar et al (2014)** found in their study that digital platforms “effectiveness” and “efficiency” of the drug therapies. In the healthcare sector, it is important to encourage the decision makers to manage information and communication technology (ICT) platforms so that they can make efforts to create a competence centre in the digital health care system. Since the information and communication technology platforms were commonly utilized, therefore, it is proved that it is very basic in the “treatment phase” and in the “prevention phase” as well. Information and communication technology (ICT) platform were commonly used as the communicating tool by the doctors to keep in touch with their patients and the family in the treatment phase and it is used as the tracking tool in the prevention phase **(Botti&Monda, 2020)**.

TreC is the most important innovation that represents the digital health service platforms and has an “ecosystem of web” and “mobile applications” through which the citizens were supported to manage their health and also interact with their health care professionals and on the other hand, the professionals can monitor their patients from the remote areas. Some of the role of these digital platforms is: they allow access to “electronic health record,” enable the people to consult to the doctors, allow accessing their documents like “reports, laboratory tests, discharge letters, health, and pharmaceutical prescriptions etc,” “to book and pay for visits and change their doctor, and also have a record of their personal health observations.”

Literature Review

Digital platforms and the technologies related to digital health are the offerings that are ideal and cost effective solution to all the wicked problems of health care delivery. They also

encourage people to change their health related lifestyle and the behaviour of avoiding their ill health. The digital platforms and the websites are allowing the people to connect with the health service providers and get access to “medical” and “health information.” Through these digital platforms the service providers can monitor, measure, and also visualize the human body and the users can share their personal information and experience with each other. The digital health technologies are representing self responsibility and self management of the patients that get the advantages and are guided by the digital platforms to be engaged, track themselves, and promote their health issues. The patient’s opinion is co-modified in digital platforms and directed at “patient support” and “medical and health apps” as a socio cultural work of art (**Lupton, 2014a, 2014b**).

These digital platforms are bringing all the related physicians, patients, families, health service providers, institutions, etc. at one single platform to give solution to all the health related issues. They are also facilitating the interactions and the processes of exchange of mutual resources that triggers the mechanisms and the procedures and finally contributes to sustainability on the health care system. This also empowers the related people and also reduces the information uncertainties and encourages the people for personalized health care services and the systems. In health care system, digital platforms act as versatile mediators of interactions that enhance the exchange of resources among various active entities and this is only possible because of the ability of the digital platform that facilitates its users (**Storbacka et al., 2016**), and empowers them with friendly and easy to understand health related information.

Users need to agree the terms and conditions of these digital platforms under customer loyalty schemes and share their personal information. The “sensory medical” condition is then easily identified by examining the data sets (**Rosenblat et al. 2014**). Digital platforms also conduct “customer loyalty programs” to encourage people to upload their self tracked health and fitness data.

The system perspective is applied to the health care sector (**Patrício et al., 2018**) to make a work goal to configure the service ecosystem and make it is the most suitable “organizational model” that can obtain the “value co-creation” in the digital health care system. Since the growth in awareness and knowledge is increasing day by day, the people involved in health sectors except the physicians are working with the help of the platforms and are becoming the

real contributors to the “co-production” of the health care services that are personalized according to the users and to the “co-creation of value” for themselves and others.

Digital nourishes value co-creation patterns which are important to improve the health results and long lasting well beings of the actors which are necessary for the sustainability of the health care system. These digital platforms has the potential to bring a change in the public and private health care management that needs to be promoted as a smart and wide tool that can stimulate the dynamic and multi actor dialect. It has the goal to combine the health care needs for “efficiency,” “effectiveness,” and “sustainability.” Digital platforms mediate the communication and facilitate the users in sharing their resources and experiences. They are also working as the “data manifold,” the role of digital platform which is investigates in future while implementing the big “data techniques” and “data mining procedures” in health care services (**Faggini et al., 2018**).

Huge advancement is been witnessed in recent years in Information and Communication Technologies and in the implementation of digital platforms as well. They have boosted the patient’s empowerment and help in coping with information asymmetries and also enhance the interaction between “health care professional, patients, and other that includes families, peers, citizens, institutions, etc.” Technologies and digital platforms are boosting the interaction among the users and offering more the health care management which is more effective in providing the information (**Caputo et al, 2018**).

The information and communication technology and digital platforms of health care system are improving the effectiveness and the quality of the healthcare services that are provided. They have boosted the access to information and knowledge resources through which an individual is improving his or her understanding and awareness level regarding the medical issues and involving them in the whole service provision. The accessibility to the resources and the emergence of sustainable multi actor communications is been increased by the digital platforms of the health care system which is based on “resource sharing, cooperation and networking” (**Grunwald, 2017**).

Digital platforms are adding sustainability to these service domains and balancing the need for “efficiency,” they are also reducing the time and cost of the health related procedures. These digital platforms are improving the effectiveness of the health care services and changing the behaviour of the common people related to their health care management. These

platforms are smartly and widely used by its users as a tool which is helping them in managing their health and issues related to it.

Objective of the Study

1. To find the role of digital platforms in healthcare system in India.
2. To find the significance of digital platforms in health care system.

Research Methodology

The present study was conducted with the help of survey method where 203 respondents were surveyed through structured questionnaire. The users and services providers of health care sector were considered to know the role and significance of digital platforms in health care sector where primary data was collected through random sampling and Mean and t-test was applied to get appropriate results.

Findings of the study

Table 1 shows the demographic profile of the respondents. It is seen that in the total number of 203 respondents 57.6% are male 42.4% are female in which 31.5% are from the age group 26-35 years, 34.5% belongs to age group 35-45 years and rest 34.0 are above 45 years of age. Among them 26.1% are undergraduates, 38.9% are post graduates, and 35.0% are having some other educational qualification. 23.1% of the total respondents are from the business field, 29.1% are serviceman, 21.2% are healthcare service providers, and rest 26.6% are from some other occupational sector.

Table 1 Demographic profile of the respondents

Variables	No. of respondents	Percentage
Gender		
Male	117	57.6
Female	86	42.4
Total	203	100
Age		
26-35 years	64	31.5
35-45 years	70	34.5
Above 45 years	69	34.0

Total	203	100
Educational qualification		
Undergraduates	53	26.1
Post graduates	79	38.9
Others	71	35.0
Total	203	100
Occupation		
business	47	23.1
Service	59	29.1
Healthcare service providers	43	21.2
Others	54	26.6
Total	203	100

Table 2 Role of digital platforms in healthcare system

Sl. No.	Role of digital platforms	Mean score	t value	Sig
1.	Digital platforms simplifies the interaction between the patients and the service providers	3.79	12.23	0.00
2.	Digital platforms allows the co-creation of value amid users and the service circle	3.81	10.40	0.00
3.	Digital platforms helps in increasing the loyalty of the doctors	3.19	2.75	0.00
4.	Digital platforms increases the well beings of the patients	3.73	10.08	0.00
5.	Distribution of health services becomes easy through Digital platforms	4.03	12.86	0.00
6.	Digital platforms facilitates the interaction and communication between the patients and the doctors and the health providers	4.11	17.19	0.00
7.	Operational efficiency of the health care sector is increased by digital platforms	3.93	11.94	0.00
8.	Digital platforms have improved the health information systems	3.77	11.16	0.00
9.	Digital platform had increased the service provider capabilities	4.01	13.95	0.00
10.	Quality of patient's life is improved due to digital platforms	4.07	13.36	0.00

Table 2 shows the role of digital platforms in health care system in India. It is seen that Digital platforms simplifies the interaction between the patients and the service providers

with mean score 3.79 and Digital platforms allows the co-creation of value amid users and the service circle with the mean score 3.81. Respondents believes that Digital platforms helps in increasing the loyalty of the doctors with the mean score 3.19 and Digital platforms increases the well beings of the patients with the mean score 3.73. Respondents accepts the fact that Distribution of health services becomes easy through Digital platforms with the mean score 4.03 and Digital platforms facilitates the interaction and communication between the patients and the doctors and the health providers with the mean score 4.11. According to the respondents Operational efficiency of the health care sector is increased by digital platforms with the mean score 3.93 and Digital platforms have improved the health information systems with the mean score 3.77. Respondents says that Digital platform had increased the service provider capabilities with the mean score 4.01 and Quality of patient's life is improved due to digital platforms with the mean score 4.07. One sample t-test was applied to test the significance of the statements. It was found that for all the statements the value under significance column is below 0.05 hence, all the statements are significant which shows that digital platforms are playing a significant role in the health care sector in India.

Conclusion

The digital platforms in the health care system are very important as they enable the interaction, activates specific and dynamic relation amid different agents, health service providers, patients, and their families. These digital platforms of health care sector are supporting the service providers so that they can share their resources, enhance their accessibility, and provide their services to the patients. It allows the users to interact and communicate with their doctors and share their health issue and on the other hand the service provider can monitor, evaluate, and also treat their patients from the remote places as well. They have boosted the access to information and knowledge resources through which an individual is improving his or her understanding and awareness level regarding the medical issues and involving them in the whole service provision.

The study concludes that there are number of significant roles of digital platforms in health care system in India like it simplifies the interaction between the patients and the service providers and allows the co-creation of value amid users and the service circle, it helps in increasing the loyalty of the doctors and also increases the well beings of the patients. Distribution of health services becomes easy and it also facilitates the interaction and communication between the patients and the doctors and the health providers. The operational

efficiency of the health care sector is increased and the digital platforms has improved the health information systems and also increased the service provider capabilities.

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