Factors Influence Intention to Adopt Internet Medical Information on Bulletin Boards: A Heuristic-Systematic Perspective

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ABSTRACT

The considerable attention that increasing needs to acquire Internet Medical Information (IMI) has received in recent years, there has been little research to systematically investigate the factors influencing users’ intention to adopt the IMI. The authors apply the Heuristic-Systematic Model (HSM) to evaluate how users form the intention to adopt IMI on bulletin boards. An online survey was conducted collecting 339 questionnaires from users of bulletin boards to validate the proposed model. The authors’ findings suggest that both systematic and heuristic processes had significant effects on intention to adopt information. Subjective knowledge positively moderated the systematic process, while trust in word of mouth positively moderated the heuristic process. The key contributions of this study are: (1) the HSM was examined in a natural setting instead of a laboratory setting, which made the results more credible and generalizable; (2) the HSM was extended by proposing two moderators (subjective knowledge and trust in word of mouth) to give insight into the users’ considerations when evaluating IMI.

KEYWORDS

Intention to Adopt Information, Internet Medical Information, Perceived Readability, Source Authority, Subjective Knowledge, Trust in Word of Mouth

INTRODUCTION

Notwithstanding surveys reporting that people go online to obtain Internet Medical Information (IMI) (Weaver, Mays, Lindner, Eroglu, Fridinger, & Bernhardt, 2009) for themselves or others, it appears that the intention to actually apply that IMI to health issues is often weak (Baker, Wagner, Singer, & Bundorf, 2003; Hesse, Nelson, Kreps, Croyle, Arora, Rimer, & Viswanath, 2005; Rice, 2006). This may be because IMI still lacks credibility for most people (Eysenbach, Powell, Kuss, & Sa, 2002). Impicciatore, Pandolfini, Casella, and Bonati (1997) studied 41 medical treatment websites and reported that only four of them provided accurate information. Schmidt and Ernst (2004) examined 32 websites discussing cancer treatment and found that three of them contained information that could potentially endanger patients. Since IMI is valuable only if it can be used to improve health-care decisions (Harri, 2010; Zhang & Watts, 2008), investigating factors affecting people’s intention to adopt IMI not only can help practitioners and scholars improve the IMI services but also increase users’ willingness to adopt IMI.
IMI has received considerable attention in “social network” communities, such as blogs, bulletin boards, and Twitter (Adams, 2010; Scanfeld, Scanfeld, & Larson, 2010). These platforms allow people to manage and share their knowledge of and experiences with IMI, creating a rich repository of user-generated content that is a popular and important source for users who need to make health-related decisions (Fox & Jones, 2009). Among these platforms, bulletin boards have three advantages that outweigh others to become an excellent information source for maintaining health. First, thread, the problem-oriented information structure of bulletin boards, allows new sub-threads to respond existing threads (Suzuki & Calzo, 2004). For example, a thread post such as “Are there any good doctors for my breast cancer treatment?” may result in numerous posts from many people wanting to contribute their ideas and experiences in order to respond the first thread, even though comments exit in other sub-threads. This kind of problem-oriented and well-presented structure allows users to focus on the topics they are interested in as well as to search information easily. Second, the posts in bulletin boards from a variety of registered users, including professionals, amateurs and beginners instead of just from an individual’s experiences like blog and twitter, form a valuable database for peoples’ health reference. This allows the information in bulletin boards to have higher ability of generalization and cover more extensive aspects of specific health issues, which in turn creates higher value of information. Third, bulletin boards provide some useful functions to assist users to retrieve more information. These include private message system which allows users to send messages to others to acquire further information, and search engines that enable users to search and organize information more efficiently. Finally, this digital environment has not received significant research attention (Bond, Ahmed, Hind, Thomas, & Hewitt-Taylor, 2013). Our research therefore focuses on these health-related online bulletin boards.

Past IMI studies have focused on two main streams: seeking behaviors (e.g., Beaudoin & Hong, 2011; Weaver et al., 2010) and information quality validation (e.g., Buhi, Daley, Smith, Schneider, & Fuhrmann, 2010; Rains & Karmikel, 2009). The former emphasized how users search for IMI by integrating information search methods, messages and personal characteristics. The latter demonstrated how people judge the information quality from a multi-dimensional perspective (such as credibility, accuracy and trust). Most extant studies have focused on how people search and evaluate IMI, but little is known about which factors are significant and how these factors affect the intention to adopt IMI. Thus, this study addresses the aforementioned gaps in extant literature.

In addition, our study is a response to calls by Zhang and Watts (2008), Racherla and Friske (2012) and Zheng, Zhao and Stylianou (2013) for research in other online communities in order to increase the relevance of the available body of knowledge for improving the design, facilitation, and effective use of online communities. In doing so, this study also attempts to provide a valuable framework for software designers to understand the potential impacts of the design features of online community support software, and to offer a paradigm for predicting, testing, and evaluating their effectiveness accordingly.

Based on the discussion above, this study aims to:

1. Identify the factors affecting users’ intention to adopt IMI in the context of health-related online bulletin boards, and
2. Develop and empirically examine a framework to provide advice for managers to improve IMI information and services.

To achieve these goals, we first developed a theoretical framework based on the Heuristic-Systematic Model (HSM) and analyzed survey data collected from 339 users of health bulletin boards. Based on our analysis, we drew insights on factors driving how users process and evaluate IMI and in turn form the intention to adopt information. The rest of the paper is organized as follows. We discuss the conceptual model and present our hypotheses in the Theoretical Development section. Then we describe research design, subjects and scale validation. Next, we present our analysis and
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