

## **The Impact of Psychological Factors on Seeking Health Information Online**

Dale Dong  
Pre-Pharmacy Department  
University of the Pacific  
3601 Pacific Ave  
Stockton, CA 95211

Faculty Advisor: Dr. Qingwen Dong

### **Abstract**

*Objective:* The purpose of this study is to examine the impact of Internet self-efficacy, self-esteem and emotional intelligence on seeking health information online. *Method:* The study was conducted in a northern California university among young adults. The sample of 250 was selected through general education classes in order to represent the whole population of the university. Three independent instruments were adopted from existing reliable measures and the dependent measure was generated and pretested with strong reliability. *Results:* Descriptive analysis showed that 44% of the surveyed population paid attention to online health information; half of the surveyed individuals consulted the Internet before consulting the doctor with health related questions, and 39% of participants used WebMD to better understand health information. Results suggested that Internet self-efficacy was a strong predictor of individuals' online health information seeking. However, results did not show strong evidence that self-esteem and emotional intelligence could be used as predictors for seeking health information online. *Conclusion:* Young adults with high Internet self-efficacy are more likely to seek health information online. This finding should encourage researchers, policy makers, and educators to develop new ways to help people take advantage of using new technology to seek critical information online. Limitations and suggestions for future research are also provided.

**Keywords:** Seeking Health Information Online, Internet Self-efficacy, Self-esteem, Emotional Intelligence

### **1. Introduction**

The rapid expansion of Internet technology and its popularity in today's society has affected our everyday lives in countless ways. The growing usage of the Internet has increased the popularity of seeking health information online.<sup>1</sup> This new method of receiving health information online is playing a key role in minimizing health inequalities in the United States, empowering those who could not get health information from traditional sources. It is critical that researchers examine ways of helping individuals develop confidence in using online resources to seek health information and change the unequal situations present in health information seeking.

Given social importance of the topic, this study's purpose is to investigate the key factors that influence individuals' online health information seeking. In today's Internet age, psychological factors shape the way individuals perceive, feel, and do things. People are regulated by psychological factors such as self-efficacy, emotional intelligence and self-esteem. The current study has three main objectives: first, it examines the impact of Internet self-efficacy on online health information seeking; second, it looks at how emotional intelligence affects individuals' online health information seeking, and third, it investigates the effects of self-esteem on online health information seeking.

The Internet is an important source of health information for college students, but it is even more important to notice that not all students equally utilize this critical resource due to various factors within contextual situations.<sup>1</sup> Previous research suggested that the new media changed health inequalities; however using the new online source may pose new inequalities to individuals. In other words, the digital divide may become a key factor in seeking health information online. Those who have access to the Internet may develop more competence in using the medium to seek information while those who have limited or no access to the Internet may have very little competence in using it as a source for vital information.

### 1.1. Health Information Seeking

There has been a significant amount of research conducted on information seeking behavior over the past decades.<sup>2</sup> Kostagiolask, Aggelopoulou and Niakast focused their study on the information seeking behaviors of pharmacists, whose information seeking competence is critical to management of health care systems and services. The study found that hospital pharmacists in Greece depended on the Internet and the National Organization of medicines to gain information. Research on health information seeking has proliferated in recent years, however “relatively few studies have focused on where young adults look for health information.”<sup>1</sup> The younger adult Americans have drastically changed the way of information seeking patterns. These young people tend to have more access to and more experience with the digital media, as indicated by Percheski and Hargittai. The study indicated although young adults have fewer health problems, they tend to have more information seeking needs about drug use, sexually transmitted diseases, and unplanned pregnancies. Online information can be so critical for these types of health issues and seemingly young people tend to seek health information online for their privacy, problem solving, and curiosity.

### 1.2. Internet Self-Efficacy

Self-efficacy was a term coined by Bandura as a measure of one’s own ability to deal with the external world. Bandura suggested that self-efficacy is the “foundation of human agency” and it is “more central or pervasive than people’s belief in their efficacy to exert control over their level of functioning and events that affect their lives.”<sup>3</sup> He added that self-efficacy is a mechanism which plays a central role in shaping all human behaviors: “Efficacy beliefs influence whether people think self-enhancingly or self-debilitatingly, optimistically or pessimistically; what courses of action they choose to pursue; the goals they set for themselves and their commitment to them...” Bandura added that these beliefs in efficacy also shape individuals’ efforts in dealing with various situations, productivity outputs, and coping with various contextual factors and accomplishing their goals.<sup>3</sup>

Bandura indicated that self-efficacy is the most powerful human agent. He said that the higher level of self-efficacy individuals have, the more likely that they will do well in their performance.<sup>3</sup>

Internet self-efficacy is defined as the belief in one’s capabilities to organize and execute courses of Internet actions required to produce given attainments.<sup>4</sup> The study suggested that Internet self-efficacy has the potential to minimize the digital divide between those who are experienced Internet users and those who are not. According to Eastin and LaRose, Internet self-efficacy measures how confident people are with using the Internet to accomplish their own goals such as searching for information.<sup>4</sup> This efficacy also encompasses how comfortable an individual is when utilizing the Internet as a method of communication or a source for information. In the past few years, the measurement of Internet self-efficacy has changed due to the rapid evolution of the Internet. The earlier measurement of Internet self-efficacy scale focused on how confident an individual was with browsing the Internet or how confident they were with sending an email message.<sup>5</sup> However, the recent introduction to social media, such as Facebook and Twitter has changed the dynamics of Internet self-efficacy. Studies have showed that training significantly can improve and enhance Internet self-efficacy.<sup>6</sup>

### 1.3. Emotional Intelligence And Health Information Seeking

Emotional intelligence is defined as a combination of individual and social competence.<sup>7</sup> This individual competence refers to how individuals understand and manage themselves while social competence indicates how individuals understand and manage others. Goleman believed that emotional intelligence is critical to helping young people deal with today’s challenging, multi-tasking environment, also adding that people have the capability to learn emotional intelligence whenever they want.<sup>8</sup>

Goleman's emotional intelligence focused on five dimensions of self and social factors including self-awareness, self-regulation and motivation as self-factors and empathy and social skills as social factors. These self and social competencies directly shape individuals' ability to become competent in self and social interactions. Based on the mechanism of emotional intelligence, it is anticipated that emotional intelligence can be viewed as an agency to motivate individuals to seek health information online and thus self-empower themselves.

#### 1.4. Self-Esteem And Health Information Seeking

Self-esteem is defined as how individuals perceive themselves. Individuals may perceive themselves positively or negatively. According to Gecas, self-esteem has been one of the most popular aspects in self-concept studies.<sup>9</sup> If individuals have high self-esteem, they tend to do more work, seek more information and believe themselves as worthier. If people have low self-esteem, they may develop self-rejection and self-dissatisfaction. It is anticipated that individuals of high self-esteem tend to be more confident and more likely to seek information in order to empower themselves.

#### 1.5. Summary Of Literature And Research Questions And Hypotheses

In summary, the review of literature has suggested that these psychological factors do play a critical role in shaping individuals' cognition, feelings and behaviors. These psychological factors are agents, motivating people to seek information to empower themselves.

The review of literature suggested that Internet self-efficacy has the potential to serve as a powerful human agent, encouraging people to take advantage of digital resources and to seek information online. Therefore, the study proposes the first hypothesis: (H1) Internet self-efficacy leads to individuals' seeking health information online.

The review also indicated that emotional intelligence refers to individuals' competence in understanding and managing themselves and others. Emotional intelligence empowers individuals to seek information. Therefore, the study proposed the second hypothesis: (H2) Emotional intelligence leads to individuals' seeking health information online.

In addition, the literature stated that self-esteem is viewed as individuals' perception of themselves positively or negatively. These self-perceptions can also motivate individuals to seek information to reinforce their positive feelings about themselves. Therefore, the study proposes the third hypothesis: (H3) Self-esteem leads to individuals' seeking health information online.

## 2. Method

### 2.1. Sample

The sample contained 250 college students from a northern California university with 97 (40%) male respondents and 148 (60%) female respondents. The total of 280 questionnaires were distributed and 250 were collected and used for the study with the response rate of 89%. The respondents ranged in age from 17 to 40, with a mean of 20.25 years. The racial/ethnic composition of the sample was 41.7% Caucasian, 33.2% Asian American, 13.4 % Hispanic, 2.4% African American, and 8.5% selected "other."

### 2.2. Procedures

A self-administrated survey was distributed to subjects during class sessions. The teaching assistants followed the protocol of the research design and read the instructions to the participants. Participants were informed that this survey was voluntary and the information was completely confidential and anonymous. A quick debriefing of the study was given to the participants by the instructor after the questionnaires were completed. The questionnaire took 8-10 minutes for the participants to complete.

### 2.3. Measurements

The survey instruments were constructed based on a combination of established scales and original items based on the review of literature. All of the instruments in the study shared a strong reliability for the investigation. These

instruments included Internet self-efficacy, health information seeking online, emotional intelligence, and self-esteem.

Internet Self-efficacy was adopted from Tella<sup>10</sup> measurement of ten Likert scale statements. Statements included “I can effectively search for information on the Internet by using key words; I rarely find search engines like Google and Yahoo to be difficult to use; and I rarely have problems finding what I am looking for on the Internet.” This scale had a reliability of Cronbach’s Alpha at 0.81.

Health information seeking online had ten Likert scale statements generated by the author. A pretesting was conducted in order to confirm its validity. These statements included “I have noticed that there are a lot of health information online; I pay attention to health information online; I consult the Internet before I consult my Doctor when I have a health related questions.” The scale had a reliability of Cronbach’s Alpha at 0.89.

The emotional intelligence scale was adopted from Dong’s measurement, which included 20 Likert scale statements covering the five dimensions of emotional intelligence.<sup>11</sup> The five dimensions are self-awareness, self-regulation, motivation, empathy, and social skills. These statements include “I know myself very well,” I am very goal-oriented,” and “I am a good listener.” The scale had a reliability of Cronbach’s Alpha at 0.91.

Self-esteem was measured by 11 bi-polar adjectives to examine how individuals evaluate themselves as powerful/powerless, honest/dishonest, and good/bad. Gecas (1971) developed this semantic differential scale to measure self-esteem.<sup>8</sup> The scale had a reliability of Cronbach’s Alpha at 0.91.

### 3. Results

#### 3.1 Descriptive Analysis

Data analysis was conducted using Statistical Package for Social Sciences (SPSS) and three major analyses for this study were conducted including descriptive analysis, correlation analysis, and regression analysis. Descriptive results regarding online health information seeking indicated that 49% of respondents consult the Internet before consulting the doctor with health related questions. In addition, 44% pay attention to online health information and 39% use WebMD to better understand health information. The descriptive results indicated that the sample population was relatively accustomed to seeking health information online. The descriptive results also showed a high level of Internet self-efficacy among the respondents. The sample showed that 97% of respondents said that they can effectively search for information online through using key words. The respondents also showed high emotional intelligence and moderate self-esteem. The correlation analysis (see Table 1 below) indicated a significant positive correlation between online health information seeking and Internet self-efficacy ( $r=.21$ ;  $p<.01$ ). There was no significant correlation between online health information seeking and emotional intelligence and self-esteem.

Table 1. Means, Standard Deviation, Correlation, and Reliability of Major Scales

Variables	Means	SD	1	2	3	4
1. Online Health Info	3.37	.76	(.89)			
2. Internet Self-Efficacy	4.29	.51	.21*	(.81)		
3. Emotional Intelligence	4.16	.47	.08	.45*	(.91)	
4. Self- Esteem	3.30	.83	.05	.37*	.57*	(.91)

\*  $p<.01$ ; numbers in parentheses represent Cronbach’s Alpha Reliability

#### 3.2 Hypothesis Testing

The regression analysis (See Table 2 for details) showed evidence that Internet self-efficacy was a strong predictor for online health information seeking ( $p<.001$ ). In other words, individuals with higher Internet self-efficacy tend to seek health information online. Therefore, the results supported the hypothesis that Internet self-efficacy leads individuals to seek health information online. However, the results could not offer sufficient evidence to support hypotheses 2 and 3. In other words, emotional intelligence and self-esteem could not be used as predictors for health information seeking online.

Table 2. Summary of Regression Analysis for Variables Predicting Online Health Information Seeking

Variables	B	SE	t	Beta
Internet Self-Efficacy	.37	.10	3.76	.24*

Note:  $R^2 = .06$ ;  $F(1, 231) = 15.50$ ,  $P < .001$ ;

\* $p < .001$

## 4. Discussion

### 4.1 Implication

There are several implications to the study. First, the study developed a ten-statement online health information seeking scale with high validity and reliability. This scale can be utilized to generate further studies on the topic, which is playing a key role in the current transformation of health information seeking in our society. Secondly, the study discovered the importance of self-efficacy in health information seeking. This discovery has the potential of eliminating health inequalities. It is especially important to note that the results of this study may help the middle aged generation with increasing their Internet self-efficacy and thus increasing their online health information seeking. The study has discovered the mechanism that empowers individuals to seek information, which can help researchers, policy makers, and educators develop new ways of assisting people to gain critical information online.

### 4.2 Limitation

There are two major limitations on the study. First, a convenient sample was used, which may potentially pose some constraints in generalizability of the results. In addition, the results were generated based on self-reported data, which may also affect the validity of the study. Therefore, it is critical that we take this information into consideration when applying these results into our decision making process.

### 4.3 Suggestions For Future Research

As an exploratory research, the study offers several suggestions for future research. First, it would be beneficial to study a larger population outside the college population. Also, further tests can be conducted to examine why emotional intelligence and self-esteem could not predict online health information seeking. In addition, further investigation on other factors such as the impact of gender on seeking health information online could generate critical results. Specifically, it would be beneficial to examine information seeking patterns across individualistic and collective cultural contexts. Further research on other determining factors of online health information seeking could be done. For example, satisfaction with primary doctor or importance of the health information sought could be researched as further factors. Focus groups or experiments can be used to broaden the understanding of online health information seeking.

## 5. Conclusion

The study examined the impact of three psychological factors on online health information seeking. Currently, many individuals find it increasingly difficult to keep in touch with a doctor or get a hold of one when in need. Not all individuals have access to doctors, however more and more individuals are gaining access to the Internet. The growth of the Internet as an accessible source of information has suggested its potential to eliminate inequalities present in our health system. The purpose of this study was to examine important factors that could encourage individuals to utilize the Internet as a source for health information.

The study used established reliable scales to measure Internet self-efficacy, emotional intelligence, and self-esteem and an original instrument to measure online health information seeking. The results produced supported that higher

Internet self-efficacy allowed higher online health information seeking. With this information researchers, educators, and policy makers can help more individuals use the Internet to seek health information.

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