
Jon Blue, University of Delaware, USA

ABSTRACT

Technology Acceptance Theories have been widely applied and quite successful at explaining the behavioral intention to use technology in many organizations. One of the most significant variables in the Technology Acceptance Model is perceived ease of use. The Technology Acceptance Model purports that perceived ease of use contributes to the behavioral intention to use technology. Additionally, the model purports that perceived ease of use is an antecedent of perceived usefulness. In the adoption and use of technology across multiple industries, previous studies show that Technology Acceptance Theories predictions have been incorrect and not consistently supported. Qualitatively studying physicians, it is shown that medical doctors focus on factors not thoroughly investigated or explained in the literature. This study specifically investigates physicians’ behavioral intention to use a Personal Digital Assistant in their work environment and examines why some tested constructs, such as perceived ease of use and perceived usefulness, are not relevant in a health care environment. Plausible solutions to this non-predictability issue, such as technology substitution, are presented.

Keywords: Behavioral Intention, Perceived Ease of Use, Perceived Usefulness, Personal Digital Assistant, Technology Acceptance Theories

INTRODUCTION

Information technology acceptance and adoption have received an enormous amount of attention for over twenty years. Technology Acceptance Theories (TAT) have been used, reused and tested and have been shown to be applicable on many occasions. However, there have been studies that have refuted the theories’ applicability in various industries. These studies include those that are in health care. However, while these studies have refuted the applicability of TAT, they have not provided research that shows answers to why these inconsistencies exist.

The use of information technology has become pervasive across every industry including health care. With the increased use of the Internet in the 1990s and the new millennium, the speed of communication and the standardization of
information have drastically increased. These phenomena allow physicians to deliver better quality care to their patients. For instance, using technology such as telemedicine, physicians can conduct electronic house calls to monitor, direct, and diagnose patients without being physically present. Telemedicine allows physicians to deliver health care services to many persons without a concern of physical locality.

Most health care institutions are committing to information systems and services, which affect every aspect of the organization’s function (Greenes & Shortliffe, 1990). It is important that physicians are not only aware of health care technology, but are also using it to provide excellent or superior quality care. Physicians face many challenges and obstacles once they decide to embrace the use of technology. A major challenge of a physician’s adoption of technology is the behavioral changes needed by physicians, other health care providers, administrators, and patients. Clearly, the weakest link syndrome applies in technology acceptance. This means a physician cannot send patient instructions electronically if the patient does not have a personal computer, an email address, or the ability to instant message.

Information technology applications are abundantly present in the health care industry. Physicians indicate that information technology in health care is not only desired but needed (Healthcare Information Management and Systems Society, 2009). Nearly two-thirds of the HIMSS Survey respondents (United States) indicated that IT can have a positive impact on patient care through an improvement in clinical/quality outcomes or reducing medical errors. Twenty-four percent of respondents of the survey indicate that “to improve patient care” is their key business objective. The most important future technology, as stated by the survey respondents, is implementing an Electronic Medical Records (EMR) system. To date, the survey indicates that only 17 percent of the respondents have an EMR fully operational across their entire organization.

To ensure that there is a continued increase in physicians delivering quality health care, it is important to investigate the phenomena of physicians’ behavioral intention to use information technology. The current theories such as The Technology Acceptance Model (TAM) and the Extended TAM have repeatedly been inconsistent in predicting usage. Therefore, this research is significant because reasons for technology non-use and prerequisites for usage are presented. This research of physicians’ technology adoption is also vital because acceptance of computer systems and technological advancements historically assist health care providers in delivering high quality care (Kuziemsky, Laul, & Leung, 2005, p. 205). This study seeks to discern 1) why haven’t TAT been successful in predicting individual usage in the health care industry, and 2) what, if any, characteristics of physicians and their environments contribute to physicians’ use and non-use of PDAs?

The article is organized as follows. First, seminal TAT is reviewed in order to present the base of where many subsequent theories have arisen. This review is followed by a discussion of literature that has shown that TAT has fallen short of predicting as purported. The study consists of the specifics of the study that includes the research method, data collection, data analysis and results. The article is concluded with a discussion of possible answers as to why TAT have not consistently predicted physical technology use and what actions can occur that will assist in increasing physician usage.

**TECHNOLOGY ACCEPTANCE THEORIES**

Davis (1989) used the Theory of Reasoned Action (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975) with the intention of creating a model based on the behavioral intentional framework that is suited to explaining and predicting end user adoption of information technology. TAM continues to focus on behavioral intention as the antecedent of actual behavior, but with two significant changes that suggest attitude directly influences behavioral intention. These are: 1) TAM excludes the subjective norm construct.
14 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the product's webpage:

www.igi-global.com/article/physicians-non-use-technology/41717?camid=4v1

This title is available in InfoSci-Journals, InfoSci-Journal Disciplines Medicine, Healthcare, and Life Science.
Recommend this product to your librarian:

www.igi-global.com/e-resources/library-recommendation/?id=2

Related Content

An Interactive System for People Suffering from Cerebral Palsy

www.igi-global.com/article/an-interactive-system-for-people-suffering-from-cerebral-palsy/95930?camid=4v1a

Utilisation of Health Information Systems for Service Delivery in the Namibian Environment
Ronald Karon (2016). Maximizing Healthcare Delivery and Management through Technology Integration (pp. 169-183).

www.igi-global.com/chapter/utilisation-of-health-information-systems-for-service-delivery-in-the-namibian-environment/137585?camid=4v1a

Using RFID and Wi-Fi in Healthcare
Alexiei Dingli and Dylan Seychell (2014). International Journal of E-Health and Medical Communications (pp. 96-113).

www.igi-global.com/article/using-rfid-and-wi-fi-in-healthcare/109868?camid=4v1a
Physician Characteristics and EMR Attitudes
www.igi-global.com/chapter/physician-characteristics-emr-attitudes/50157?camid=4v1a