

Chapter 11

What Makes Patients Adopt the Web-Based Personal Health Records (PHRs)?

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ABSTRACT

This study analyzed what makes patients adopt the web-based personal health records (PHRs). Patients may consider the perceived value of information, the perceived usefulness of searching, the perceived privacy, the perceived trust, and the perceived security when they adopt the web-based PHRs. By using HINTS (Health Information National Trends Survey), this study found that the perceived value of information is the most important determinant when patients adopt the web-based PHRs. The perceived privacy, the perceived trust, and the perceived security are also determinants to influence their decision to adopt the web-based PHRs. But, the perceived value of searching is not statistically significant to explain the adoption of the web-based PHRs. However, the perceived value of information is a strong antecedent of the perceived usefulness of searching. Based on this study, patients are more likely to adopt the web-based PHRs when they realize that the web-based PHRs provide valuable and reliable information with protecting their privacy and system security.

INTRODUCTION

When health care industry adopts new information technology, it reduces costs and improves quality (Li et al., 2014; Menachemi, 2006; Menachemi et al., 2007; Simon et al., 2008; Simon et al., 2007; Thompson & Brailer, 2004), efficiency, and safety of health care (Li et al., 2014). This is also the case of e-Health care systems as they improve access, cost efficiency, and healthcare quality (American Telemedicine Association, 2013). The Web-based Personal Health Records (PHRs) as one of e-Health care systems

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bring lots of benefits to providers as well as patients as they help create a reliable health information infrastructure within the public health sector and improve the fragmented and decentralized healthcare system. They also empower patients to be independent in taking care of their own health (Institute of Medicine, 1997). However, new IT adoption in the health care industry does not seem to have been popular despite lots of benefits (Bhattacharjee & Hikmet, 2007; LaPointe & Rivard, 2005) to both providers and patients. Ilie et al. (2009) explained why new IT adoption in health care providers is so slow, using the case of the EMR (Electronic Medical Records) into four reasons; complexity, dual organizational structure, different characteristics of physician and general IS users, and power structure. But, their study is based on the providers' perspective. Relatively few studies analyzed from patients' perspectives such as why patients are hesitating to adopt the Web-based PHR systems or what makes patients adopt the system. Therefore, the present study focuses on patients' adoption of the Web-based PHRs. The purpose of this study is to explain what makes for patients to be willing to use the Web-based PHRs. Thus, the research question would be "what makes patients adopt the Web-based PHRs?"

This study contributes to academic and practice areas. Currently, there are relatively few studies conducted from patients' viewpoints, while most studies are from providers' viewpoint. This study will fill the gap between providers and patients by focusing on patients' adoption factors. Practically, the results of this study will provide guidelines to health care providers about how to implement the Web-based PHRs to reduce costs and improve service quality.

The following section reviews existing literature and proposes hypotheses derived from literature reviews to answer the research question. The data analysis section explains the procedures to collect and analyze data, followed by results, discussion, and conclusions. This study concludes with some implications and limitations.

LITERATURE REVIEW

The Web-based Personal Health Records (PHRs) are one type of information technology used in the health care industry. According to the Health Care Information and Management Systems Society (HIMSS), PHRs is defined as "a universally accessible, layperson comprehensible, lifelong tool for managing relevant health information, promoting health maintenance and assisting with chronic disease management via an interactive, common data set of electronic health information and e-health tools" (Liu et al., 2013). For a theoretical framework, Davis et al.' Technology Acceptance Model (TAM) (1989) has been adopted and discussed in many studies of individuals' information technology adoption behaviors. For example, this theory has been widely used in IS research (Lee et al., 2003) and in health care research (Bhattacharjee & Hikmet, 2007; Hu, et al, 1999; Chau & Hu, 2001, Pare et al., 2006, Hos-sain et al., 2019). TAM has also been used to explain the adoption of other technologies (Klein, 2007) such as e-mail system (Gefen & Straub, 1997), health information system (Wilson & Lankton, 2004), microcomputers (Igbaria, 1993), operating systems (Karahanna et al., 1999), spreadsheet (Chau, 1996), WWW (Agarwal & Prasad, 1997), driverless car (Koul & Eydgahi, 2018), and virtual reality (Manis & Choi, 2019). The main idea of TAM is that belief affects personal attitude, and then personal attitude influences intention (Davis et al., 1989). Finally, the intention determines personal behavior whether the user adopts new technology or not. In the theory of TAM, perceived ease of use (PEOU) and perceived usefulness (PU) are used as factors to explain technology adoption. Davis et al. (1989) defined perceived usefulness as "the degree to which a person believes that using a particular system would enhance his or

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