

Chapter 43

Factors Influencing Physicians' Acceptance of E-Health in Developing Country: An Empirical Study

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ABSTRACT

E-Health is one of the solutions to provide better access for patients and physician to healthcare facilities. In developing countries, e-Health is particularly important due to a shortage of physician and medical workers. Although most physicians in developing countries like Bangladesh acknowledge the benefits of e-Health, low adoption is not uncommon. The objective of this study is to identify the critical factors affecting e-Health adoption among physicians in Bangladesh. A cross-sectional survey questionnaire method was used for this study. The structural equation modeling (SEM) with the partial least square (PLS) approach was used to analyze the data. The study found that Performance Expectancy, Effort Expectancy, Social Influence and Personal Innovativeness had a significant impact on the behavioral intention to use e-Health, while Facilitating Conditions had no significant effect. The findings of this study will facilitate the degree of more acceptance of new technology by the physicians for their own betterment.

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INTRODUCTION

e-Health applications are being widely deployed across the globe to provide healthcare to remote locations (Mostafa et al, 2010). It is increasingly needed due to the postulation that it improves effectiveness and efficiency of health services (Lang and Mertes, 2011). Research has shown that e-Health is one of the solutions to provide better access for patients and physician to healthcare facilities (Hoque and Bao, 2015; Mostafa et al., 2010; Khalifehsoltani & Gerami, 2010). In developing countries, e-Health is particularly important due to a shortage of physician and medical workers, infrastructural problems and disparity between urban and rural citizens (Hoque et al., 2014; Fulton et al., 2011; Naicker et al., 2009). The patient and physician use of e-Health has been touted as important ways to improve quality and decrease healthcare costs. It has the potential to improve both the quality and the access to health care services delivery while lowering costs even in the scarcity of resources (Nessa et al, 2006).

A recent report has shown the importance of e-Health in reducing the number of readmissions for patients suffering from many chronic health problems (De Toledo, et al. 2006). e-Health can also help in keeping track of patients with one or more cognitive disabilities, such as stray prevention system for the elderly with dementia. An economic analysis of health insurance was performed by Gravelle and Sicilian (2008) and they indicated that if wireless networks could provide the help to a treatment process of patients in hospitals, the outcome of healthcare would be effectively increased. Moreover, the use of Internet and ICT can reduce the long-term cost of healthcare and result in an increased productivity of healthcare providers. To support the long-term healthcare needs of patients, e-Health solutions must be developed for the homes, nursing homes, and hospitals (Hung & Zhang, 2003; Pollard, Rohman & Fry, 2001; Varady, Benyo & Benyo, 2002).

Bangladesh is one of the most densely populated countries of the world. About 156 million people living within 144,000 sq. km of land (1045 person/km²). There are only 663 Government hospitals in District head-quarters and Thana (sub-town) areas. Total number of beds available in both public and private hospitals and clinics is 51,648. So the ratio of one hospital bed to citizen of Bangladesh is around 1:2571 (Nessa et al. 2006). Around 80% of the total population of this country lives in rural areas. And rural health centers are often ill-equipped for proper medical and surgical treatment. Moreover most of the doctors are city based (Nessa et al. 2006). So, when the rural people go to health centers in thana or Upazila level they don't get any specialist doctor's advice. To get better consultancy rural people spend most of their money on travel to visit doctor in urban areas. Sometimes, due to the critical health condition of the patients and poor transportation facilities in those areas they are not be able to travel from the suburb to the city on time.

Due to non-availability of health facilities in remote areas, a large health service seeking people may need to travel for their appropriate health care in a few specialized health centers mostly situated in capital city or big cities. The use of Information and Communication Technology (ICT) in the health sector is very limited in Bangladesh, though its use will make a significant contribution to the improvement of health sector and change the present scenario. To meet these challenges, a group of responsible physicians, IT specialist and eminent persons have come together and formed a common platform named Bangladesh Society for Telemedicine & eHealth (BSTeH). The BSTeH exists to facilitate the dissemination of knowledge and experience in Telemedicine and eHealth and to provide access to recognized experts in the field. Understanding the potentiality of telemedicine and e-Health, many developing countries are implementing telemedicine to provide health care facility to remote area where health care facilities are deficient. Bangladesh is not an exception to this either (Nessa et al, 2006).

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