# Exploring the Role of Service Quality and Knowledge for Mobile Health Services

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# ABSTRACT

The use of mobile technology-based services has made healthcare delivery more accessible and affordable in recent times. In fact, mobile health services today act as an effective means of providing healthcare knowledge to users directly from providers. However, the cynical behavior of users regarding this medium of healthcare services often encircles around the quality of such services. The aim of this paper is to examine the role of service quality and knowledge among other underlying factors that can influence future use intentions of m-Health services in the context of Bangladesh. The conceptual model of the study identifies that certain aspects of service qualities like reliability, privacy, responsiveness, empathy and information quality along with facilitating conditions, effort expectancy, performance expectancy and social influence plays an important role in capturing users' overall perceptions of mobile health services. Finally, the study highlights managerial implications, future research directions and limitations from the Bangladesh perspective.

#### **KEYWORDS**

Bangladesh, Healthcare Knowledge, Information Technology, Mobile Health Services, Service Quality, UTAUT

### INTRODUCTION

Information and communication technology (ICT) offers great potential for improving the quality of services provided along with the efficiency and effectiveness in health care sectors. In recent times, electronic health (e-Health) services truly serves as a tool with a huge potential for health care organizations to deliver quality and cost-effective care to geographically dispersed populations through the Internet (Jung, 2008}. However, a branch of e-Health services - mobile health (m-Health) has been constantly expanding over the last decade.

The m-Health services can be broadly defined as the use of mobile computing and communication technologies in health care and public health. This service application generally provides patient monitoring, sends text messages reminding patients to take needed medications and offers suggestions for maintaining health while pregnant, even in war-ravaged places. Current evidence suggests that

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the use of mobile technology can improve diagnosis and compliance with treatment guidelines, as well as patient information and can increase administrative efficiency (Rashidee, 2013). In a broader sense, m-Health is not just improving health status rather it is the use of mobile technology to address health care challenges such as access, quality, affordability, behavioral norms, skill development in communication, supply management, information management and financial transactions through the exchange of information (Sultana, 2014).

The m-Health services are a great initiative in health care sectors, since there are a number of patients who possess less knowledge and understanding of personal health problems but cannot afford time or money to visit doctors or medical centres on a regular basis (Nisha et al., 2015}. However, the benefits of m-Health services are often outweighed by the fact that many users are still skeptical of the quality of services that can be provided through such mediums. As such, it becomes imperative to examine the role of service quality and knowledge among other factors that can influence the acceptance, use, future prospect and necessity of m-Health services from the perspective of a developing country.

In the context of developing countries, technology may be well-perceived but when the content is sensitive like healthcare provisions, acceptance of the technology often depends upon the quality of the services and individual knowledge related to the service, among other factors. Therefore, the unified theory of acceptance and use of technology (UTAUT) model has been used for this paper. This study employed proposed constructs of system quality (system reliability, system efficiency, system privacy), information quality, interaction quality (responsiveness, assurance, empathy) and healthcare knowledge, to examine the factors that can influence users' intention to use m-Health services in Bangladesh. Moreover, this study has both theoretical and managerial implications. Theoretically, drawing upon relevant literature, this study aims to provide a model that is capable of understanding the determinants behind the future adoption of m-Health services among the people of Bangladesh. From a managerial perspective, the findings of this research should provide further insights into understanding and managing potential m-Health users, particularly hailing from the developing countries. This study can also assist various public and private hospitals and various telecommunication networks to consider the idea of providing m-Health services to the people of Bangladesh.

# LITERATURE REVIEW

This study argues that service quality and individual knowledge of health care plays a deterministic role in influencing the future use of m-Health services in the context of Bangladesh. As such, the current practice of m-Health services and its implications in Bangladesh, followed by the research platform of the study has been discussed to determine the gaps for the study.

# A Budding Ground for Mobile Health Initiatives

Bangladesh is experiencing significant advances and development in health care sectors in recent years, since the government has started a new era in the health sector by introducing ICT for health service delivery. The government has developed a Health Management Information System (MIS) department under the Directorate General of Health Services (DGHS). The purpose of this department is to ensure the best use of ICT to build and maintain nationwide health information system of Bangladesh (DGHS, 2014}. This works as the backbone of the e-Health service network of Bangladesh and m-Health service is rendered using the national wide mobile phone network. The health professionals provide basic health advices and initial diagnosis when the service recipients' contacts through specialized 24/7 call centers. It has established free tele-consultation with government doctors, free SMS services for patient management and communication with staff, particularly for the needy people of the country. These cell phone numbers are circulated among the surrounding community. As such, people residing in the rural areas can contact with the health professionals through this network.

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