

Domestic and International College Students: Health Insurance Information Seeking and Use

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ABSTRACT

This study aimed to explore perceived barriers to using health insurance and identify discriminant factors between health insurance information seekers and non-seekers. A total of 615 domestic and international college students from a large university in the Southwest completed a cross-sectional survey. Findings imply that campus health providers and staff in international student services should be working closely to communicate to students about health insurance because they are both trying to solve the same basic problems.

Keywords: health insurance, information seeking, international students, survey, discriminant analysis

College represents a time of transition between childhood and adulthood. Students may attend schools far away from their family and home, and are often asked to make their own decisions in terms of academic work, social lives, and control over their health (Arnett, 2000). To help students adjust and grow in these ways, college administrators and staff make extensive efforts into preventing risky behaviors and promoting healthy life styles. Such efforts often focus on specific health concerns such as binge drinking, healthy diet and physical activity, sexual health promotion, smoking

cessation, stress and mental health issues (Abroms et al., 2012; Bynum et al., 2011; Cavallo et al., 2012; Gomberg, Schneider, & DeJong, 2001; Mann et al., 2005; Peterson, Duncan, Null, Roth, & Gill, 2010; Riley, Obermayer, & Jean-Mary, 2008; Shive & Morris, 2006; Turner, Perkins, & Bauerle, 2008; White, Kolble, Carlson, & Lipson, 2005). However, there is one crucial factor that underlies many of these health concerns but does not receive comparable attention: health insurance.

Having health insurance is beneficial because it not only helps a patient receive timely care but also aids in covering expenses associated with medical check-ups and procedures, even in the event of unexpected illness and injury (Collins, Rasmussen, & Doty, 2014; HealthCare.gov, n.d.); thus, patients with health insurance are more likely to have better general health than those without health insurance. Despite these benefits, previous research suggests college students have inadequate levels of knowledge about this important topic (Chen & Volpe, 1998; Danes & Hira, 1987; Gordon & Brown, 2016; Volpe, Chen, & Pavlicko, 1996). This lack of health insurance knowledge may stem from not feeling that they “need” this information, as many are often on their parents’ health insurance plan throughout college and beyond. The recent implementation of the Affordable Care Act’s provision allowing most students to remain on their parents’ insurance plan until age 26 may reinforce this sentiment. This policy has likely shifted students’ perception of health insurance from something they must understand and obtain right after college graduation to something more distant that can be obtained as they enter into the workforce. Unfortunately, a low level of health insurance knowledge may prevent college students from seeking health insurance information and using this information correctly in the future when they are “on their own,” creating broader issues related to healthcare delivery and health promotion on college campuses.

Prior literature demonstrated the distinctive characteristics between people who search for health-related information and those who do not; where health-related information seekers were indeed more health-oriented than non-seekers (Dutta-Bergman, 2004). However, little effort has been made to investigate students’ health insurance information search and use behaviors. Thus, this study aims to identify discriminant factors between health insurance information seekers and non-seekers and to distinguish differences that might exist between domestic and international college students. Also, this study explores perceived barriers to using health insurance. In uncovering the factors that determine whether or not a student seeks (or plans to seek) health insurance-related information, we can create impactful health promotion campaigns aimed at these critical factors so that students are better equipped with health insurance information knowledge for future.

Beyond whether college students (in general) understand health insurance, there is a pressing need to consider the particular case of international students. International students may be unfamiliar with the U.S. healthcare system and attempting to navigate it in a second language may be daunting (Zysberg, 2005). Zysberg (2005) interviewed 25 international students to explore how they perceived the U.S. healthcare system. Their findings indicated that international students perceived that the cost of medical services in the U.S. is overly expensive and unaffordable for them. Also, they thought that access to U.S. medical service and handling insurance-related tasks, such as filing claims, was complex. Because of the perceived complexity and misunderstanding of handling health insurance, these students may delay timely medical care until they return to their home country or, in some cases, visit an emergency room even though they did not need emergency treatment.

Although there is no prior research examining differences in health insurance information seeking and use between domestic and international students, prior literature indicates that immigrants in the U.S. face many difficulties in health-related information seeking and understanding compared to citizens (Lee & Choi, 2009). International students in the U.S. may also experience difficulties stemming from their own existing cultural experiences, language, education, and healthcare systems. This study explores whether there are any differences between domestic and international students in terms of their perceptions and prior behaviors regarding health insurance information seeking and insurance use. Thus, the study is guided by three research questions:

1. What are the factors that discriminate health insurance information seekers from non-seekers among college students?
2. What are the barriers to using health insurance among college students?
3. What differences exist between U.S. and international students in health insurance information seeking and use?

Results from this investigation can help college health educators better understand students' perceptions and prior performance in terms of health insurance information seeking and health insurance use. Thus, findings from this study will contribute to developing useful campaign strategies for promoting insurance communication to improve students' health. The remainder of this paper provides a description of the methods used, study results, and a discussion of implications for future research and improving the promotion of healthy practices on college campuses.

RESEARCH METHOD

This study used an online survey format. All participants were provided with an Institutional Review Board-approved informed consent. After providing consent, participants were asked to complete a survey using the Qualtrics online survey platform. The survey assessed students' perceptions of the severity and susceptibility of failing to understand health insurance-related information, perceived ability and benefits of understanding health insurance-related information, feelings of worry about getting in trouble when failing to understand health insurance-related information, and perceived barriers to using health insurance. Also, participants were asked to report their past experiences of seeking health insurance information and other demographic information.

Table 1. Demographic Information for Domestic and International Students

		Domestic Students (<i>n</i> =495)	International Students (<i>n</i> =120)
Age	Mean	<i>M</i> =20.12 (<i>SD</i> =2.13)	<i>M</i> =25.13 (<i>SD</i> =4.51)
Gender	Male	168 (33.9%)	66 (55%)
	Female	326 (65.9%)	53 (44.2%)
Ethnicity	Caucasian	279 (56.4%)	18 (15%)
	Asian American	21 (4.2%)	1 (0.8%)
	Hispanic American	45 (9.1%)	5 (4.2%)
	African American	25 (5.1%)	2 (1.7%)
	Other	51 (10.3%)	69 (57.5%)
	Hispanic	46 (9.3%)	13 (10.8%)
	Other	28 (5.7%)	12 (10%)

Participants were college students (*N*=615; domestic *n*=495, international *n*=120) at a large public university in the Southwest. The domestic students were recruited from a participant pool maintained in the College of Communication, which includes large elective courses that draw from the entire campus. The international students were recruited by sending e-mails to enrolled international students via the university's International Office. Only the students from the participant pool were offered extra course credit for their participation. Participants' ages ranged from 17-39 years old (*M*=21.09; *SD*=3.40) (See Table 1.)

Measures

Perceived severity and susceptibility of failing to understand health insurance-related information. The extent to which participants perceived failing to understand how to use health insurance as severe and the extent to which they were susceptible to this issue were assessed with

a 7-point Likert-type scale ranging from 1 = *Strongly agree*. The scales were adopted from prior literature (Witte, 1996); each scale was comprised of three items. Sample items include “*I believe that if I do not know how to use my health insurance correctly it would cause serious issues to me*” (severity scale) and “*It is likely for me that I will be in trouble if I do not know how to use my health insurance correctly*” (susceptibility scale).

Perceived ability and benefits of understanding health insurance-related information. The extent to which participants perceived they could understand how to use health insurance and the extent to which participants perceived knowing how to use health insurance as beneficial were assessed with a 7-point Likert-type scale ranging from 1 = *Strongly disagree* to 7 = *Strongly agree* (Gore & Bracken, 2005; Witte & Morrison, 2000); each scale had two items. Sample items include “*It is easy to understand how to use health insurance*” (perceived ability scale) and “*I think that understanding how to use health insurance will be beneficial for me*” (perceived benefits scale).

Feeling worried about getting in trouble when failing to understand health insurance-related information. To assess how often participants worried about getting in trouble when failing to understand how to use health insurance, participants were asked to indicate their level of agreement on a 5-point Likert-type scale with the following statement “*How often do you worry about getting in trouble if you do not know how to use your health insurance?*” (1=*Never*, 5=*Always*)” (Kiviniemi & Ellis, 2014).

Perceived barriers to using health insurance. The extent to which participants perceived several factors as barriers to using health insurance was measured with a 5-point Likert-type scale ranging from 1 = *Very Low* to 5 = *Very High* (Davies et al., 2000; Wilson, Chen, Grumbach, Wang, & Fernandez, 2005). The factors included cost, concerns about language, concerns about disclosure of personal information and vulnerability, lack of time, lack of understanding of health insurance, and lack of credibility of healthcare providers.

Past experiences of seeking health insurance information. Participants’ past experiences of seeking health insurance information was asked using a yes or no question, “*Have you ever looked for information about how to use health insurance?*” Participants who answered “Yes” were regarded as health insurance information seekers while those who answered “No” were regarded as health insurance information non-seekers.

Analysis. To answer the research questions guiding this study, discriminant analysis was conducted. Many domestic students identified as non-seekers of health insurance information ($n=398$). Out of 120 international students, nearly half ($n=58$) identified themselves as non-seekers of health insurance information. A discriminant analysis examined past experience with seeking health insurance information as a grouping variable.

RESULTS

RQ1 explored the factors that discriminate health insurance information seekers from non-seekers. No significant differences were found between domestic and international students. Two groups of students were combined for the analysis. Findings indicated health insurance information seekers were more often worried about getting in trouble when failing to understand how to use health insurance and had a greater perceived ability to use health insurance than non-seekers.

Regarding RQ2, which explored the perceived barriers to using health insurance, domestic information seekers were more likely to perceive cost and less likely to perceive lack of understanding as a barrier to using health insurance than did domestic non-seekers. Interestingly, for international students a different pattern was detected; information seekers were less likely to perceive cost and lack of understanding as a barrier to using health insurance than information non-seekers. Also, there was an additional factor that discriminated international information seekers from non-seekers: lack of ability to speak English. International information seekers were more likely to perceive lack of language ability as a barrier to using health insurance than international non-seekers.

Table 2. The Discriminant Factors that Distinguish Health Insurance Information Seekers from Non-Seekers

	Domestic (n=495)				International (n=120)			
	Information seekers (n=91)		Information non-seekers (n=398)		Information seekers (n=62)		Information non-seekers (n=58)	
	M	SD	M	SD	M	SD	M	SD
Feeling of worry	2.47	0.99	2.22	0.96	3.26	1.31	2.90	1.27
Perceived ability	4.70	1.23	4.31	1.16	4.30	1.33	3.64	1.44
Group Centroid	0.41		-0.09		0.32		-0.34	
Wilks' Lambda	.96				.90			
Chi-Square	$\chi^2(5) = 19.039^* p = .002$				$\chi^2(5) = 11.804^* p = .038$			

* $p < .05$.

RQ3 asked whether there are differences between U.S. and international students health insurance information seeking and use. Two discriminating factors significantly distinguished health insurance information seekers from non-seekers in both domestic and international students. Both domestic and international students sought health insurance information because of the feeling of worry and the perceived self-efficacy to process information.

On the other hand, regarding the perceived barriers to using health insurance, for both domestic and international students, a perceived lack of understanding of how to use health insurance and the cost of health insurance were the discriminant factors that distinguished health insurance

Table 3. The Barriers to Using Health Insurance that Distinguish Health Insurance Information Seekers from Non-seekers

	Domestic (n=495)				International (n=120)			
	Information seekers (n=91)		Information non-seekers (n=398)		Information seekers (n=62)		Information non-seekers (n=58)	
	M	SD	M	SD	M	SD	M	SD
Cost	3.62	1.18	3.12	1.24	3.21	1.42	3.98	1.29
Lack of understanding	2.71	1.11	3.01	1.12	3.16	1.13	3.62	1.34
Language	-	-	-	-	2.10	1.33	1.83	1.17
Group Centroid	0.49		-0.11		-0.39		0.42	
Wilks' Lambda	.95				.86			
Chi-Square	$\chi^2(7) = 26.133^{**}$ $p < .001$				$\chi^2(7) = 17.880^*$ $p = .013$			

* $p < .05$, ** $p < .001$.

information seekers from non-seekers.

Specifically, domestic information seekers tended to perceive cost as a greater barrier to using health insurance than did non-seekers, while international information seekers tended to perceive cost as less of a barrier to using health insurance than non-seekers. Additionally, the concerns about language ability were a discriminant factor for international students. International health insurance

information seekers perceived their lack of ability to speak in English as a greater barrier to using health insurance than did international non-seekers.

DISCUSSION AND CONCLUSIONS

The purpose of this research was to explore how domestic and international college students search for information about health insurance and to identify factors that distinguish those students who seek information from those who do not. While international students face clear challenges learning about the U.S. healthcare system, domestic students are often taking control of their health for the first time and may be similarly learning about the healthcare system. Improving students' knowledge and use of health insurance is crucial for improving their health while in college. Furthermore, the improved knowledge and experience of use will be important for their health, which help them sustain their health after graduation throughout their lifetime.

In terms of those who seek health insurance information, both domestic and international students seek this information when they worry about getting in trouble because of their lack of knowledge about health insurance, as well as when they are confident in their ability to use health insurance. Compared to information seekers, both domestic and international non-seekers were less worried about potential negative consequences due to their lack of health insurance-related knowledge. Also, health insurance information non-seekers were less confident in using health insurance. To encourage college students to actively seek health insurance information, it is important to foster the perception that they have the ability to learn and understand how health insurance works (and thus avoid a situation in which they are in trouble because of a lack of health insurance knowledge). Prior literature indicates that self-efficacy is a significant precursor of information seeking and processing (Griffin, Dunwoody, & Neuwirth, 1999). As such, people are more likely to engage in information seeking and processing when they are confident that they can do so successfully.

Findings from the present study could be understood in the context of the Extended Parallel Process Model (EPPM; Witte, 1994). According to the EPPM, negative emotions could stimulate information seeking. That is, when people do not perceive any threat, or when the perceived level of threat is relatively low, they do not process information/messages. In addition, when people feel threats or danger enough to seek information and when they believe there is little they can do to ameliorate the situation, a fear control process may take over causing them to stop seeking additional information (Witte, 1994). However, if people feel threats or danger enough to seek information and believe they can do something to prevent negative

consequences, the danger control process occurs and they will seek more information (Witte, 1994).

Based upon the findings of this study, university health educators and providers should work to increase students' perception of self-efficacy to seek and use health insurance information in their persuasive campaigns. One strategy to increase students' perceptions of self-efficacy is to provide them with an opportunity to practice how to seek and use health-related information during orientation sessions. For example, scenario-based problem-solving situations or specific case examples allow students to experience feelings of worry indirectly (i.e., anticipated worry/anxiety or anticipated regret) and practice how to seek and use health insurance-related information, which could be a motivation to active health insurance-related information seeking. At the same time, they must be careful not to evoke fear among students when communicating the potential pitfalls of not understanding or using health insurance correctly because this approach may backfire.

Both domestic and international information non-seekers perceived their lack of understanding of health insurance processes as a barrier to using health insurance. Thus, campus health practitioners should help students understand how their health insurance works by: (a) providing clear definitions of key terms related to health insurance in plain language; (b) giving specific examples of each term; and (c) emphasizing the financial aspects of health insurance. As might be suspected, regarding international students' comfort with a second language, a student's language ability was a significant discriminant factor distinguishing information seekers from non-seekers for international students. This finding emphasizes the importance of points one and two above and further suggests it may be valuable to have some health information available in one or more non-English languages that are most prevalent among international students on a university campus.

Another support structure to motivate new international students to seek and acquire health insurance information is that of peer mentoring. There would be a great deal of support for having peer mentors, who preferably came from the same country (or at least similar culture) previously, to assist with navigating and using the U.S. health insurance system as they would point out the differences between the insurance system in their own country and the U.S. insurance system. Also, peer mentors could share their or their friends' experiences with health insurance information seeking and use with their peer mentees.

During the new international student orientation activities, International Student & Scholar Services (ISSS) offices could present information about understanding and using health insurance. Presentations should use clear and accessible language, and include definitions of unfamiliar terms. Models and examples

of real-life scenarios should be used frequently in order to increase students' confidence in their ability to understand what to expect when using health insurance. For better understanding and easy application, video messages showing how/where to seek information and how to use insurance in several different contexts would be beneficial when providing supplement print flyers.

Information sessions also can be offered for continuing students, who may seek health information as they remain in the U.S. and begin to understand the importance of health insurance. These sessions, smaller than orientation large-scale presentations, would be an excellent opportunity for modeling real-world scenarios. Having spent time in the U.S., these students may also have specific concerns about barriers they have encountered that can be addressed in this setting. Additionally, ISSS should have a designated staff member to address students' questions as they build their health insurance literacy.

Overall, domestic and international students are very similar in their motivations to seek health insurance information and perceptions of barriers to using health insurance. These findings imply that campus health educators, providers and staff in international centers should be working together on these kinds of issues.

Although the findings from this exploratory study helped identify factors that may influence college students' health information seeking and use, there are some limitations worth noting. First, this study used a convenience sample recruited from two different sources on a single campus. The interpretation of current findings may not be applied to students in other universities, particularly as it relates to different compositions of the international student body that might vary widely from campus to campus. Additionally, there were far fewer international students in this study than domestic students, so an increased focus on recruiting international students – including offering the survey in other languages – might provide a richer picture, particularly of those students who struggle most with language issues. However, the percentage of international students included in the present study (19.5%) is comparable to the number of international students enrolled at the university (10%).

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