The Role of Risky Behaviors and Health Education in College Students’ Health Information Acquisition on the Internet

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ABSTRACT
Prior research shows that students use the Internet as a main source of health information. When starting college, students get greater autonomy over their behaviors and responsibility for their own health, which creates a number of health-related information needs. As a result of this newly acquired autonomy, students also frequently engage in various risky behaviors, putting their well-being in jeopardy. This study aimed to answer whether the self-reported frequency in which students engage in risky behaviors and their enrollment in health-related courses affect how frequently they obtain health-related information. A novel aspect of this study is that it incorporated both intentional and opportunistic information acquisition. An analysis of online survey responses from 810 undergraduates attending a mid-western U.S. university showed that the frequency of their engagement in risky behaviors (e.g., the use of substances and alcohol and engagement in high-risk sexual activities) is not significantly associated with the frequency of neither intentional nor opportunistic health information acquisition on the Internet. However, students enrolled in health-related courses more frequently obtain health information by both intentional search and opportunistic discovery. This opportunistic style of was often described in the literature using terms such as passive, unintentional, accidental, serendipitous, encountering or acquiring by chance. The study findings provide valuable directions for librarians and health educators on how to design new and improve existing e-health literacy instructions to better suit students’ current needs and information behavior patterns.

Keywords
Health information acquisition, opportunistic acquisition of information, the Internet, college students, risky behaviors, health education

INTRODUCTION
The Internet is becoming a popular source of health information. Searching for health information online is one of the most frequent uses of the Web in the United Stated across all age groups (Fox, 2011). As the most active Internet user group, more than 98% of college students use the Internet multiple times a day (Horgan & Sweeney, 2012) in all areas of their lives (Escoffery et al., 2005; Smith, Rainie, Zickuhr, 2011) often to answer any question they may have (Fitzgerald, 2004; Kivits, 2009; Ogan et al., 2008), including health-related questions (Buhi et al., 2009; Escoffery et al., 2005; Gray et al., 2005; oh & Kim, 2014; Percheski & Hargaitai, 2011; Zuckerman, 2009). Upon starting college, the majority of students move away from their homes into college dormitories, which have limited supervision of their behaviors and offer many opportunities to engage in a variety of risky behaviors. These behaviors include unsafe sexual activities, heavy consumption of alcohol and use of tobacco and illicit drugs, unbalanced eating habits, and a decrease in physical exercise and activity (ACHA, 2012). Behaviors like this have potential to negatively impact college students’ mental and physical health, and may result in a greater need for health-related information (Zuckerman, 2009). In addition, this transition from high school to college gives students a greater autonomy and responsibility over their own life. This new role also brings the responsibility of addressing a number of health-related information needs that were previously addressed by their parents or guardians. Instead of the heavy reliance on their parents, undergraduate students realize the need to recognize when they are at health or medical risk, decide when medical attention is needed, discover how and where to seek medical help and schedule appointments, and manage their medications and health insurance coverage. There is a risk that in this situation they may obtain inaccurate or irrelevant health information that has potential to endanger their health, and for that reason it is important to understand the nature of their health information acquisition. Knowing how students acquire information about health in intentional and opportunistic manner and in the context of various situational factors from their every day life, would provide a deeper insight into their information behavior as well as enable health
professionals to disseminate relevant information via the channels used by this population, and that way ensure that students get information they need to make decisions and take care of their own health and well-being. Also, it would inform design of information systems focused at delivering health information to the college population.

HEALTH INFORMATION ACQUISITION ON THE INTERNET

With the plethora of health-related information available on the Internet, information users frequently obtain health information as a result of active or purposeful information searching and passive or opportunistic acquisition of information (Williamson, 1998). Health information behavior is described in the literature as the process of discovering a message that answers concerns regarding health status either intentionally or by chance (Tardy & Hale, 1998). Still, most research studies in the field of health information behavior have focused on intentional information searching behavior, overlooking unintentional and opportunistic incidences, which may be fruitful for the information user. Several scholars argue that opportunistic acquisition of health information is a practice occurring on a regular basis (Palsdottir, 2010; Tian, 2008, 2009; Shiam et al., 2009; Williamson, 1998). Health information behavior is driven by a certain need that motivated the user to seek information (Baker & Connor, 1994; Conley, 1998; Johnson, 1997; van den Molen, 1999; Rees & Bath, 2001). In the literature, this information need is described as a result of information users’ context. According to Case (2002), “information needs do not arise in a vacuum, but rather owe their existence to some history, purpose, and influence” (p.226). An individual seeks information in response to an information need that is partially determined, constrained, and supposed by his or her contextual environment (Case, 2002). Wilson (2006) suggests that this need “arise out of the roles an individual fills in social life” (p.661), as well as social and cultural expectations, or biological demands. In the health context, this need is commonly associated with obtaining a piece of information that has potential to reduce uncertainty related to a certain situation or incident, help an individual cope with a health-threatening situation, facilitate their involvement in health-related decision making, and achieve behavioral change and preventive behaviors (Loo, 2012).

Nevertheless, not all information acquisition behaviors are motivated by current information need. Individuals can also be uncertain about different questions that are of no concern to them (Williamson, 1998; Savolainen, 1995; Zhang, 2012), and their unconscious needs are being recognized only when relevant information is unexpectedly discovered (Williamson, 1998). In contrast to active and intentional information seeking, this type of information acquisition is opportunistic and accidental. For example, a user may unexpectedly acquire health information that addresses her or his previously unsolved health problem by coincidence while searching for information on another topic using online tools such as a search engine or routinely checking their social media account. By relying on user-participation and user-generated content, current social media tools provide excellent opportunities for health information encountering (Rubin, 2010; Zhang, 2012; Oh and Kim, 2014).

Health information behavior as a type of everyday-life information behavior is known to be deeply embedded in routine behavior, the most intuitive, and as such the most representative of underlying context (Longo, 2005). Many scholars argue that information behavior is a personal experience unique for each individual, and hence should be studied in the context in which information behavior takes place (Solomon, 2002). According to Solomon, this context is constituted of personal attributes (e.g., demographics, socio-economic status, and cultural values), situational factors (e.g. health status, information need) and environmental factors (e.g., information source or tool used to access information). These three elements together shape an individual’s information behavior.

COLLEGE STUDENTS’ HEALTH INFORMATION ACQUISITION

Over the last decade, a body of literature on health information behavior has begun to accumulate in the college population. Most of these studies attempted to answer the following questions: how frequently college students search health-related information both online and offline, which specific health needs they have and in which topics they are interested, what sources they utilize to acquire information, and how they utilize the acquired information.

Between 66.1% and 84.8% of college students use the Internet to acquire health-related information on a regular basis (Escoffery et al, 2005; Buhi et al., 2009; Zuckerman, 2009; Percheski & Hargaittai, 2011; Hogan & Sweeney, 2012). The topics college students look for using the Internet include sexual health, diet, nutrition and vitamins, exercise and fitness, and mental health (Pew, 2013; Smith et al., 2000; Buhi, 2009; Horgan & Sweeney, 2012; Baxter et al., 2008; Buhi et al, 2009; Escoffery et al., 2005). Many young people see the Internet as an easily accessible, cheap, and convenient resource for health information that allows them to avoid confidentiality concerns (Gray et al., 2005). Therefore, college students use the Internet as an outlet for learning about health topics that they feel embarrassed to discuss with parents, educators and health-care providers (Buhi et al., 2009; Gray et al., 2002). The most popular health tools used to access information among college students are search engines such as Google, Bing, or Yahoo! (Buhi, et al. 2009; Escoffery et al., 2005; Eysenbach & Kohler, 2002; Fox & Duggan, 2013) followed by health-specialized websites (e.g. WebMD.com) and social media tools (e.g. Facebook, Twitter) (Pew, 2013; Oh & Kim, 2014).
Many studies examined college students’ health information seeking behavior but very few of them have explored opportunistic acquisition of health information. According to Zhang et al. (2012) before college students start their search; they tend to utilize browsing strategies to access information that will help them gain preliminary understanding of a health-related question they trying to address. It is during this browsing process, that according to many scholars (Foster & Ford, 2003; Rice et al., 2001; Toms, 2000; deBruijn & Spence, 2008), opportunistic acquisition of information occurs. However, as noted in earlier chapters, not all incidences of opportunistic acquisition of information are a result or by-product of active attempts to obtain needed information.

Baxter et al. (2008) discovered that college students commonly acquire health information or advice by chance. The authors asked their participants (n=109) to keep anonymous diary records of their health communication experience for a two-week period. The results showed that only 26% of the entries included active and intentional seeking of health information or advice. The students reported that they were exposed to the information and advice they needed without intentionally seeking it; therefore their “need for information or advice was fortunately met” (p.432). Baxter and his colleagues described this type of health information acquisition as “experience characterized by the absence of proactive efforts by participants to obtain health-related information or advice” (Baxter, 2008, p.430).

Zhang (2012) explored college students’ use and perception of social networking sites for health and wellness by using McKenzie’s model of information practices in everyday life, which assumes that there are various modes of information seeking practices, that vary from “active seeking out a known source to serendipitously being connected by a previously unknown source or being given unasked-for advice” (McKenzie, 2003). He discovered that college students often discover health information by chance, without having any specific information-seeking goal in mind. The participants reported that they often encounter updates related to friends’ health conditions in a serendipitous manner when they browse their news feeds. A large portion of study participants said they often share information about healthy lifestyles (nutrition, diet plans, exercise routines), weight loss, physical therapy, and treating common and mild conditions (e.g., cold, headache) using social networking sites. This suggests that their friends, interested in any of these topics, are likely to encounter shared information when browsing their news feeds.

Factors that shape college student health information acquisition
Over the last two decades, college students’ health information behavior was studied in the context of students’ personal attributes, situational and environmental factors. Demographic factors (e.g. age, gender, race/ethnicity) have been found to be among the most important factors that are associated with whether and how often this population acquires health information on the Internet. There is a considerable difference between males’ and females’ online health information practices (Silence et al., 2007). Overall, female students are more likely to look for health-related information on the Internet than male (Escoffery et al., 2005; Percheski & Hargittai, 2011; Og an et al., 2008; Oh & Kim, 2014), which is consistent with studies on general population (Fox, 2011). In term of age influence, Zuckerman (2009) found a trend towards upperclassmen looking for health information more often than freshmen. Resembling findings from the general population, no significant racial differences on the use of the Internet for acquiring health information are found (Escoffery et al., 2005; Hanauer et al., 2004; Zuckerman, 2009).

Country of origin was also found to influence college students’ health information behavior. The U.S. citizens and those raised in the U.S. look for online health information more often than non-U.S. citizens and those raised in other countries (Zuckerman, 2009; Oh and Kim, 2014). Non-native English speakers are found to be more likely to use the Internet as a source of health-related information than native English speakers (Percheski & Hargittai, 2011). Percheski & Hargittai (2011) have found that students who live with their parents are less likely to utilize the Internet for health information than those who live independently, as well as students with greater Web skills (Percheski & Hargittai, 2011) and those with poorer health (Zuckerman, 2009).

In addition to intentional seeking for health-related information, college students acquire this type of information without actively searching for it (Askola et al., 2010; Baxter, 2008; Zhang, 2012). A small number of studies of college students’ included both intentional and opportunistic acquisition style and their findings are still rather limited. These studies describe that opportunistic health information acquisition is a common acquisition style that complements intentional seeking (Baxter et al., 2008; Zhang, 2013) and is actually more common than intentional seeking (Askola et al., 2010). Baxter and his colleagues (2008) describe this type of health information acquisition as “experience characterized by the absence of proactive efforts by participants to obtain health-related information or advice” (Baxter, 2008, p.430). Certain types of information environments facilitate this type of opportunistic information acquisition. College students often encounter health-related information while browsing their social networking sites even when they do not have specific health information need in mind (Zhang, 2012).

These studies demonstrate that contextual factors have been examined in the setting of college students online health information behavior, however, this limited research has been focused exclusively on exploring if these factors are associated with the frequency of college students intentional seeking of health information on the Internet.
Still, it is not known if these factors are associated with college students’ tendency to acquire health information in intentional and opportunistic manner. To date, opportunistic acquisition of information was examined only in the context of country of origin and topics for which students are looking. Askola et al. (2010) found that country of origin affects the frequency of acquiring information without actively searching for it, as well as that there is a difference between health-related topics students from different countries unintentionally encounter and actively search for (Askola et al., 2010).

This study contributes to the field by exploring whether or not two situational variables, the frequency of risky behaviors and the previous enrollment in formal health education, motivate students to acquire health information on the Internet more frequently. From the theoretical point of view, this study is taking an innovative approach to studying information acquisition by integrating active search and opportunistic discovery of information in research design.

**METHODOLOGY**

The objective of this study was to determine if students’ tendency to engage in risky behavior and formal health education affect the frequency in which they acquire health information on the Internet. Toward this goal, the following two research questions were pursued:

1. How is enrollment in health education related class associated with the frequency of health information acquisition on the Internet?
2. How is the frequency of college students’ involvement in risky behavior associated with the frequency of health information acquisition on the Internet?

**Hypotheses**

To answer the research questions, the following two hypotheses proposed the relationship between risky behaviors and formal health education with health information acquisition behavior.

H1: There will be a relationship between college students’ enrollment in a health related course and their health information acquisition behavior, such that those who were/are enrolled in a health-related class will obtain health information more frequently than those who were/are not.

H2: There will be an inverse relationship between college students’ risky behaviors and their health information acquisition behavior.

**Setting and Sample**

The study took place at one Midwestern university during the spring semester of 2014. The survey questionnaire was distributed using University’s weekly online announcement and administered using Qualtrics, an online survey software. The population of this study was composed of undergraduate students enrolled in any program at the university during the academic year 2013-2014.

Based on power analysis conducted using a G*Power tool (Faul, Erdfelder, Lang, & Buchner, 2007), to detect quite small, trivial effects, an N of around 850 is needed, but rather small effects can still be detected with N around 400. A total of 2331 responses were collected initially. In order to obtain a sample that is representative of the undergraduate college population at the university, random stratified sampling was performed using the SAS business analytics software. The final sample consisted of 810 observations. After the sampling procedure was completed, Chi-square test was used to compare the sample distribution against the expected distribution. This test confirmed that the number of observations in each stratum reflects the expected number.

**Instrument**

The questionnaire included items related to the frequency of college students’ health information acquisition on the Internet, the frequency of their engagement in risky behaviors and their enrollment in a health-related class. To assess the frequency of health information acquisition, students were asked two questions: 1) Within the last 6 months how often did you actively search for health information on the Internet, and 2) Within the last 6 months, how often did you stumble upon health information on the Internet by chance? They selected from one of the following 5 answer choices: “Very frequently”, “Frequently”, “Occasionally”, “Rarely” or “Never”. This variable was treated as ordinal.

To evaluate their enrollment in health-related class, students were asked to indicate whether or not they had any formal education on health (e.g., health-related class, student health center programs, programs ran by external organizations) in the last 6 months prior to data collection.

Questions related to students’ tendency to engage in risky behaviors were adjusted from the National College Health Assessment (NCHA) survey instrument (2011). First variable, use of alcohol, cigarette and drugs was measured by asking the participants “Within the last 30 days, on how many days did you use (please mark the appropriate column for each row): cigarettes, alcohol, marijuana, and other illicit drugs?” They selected one of the following answers 1) Never used, 2) Have used but not in the last 30 days, 3) 1-2 days, 4) 3-5 days, 5) 6-9 days, 6) 10-19 days, 7) 20-29 days, 8) Used daily. This variable was treated as ordinal during the data analysis.

To measure their tendency to engage in risky sexual activities, two questions were asked. First, “Within the last 6 months, with how many partners have you had sex (including vaginal intercourse, oral sex or anal intercourse)?” Participants were asked to fill in the number of partners in the text box. This variable was treated as interval. The next question asked how frequently in the last
Research Quality
To establish the content validity of the survey instrument and allow for improvements in the questions, formats, sequence, and scales, the researcher conducted a pilot test with five participants using the interview. In addition, drawing constructs (e.g., the frequency of proxy acquisition, opportunistic acquisition of health information, risky behaviors etc.) and measurements from the previous empirical studies relevant for health information acquisition behavior also supports the quality of the survey instrument. Prior to the pilot test, a group of experts reviewed the survey instrument and provided their suggestions on how to improve its content and face validity. This group consisted of a prominent researcher in the field of human health information behavior, a statistician experienced in survey design and a health professional.

Following the data collection and prior data analysis, the validity was measured using factor analysis. Factor analysis can be used to group items that describe the same phenomenon and one single variable can be used to represent two or more items. In order to assess whether a group of items can be combined together in a single variable Component Matrix value is used to verify that each factor has a value < -0.70 or >0.70. The squared values provide the factor loads. In the present study, factor analysis was conducted on items that could be grouped together to describe respondents’ tendency to engage in risky behaviors and physical exercise. Items related to students’ frequency of tobacco, alcohol, marijuana and drug use were combined and a number of sexual partners were used as an independent item in the hypotheses testing. Reliability was checked using Cronbach's alpha in order to evaluate the internal consistency of questionnaire items used to measure the frequency of intentional searching of health information and the frequency of opportunistic acquisition of health information. The coefficient for all constructs have value > 0.70 which proved the acceptable level of reliability.

Data Analysis
Data analysis included data screening, descriptive analysis and hypothesis testing. The results were exported to Microsoft Excel for data cleansing. Data screening was performed to identify data entry errors and examine how appropriately the data meets the statistical assumptions. The cleaned data was then imported into SPSS statistics software for descriptive statistics and hypotheses testing.

RESULTS
Descriptive statistics

Demographics
Only undergraduate students were included in the analysis, with an equal split between female and male students, considerably equal split of students based on their academic standing (freshman, sophomore, junior, senior) and race/ethnicity. The average age of the participants in the sample was 20 years and 7 month. The minimum age was 17 and the maximum age was 59.

<table>
<thead>
<tr>
<th>Age</th>
<th>Participants</th>
<th>Percent</th>
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<tbody>
<tr>
<td>17-18</td>
<td>52</td>
<td>6.42%</td>
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<tr>
<td>19</td>
<td>187</td>
<td>23.09%</td>
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<tr>
<td>20</td>
<td>161</td>
<td>19.88%</td>
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<tr>
<td>21</td>
<td>167</td>
<td>20.62%</td>
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<tr>
<td>22</td>
<td>76</td>
<td>9.38%</td>
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<tr>
<td>23-25</td>
<td>40</td>
<td>4.94%</td>
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<tr>
<td>26-59</td>
<td>30</td>
<td>3.70%</td>
</tr>
<tr>
<td>N/A</td>
<td>97</td>
<td>11.98%</td>
</tr>
<tr>
<td>Total</td>
<td>810</td>
<td>100.00%</td>
</tr>
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Table 2. Participants’ age.

Formal health education
When asked if they had received any formal health education in the last six months, 37% of the respondents responded with ‘Yes’ and 63% said they had not formal education in health domain.

The frequency of risky behaviors
To assess students’ tendency to engage in risky and potentially harmful behaviors, descriptive statistics were calculated about their substance use, number of sexual partners, use of condom and physical exercise.

When asked about the frequency of using tobacco, alcohol, marijuana or illicit drugs the following share of the participants replied they used them sometimes or often – tobacco (15.7%), alcohol (66.8%), marijuana (18.1%) and illicit drugs (2.3%).

In regards to the number of sexual partners they had in the last six months, 29% of respondents replied they had not had a sexual partner during that period, 45.9% had only one, and 7.4% of respondents said they had more than three partners.
Out of those who have had a sexual intercourse in the last six months prior to data collection, 28.1% of the respondents said they had always used a condom, 38% had used it sometimes or most of the times, 12.3% rarely and 21.7% had never used it.

About ten percent (10.2%) of participants were frequent users of online health information. On average they purposefully searched for information 2-3 times a week or more frequently in the last 6 months. Sixty three percent (62.6%) of the participants said they searched for information once a month to once a week and 27.2% never searched for information or did it rarely or once a month.

When asked how frequently they have stumbled upon health-related information online when they were not looking for it, 40.6% said ‘Never’ or ‘Less than once a month’, 15.8% said ‘Once a month’, 22% said ‘2-3 times a month’, 11.5% ‘Once a week’ and 10.1% with ‘2-3 times a week’ or ‘Daily’

**Hypotheses results**

The relationship between the enrollment in health related course and the students’ health information acquisition behavior (H1) was studied with an independent samples t-test. The relationship showed to be statistically significant at the 0.05 significance level meaning that students who have been enrolled in a health-related course search more often online than those who have not been (M = 3.42, SD = 1.385 for students not enrolled in a course and M = 3.63, SD = 1.395 for students enrolled in a course) (t(797) = -2.13, p = .03). In terms of the opportunistic acquisition of online information, independent samples t- test was applied and the results showed that the relationship is also significant at the 0.05 significance level. The students enrolled in a health course more often acquire online health information without purposefully searching for it (M = 3.13, SD = 1.565 for students not enrolled in a course and M = 3.42, SD = 1.649 for students enrolled in a course) (t(797) = -2.53, p = .01).

The relationship between risky behaviors and the frequency of health information acquisition (H2) was studied using three variables: a number of sexual partners, a frequency of alcohol use and the joint factor of the frequency of tobacco, marijuana and illicit drugs use. The first factor studies was the joint factor of the consumption of substances – tobacco, marijuana and illicit drugs. The Spearman’s correlation coefficient showed that there is no significant relationship between the tendency to consume these substances and the frequency of acquisition of health-related online information, either purposeful (r(791) = .06, p = .11) or opportunistic (r(622) = .02, p = .62).

The results also showed there is no statistically significant correlation between the frequency of alcohol use and online information acquisition in purposeful (r(798) = .04, p = .31) or opportunistic manner (r(602) = -0.02, p = .60).

There is no significant correlation when the tested factor is the number of sexual partners for the last 6 months for the frequency of intentional (r(789) = .04, p = .25) and opportunistic (r(789) = -0.03, p = .47) acquisition of information about health.

**DISCUSSION**

Based on the results of hypotheses testing, students’ enrollment in health-related class was shown to be significantly associated with the frequency of health information acquisition. An independent sample t-test showed that those enrolled in health education class more frequently obtained health information by both intentional searching and opportunistic acquisition. This suggests that enrollment in a health education class creates a need for students to deliberately search for information about health. They may be searching for information in order to complete school assignment or prepare for an exam, or simply to learn about a health related topic that sparked their curiosity and want to learn more about certain health-related topic. This supports O’Keefe, Boyd and Brown’s idea that having a certain need in mind or interest in a topic is a driving force that motivates people to engage in an information seeking activity (O’Keefe, Boyd & Brown, 1998).

Opportunistic acquisition of health information was also found to be more frequent among those students who reported being enrolled in a health-related course during the six-month period prior to data collection. Having an information need in mind or simply being curious about a certain health related topic may prompt students to notice health information even when they are not actively looking for it. This serendipitous event can be a by-product of an active search for health-related or some other topic. As a result of being enrolled in a health-related class, students may be more aware about health, which may result in them being more open and receptive to health information in their environment. Regardless of the reason behind their motivation this finding confirms that having health-related information need or being genuinely interested in a certain topic is a requirement for information be sought and noticed by accident (O’Keefe, Boyd and Brown, 1998).

To study the relationship between the frequency of college students’ health information acquisition behavior and tendency to engage in risky behaviors three factors were examined, including the joint factor of use of drugs, marijuana and tobacco, alcohol use and a number of sexual partners during the six-month period prior to data collection. The results of Spearman’s Rho showed that there was no significant relationship between substance use and the frequency in which students acquired health information online, both intentionally and by chance. Alcohol consumption was also not found to have a significant relationship with the frequency of students’ health information acquisition practices. This indicates that the frequency of their consumption of alcohol does not impact how often they obtain health information on the
Internet, on purpose or opportunistically. Similarly to substance use, this could be due to their lack of awareness about the detrimental effect of alcohol on their health so they do not have a need or question in mind that they are trying to answer by actively looking for information about health. As far as opportunistic discovery of health information goes, not having this information need in mind or not finding health-related information interesting could potentially result in not noticing health information online by chance either.

There was also no significant relationship detected between a number of sexual partners students had in the last six months prior to data collection and the frequency of their acquisition of health-related information. This suggests that having more sexual partners does not motivate students to explore health-related information that might be relevant, such as potential risks and prevention measures.

Also, it might be the case that students do not perceive these behaviors as detrimental for their health and overall quality of life and therefore do not pursue this information. Furthermore, it is possible that students avoid information that interferes with their habitual or enjoyable activities in order to maintain habits they know to be unhealthy. Barbour and his team (Barbour et al., 2012) discovered that individuals often avoid health information that interferes with their habitual or enjoyable activities in order to maintain habits they know to be unhealthy. In their study on why and how individuals avoid information about health topics Barbour and team (2012) found out that individuals often remove or ignore the stimuli (health information that contributes to his or her knowledge or beliefs related in particular to their health or the health of others) in order to maintain hope or deniability, resist overexposure to information about specific health-related topic, accept there is no action they could or should take, avoid information from questionable source, maintain boundaries or fend off unwanted behavior change. This question is important to address since avoidance of health information may affect many areas of health communication (e.g., health campaigns, provider-patient communication, social support) and has potential ramifications for individual’s health and well-being (e.g., avoiding information in the presence of symptoms).

CONCLUSION
Unlike the previous studies in the field, the present study explored health information acquisition by including both intentional and opportunistic practices in the context of an individual’s everyday life. As Bates (2002) argues, where there is misunderstanding about contextual background there is misunderstanding of a user as a whole.

College students’ everyday life includes engagement in various risky behaviors and well as educational programs related to health. The results of this study indicate that health information acquisition can be motivated by situational factors present in the everyday life of those acquiring information. Students who reported being enrolled in health–related class also reported obtaining health information on the Internet more frequently than those who were not, in both intentional and opportunistic manner. This suggests that health-related information needs do trigger information acquisition practices (supporting Dervin, 1992; Marchionini, 1995; Kirkelas, 1983; Wilson, 1997; Gross, 1995; 1999) and that these needs can be related to a personal health information need or motivation (e.g., recent diagnosis or symptoms) or based on an information need or motivation imposed on information consumer (e.g., homework, class project or curiosity sparked in classroom discussion) (Gross, 1995). Still, not all situational factors motivate students to pursue or recognize health information once they stumble upon it.

Insights into the motivations for health information acquisition behaviors also have implications for theories dealing with how information needs motivate information acquisition behavior. The enrichment of theory development in the field also provides knowledge structure to programs in health promotion and communication, e-health literacy, information science and design of online information systems targeted at college population. Knowing what situational factors affect students’ health information acquisition may eventually have significant implications for design and efficacy of public health communications that are geared towards the college population and young adults. Although frequent risky behaviors do not motivate students to acquire related health information on their own, knowing what online tools they frequently use, can help health professionals to identify appropriate channels and promote health by disseminating information related to risky behaviors (potential risks and prevention) to the students. This way student would be more likely to acquire information they would benefit from and hopefully take actions needed to protect or improve their health. Receiving timely and appropriate health information plays a vital role in promoting health. Disseminating the right health information to students has power to educate them about consequences of certain risky behaviors, expand their knowledge about a certain health concern, and inform their health care decision-making. Bandura (1997) argues that being informed about health risks and the potential outcomes of a certain health behavior is a necessary precondition for an individual to change his or her behavior (Bandura, 1997). Moreover, health information may reduce uncertainty in person’s mind and thus increase the sense of personal control over their health. Johnson (1997) argues that learning about potential risk a certain behavior brings may result in compliance. With this in mind, informing students about the potential outcomes of their risky behaviors or certain health conditions could motivate them to change their behaviors for better or to be more proactive about protecting and maintaining their health. Therefore, this knowledge can dramatically improve the delivery of health educational materials; improve health
promotion content and strategy as well as the behavioral change modules.

Knowing how undergraduates acquire health information on the Internet also provides valuable directions for librarians and health educators on how to design new and improve existing e-health literacy instructions to better suit students’ current needs and behavior patterns. The current study showed that students who were enrolled in a health-related class, such as e-health literacy, acquired health information more frequently in both intentional and opportunistic manner. This notion suggests the potential e-literacy programs have in empowering undergraduates to be informed and take care of their health. Therefore, it is of a large importance to carefully design such e-health literacy programs, and the findings from the present study can help in achieving that. In order for students to effectively search, evaluate, obtain and use online health information, they need to have substantial knowledge about the online tools available for accessing information as well as the skills needed to find, evaluate and acquire information that is the most relevant and appropriate for the specific health-related information need they have in mind. In addition, these findings can be used to inform design of online information systems targeted at delivering health information to the college population.

ACKNOWLEDGMENTS
This research was funded by a Mizzou Advantage grant provided by University of Missouri.

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