Social media and online health services: A health empowerment perspective to online health information ☆

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ABSTRACT

This study investigates how differences in the use of online health information and social media affect the use of online health services. We attempt to predict the extent to which the use of social media and online health information prompt individuals to use online health services. We draw upon a combination of sociology and communication studies and integrate relational maintenance assumptions regarding the quality of online social relationships to promote the importance of health empowerment factors–socio-demographic characteristics, internet attitudes and health status models to predict the likelihood of using online health services. The study's sample consists of 1406 individuals using the Internet, including 633 individuals using the Internet and social media to look for health information. The study's results provide evidence that (a) online health information empowers most of the examined individuals to use online health services; (b) among all social media only those that offer consulting have a significant effect on the likelihood of using online health services. The implications of these findings support that a conceptual integration of CMC and social media use theories along with health empowerment assumptions, is a promising theoretical framework to test the effectiveness of social media use in prompting use of online health services. The practical applications for health management are highlighted as well. Finding practical and affordable ways to support the use of social media and encourage access to online health information and use of online health services could improve health literacy and self-management of health at the individual level and increase the efficiency in the provision of health services at the institutional level.

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1. Introduction

Social media have revolutionized communication, resulting in the creation of online social relationships on platforms such as Facebook and Twitter (Thoren, Metze, Bührer, & Garten, 2013), expanding social ties and increasing psychological well-being (Chen & Lee, 2013; Nabi, Prestin, & So, 2013). Diverse sources of relevant information located in social media, ICQ, chats, health forums, etc. are then searched for, increasing the chances of finding requested knowledge, facts and evidence, and providing social support and even possible recovery for those in a vulnerable health situation. This is because social media helps to achieve a better perspective about health problems and eliminate sources of concern. Posting, sharing, and commenting on health-related issues, joining or developing online health communities, and exchanging information about health issues (Thoren et al., 2013) are social reinforcements that enable increased access to information and social advancement (DiMaggio & Bonikowski, 2008) and prompt a "health empowerment" process (Dutta-Bergman, 2006).

Health-empowered individuals accessing online health information and social media express a higher willingness to know more about health-related products (Dutta-Bergman, 2004a; Dutta-Bergman, 2004b; Dutta-Bergman, 2004c) and often adopt new health habits (Eisenberg & Berkowitz., 2009). This is possibly why individuals and health institutions alike, realizing the importance of health information channeled online and facilitated by social media (Husereau, Drummond, & Petrou, 2013; Park, Rodgers, & Stemmle, 2011), use social media to alleviate health concerns (Dutta-Bergman, 2004c), raise health awareness (Eisenberg & Berkowitz, 2009), and distribute health information (Bundorf, Wagner, Singer, & Baker, 2006; Park et al., 2011) providing ample evidence about the "empowering" effect of online health information on health literacy, health attitudes and health behaviors (Dutta-Bergman, 2006). In the present study we present an integrative model to predict use of online health services (OHS) following use of social media and access to online heath information. We draw our hypotheses from three distinct areas of research: (a) sociological and communication studies (b) the relational maintenance paradigm and (c) health empowerment models.

The use of CMC for health concerns reflects the rising concern of individuals, health institutions, and health policy-makers about maintaining and improving health levels among the general and the disadvantaged public. 81% of U.S. adults used the Internet and 35% went online to find out what medical condition they or someone else might have (Purcell & Fox, 2010). 54% seek information about new medical treatments and/or medication, 46% of online health surfers change their eating or smoking habits (Lustria, Smith, & Hinnant, 2011; Purcell & Fox, 2010). Social websites, such as Facebook and Twitter, play an important role in health because they facilitate direct, immediate and mass communication. SNS use has been reported to be an effective path in increasing connectivity levels between health service recipients and healthcare providers (Schein, Wilson & Keelan, 2010; Ellison et al., 2009).

In the US, according to a survey conducted by the Princeton Research Center (Pew Research Center, 2012) respondents were asked about their most recent serious health issue, and to whom they had turned for help. A total of 70% reported receiving information, care or support from a doctor or other health-care professional; 60% from friends and family; and 24% from others with the same problem. 18% of Internet users say they have gone online to locate others with similar health concerns. One in four Internet users with a chronic health condition (23%) go online to find others with similar health concerns (Manhattan Research., 2012). In the EU, 7.4% of the population reported contacting a family doctor, specialist or other health professional via email or the Web to request or renew a prescription, 9.9% to schedule an appointment, and 6.7% concerning specific health problems (Andreassen et al., 2007).

The empirical link between social media use and OHS use is, however, limited (Bundorf et al., 2006; Centola, 2010; Portnoy, Scott-Sheldon, Johnson, & Carey, 2008) mostly because a conceptual "bridge" connecting macro-level trends in use of social media with micro-level individual behavior is necessary to predict variations in the use of online health services. This necessitates the combination of a variety of theoretical perspectives. First, we need to address *sociological* studies that examine how the quick and easy access to online information shapes social outcomes, including health inequality (Mesch, Mano, & Tsamir, 2012). Second, we need to consider communication studies, specifically, *Relational Mainte-nance* models that explore how social relationships evolve through CMC and social media (Amichai-Hamburger, 2005; Lustria et al., 2011; Purcell & Fox, 2010). Finally, approaching the factors associated with health behavior necessitates addressing *Health Empowerment* hypotheses which explain how access to online health information and additional individual level aspects of health affect health awareness (Eisenberg & Berkowitz, 2009) increase the need for self-efficacy (Bandura, 2004) and raise the willingness to participate in social media related to health concerns (Dutta-Bergman, 2004a; Dutta-Bergman, 2004b; Dutta-Bergman, 2004c). With the two former perspectives focusing on the nature and outcomes of online interactions, and the third perspective on the psychological process of individuals concerned with health issues, we propose an integrative approach that considers the features of social media and the attitudinal aspects of Internet users seeking health information (Chen & Lee, 2013; Portnoy et al., 2008).

We suggest that variations in (a) access to social media and online health information as proposed in sociological and communication studies (Mesch et al., 2012) and (b) differences between social media proposed by the relational maintenance theory (Amichai-Hamburger, 2005) generate variations in the use of OHS. We seek to show that the frequent use of Internet platforms (instant communication providers, SNS, weblogs, online virtual communities) and "participatory" health communities will increase the likelihood of individuals to use OHS (Gibbons, 2008; Schiavo, 2008) controlling for variations in socio-demographic characteristics, health status and Internet attitudes, as proposed by health empowerment models (Dutta-Bergman, 2006).

2. Theoretical background

Social media studies addressing the importance of online interactions in different areas of life when individuals connect at work, for leisure, social engagement and education purposes (cf: Amichai-Hamburger, 2005; Baym, 2010; Joinson et al., 2007; Lin & Lu, 2011; Mano, 2014). A positive relationship was detected, for example, between the use of Facebook and forming and maintaining social capital (Ellison, Steinfield, & Lampe, 2007). Additionally, Valenzuela, Park, and Kee (2009) found that the intensity of Facebook use was related to civic participation, life satisfaction, and social trust. Mano (2013) provides evidence that engaging in social media, micro-blogging and Facebook prompts individuals to support social causes and make online money contributions. Alternatively, Tufekci (2008) showed that expressive uses of the Internet – such as reading blogs, creating web pages and emailing – are related to the adoption of SNS websites among younger adults. These findings clearly indicate that social media are significant in one's life even more so because social media is not associated with education, race, ethnicity or income, which means that a large segment of the adult population can now access online health information via social media, diminish "first-level" digital divide effects caused by gaps in Internet skills, and remove "second-level" digital divide effects in health (Househ, 2011; Mesch et al., 2012).

Sociological perspectives emphasize the role of online information in regard to social and group-level outcomes. According to the *normalization hypothesis*, the rise of the information society and the Internet can reduce social inequalities because access to the Internet at home and work can increase access to government and financial services (Korp, 2006), as well as health services (Mesch et al., 2012). Conversely, the *social diversification hypothesis* suggests that using the Internet can improve health literacy and increase motivation to use it more to expand the range of services used by individuals. This is why the Internet and lack of access to online health information may replicate and even increase social inequalities – because not everyone possesses the necessary skills needed to acquire online information (Korup & Szydlik, 2005; van Dijk, 2005; Eisenberg & Berkowitz, 2009; Sillence, Briggs, Harris, & Fishwick, 2007).

Communication studies, address the central role of CMC in relation to online behaviors. Media synchronicity theory –MST– for example, emphasizes the capacity of web communication to support synchronicity and, by doing so, supports a coordinated exchange of information and behavior among individuals who share a common interest (Dennis, Fuller, & Valacich, 2008). In contrast to other communication theories, MST argues that media which create simultaneous exchanges will also increase effectiveness in desired interaction outcomes. Similarly, following MST, the Media-System Dependency hypothesis suggests that "the more dependent one becomes on a specific CMC medium, the more important its role in one's life is; therefore, the more influence it will have on individuals' behavior" (Baran & Davis, 2000, p. 273).

Some additional and useful concepts for the possible effects of social media would be the "preferential attachment" concept, which suggests that it is more likely for individuals to visit web pages that have links to other sites than web pages with fewer links to further information. This implies that not all social media are likely to be equally attractive to individuals with specific interests and concerns in mind, since they rely on the "cumulative advantage" of using one medium. Similarly, the gratification theory provides background for the concept of the maximum utilization of one's resources – individuals who actively use media with a