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**Do Cultural Differences Influence Tourists' Likelihood to Seek Information
Via Social Media in the Event of a Crisis?**

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ABSTRACT

This study examined the influence of the cultural backgrounds of international travelers on the likelihood to turn to social media to seek information if a crisis were to occur while traveling. Data for this study were generated by surveys from an online panel of international respondents from South Korea, China, India, Australia, and Brazil. A total of 2,416 completed surveys were used. The results indicated that travelers from different countries varied in their likelihood to seek information via social media during a crisis. Tourists from South Korea were found to be the most likely to access social media to find information about a crisis while traveling. The different cultures also had different preferred sources for seeking information during a crisis. This study demonstrated the significance of examining the influence of characteristics on the potential use of social media during a crisis. Implications and recommendations are presented.

Keywords: *social media, crisis, international travel, risk information search.*

INTRODUCTION

There has been a documented increase in the occurrence and intensification of global crises recently (Drabek, 2009). Furthermore, as the popularity of international travel increases and people travel greater distances, the tourism industry is exposed to an ever-increasing vulnerability to a wide-array of crises (Drabek, 2010; Murphy & Bayley, 1989; Faulkner, 2001). Crises can have devastating effects, thus putting greater stress on local, state, and national economies that depend on tourism for survival (Tourism Crisis Management Institute, 2010a).

The dissemination of tourism information, as well as the methods in which individuals consume travel, has been significantly influenced by the Internet (Buhalis & Law, 2008; Xiang & Gretzel, 2010). Furthermore, given the ever increasing popularity of social media (i.e. Madden, 2010; Pew Research Center Global Attitudes Project, 2010), any event has the potential to be relived on social media channels and can reach a global audience. Ease of access to social media often extends into the travel experience, meaning that tourists have the ability to readily access social media during travel. However, there is a paucity of research that examines tourists' use of social media during a crisis (Pennington-Gray, Kaplanidou, & Schroeder, 2012) and information search behaviors during risky circumstances (Ritchie, 2009). Therefore, the purpose of this research was to explore the relationship between the cultural differences of international travelers and the likelihood to use social media to seek information if a crisis were to occur while traveling, as well as to examine if different cultures have varying preferred sources for seeking information during a crisis.

RELATED LITERATURE

While there has been a focus on the use of social media in the tourism scholarly literature, an embryonic topic of research focuses on the use of social media during a crisis while traveling. While there is little research concerning social media use during a crisis by tourists, research has examined residents. Sutton, Palen, and Shklovski (2008), for example, found that peer-to-peer communication during the Southern California wildfires of 2007 was supported and promoted by social media use, with information that was not easily accessible through traditional media (i.e. television) being disseminated through social media. While television remains the preferred channel, the American Red Cross (2010, 2011) found that Facebook is the fourth preferred channel for seeking information during a crisis. These findings suggest that modern society is turning to social media during crises, thus highlighting the need for research in this area concerning tourist populations.

Recently the industry has embraced the role of social media in tourism crisis management, with best practices being acknowledged by the tourism industry (i.e. VISIT FLORIDA®). Researchers have suggested that social media should be integrated into communication and tourism crisis management plans (Pennington-Gray, London, Cahyanto, & Klages, 2011). An empirical study conducted within weeks of the Deepwater Horizon Oil Spill revealed that tourists whose vacation intentions were influenced by the oil spill had different patterns of social media use than those whose plans were not affected by the oil spill (Tourism Crisis Management Institute, 2010b). Yet little research has investigated whether tourists will use social media in the event of a crisis. One study, however, found that among African Americans, the likelihood to seek information via social media if a crisis were to occur while traveling

domestically was influenced by age and risk perceptions, but not the frequency and type of regular social media participation (Pennington-Gray et al., 2012). In addition, the drivers for using social media during a crisis for international travelers include past international travel experience, perceptions of the likelihood of a crisis occurring during travel within the U.S., age, and marital status (Schroeder, 2012). The limited research that has been conducted suggests that different subpopulations of the traveling population react differently to social media use in general, as well as during or as a response to a crisis. Thus, there is a need to extend this line of research to better understand different subpopulations and how they use social media in times of crisis. To the best of the authors' knowledge, no study has examined how different cultures may use social media during a crisis while traveling. Accordingly, the purpose of this study was to understand how culture plays a role in the likelihood to use social media to seek information in the event of a crisis among international travelers.

Culture has been conceptualized as a reflection of an individual's beliefs, values, perceptions, behaviors, and attitudes of self and others, which often are influenced by unique life experiences (Hofstede, 1984). Hofstede (i.e. 1980, 1983) has studied the differences between the values of countries, based on responses to value statements. Five of the six cultural dimensions have been reexamined and the reliability and validity of Hofstede's (2001) measures have been confirmed (i.e. Reisinger & Crotts, 2010). One of the six cultural dimensions studied by Hofstede is uncertainty avoidance (UAI). This dimension focuses on a society's acceptance of vagueness and uncertainty (Hofstede, 1984). In the context of tourism, relationships have been found between the UAI dimension and travel-related risk perceptions, particularly the types of risk that different nations perceive to be a threat (Kozak, Crotts, & Law, 2007). Uncertainty avoidance also influences the types of channels used for information search throughout the vacation process, as well as other travel-related patterns and behaviors used to minimize risks associated with travel (Money & Crotts, 2003; Litvin, Crotts, & Hefner, 2004). Although studies, to the best of the authors' knowledge, have not investigated how UAI influences tourists' likelihood to use social media to seek information if a crisis were to occur while traveling.

Given that G.J. Hofstede (2001) found that cultures with high uncertainty avoidance (UAI) scores were slower to embrace and implement new technology (i.e. personal computers and mobile phones), it was hypothesized that cultures with high uncertainty avoidance scores would be the least likely to use social media in the event of a crisis. It was also hypothesized that different cultures will have different preferred sources for seeking information during a crisis while traveling.

METHODS

The data for this study was collected through an international online panel of respondents in August and September 2010, as part of a larger study conducted by a private national research company. Prior to data collection, an institute at a large southeastern University wrote and purchased three crisis-related questions. A total of 2,416 completed surveys were useable for analysis. The study specifically explored the behaviors of international travelers from the top emerging growth markets to the United States, as identified by the U.S. Department of Commerce. The identified growth markets and corresponding number of respondents were: Australia (n=475), China (n=479), South Korea (n=479), Brazil (n=483), and India (n=500) (ITA Office of Travel & Tourism Industries, 2010). The overall sample was predominantly made up of

males (73.8%). A majority of respondents from the overall sample were married (52.2%), between the ages of 18 and 40 (58.8%), had an annual household income between \$75,000 and \$149,999 (52.4%), and were either employed full time (25.5%) or were self-employed/full time homemakers (31.0%).

To operationalize the likelihood of social media use during a crisis, respondents were asked “Supposed that you are currently in the middle of your trip and you hear that a crisis has just occurred within the immediate vicinity of your current location, please indicate the likelihood you would turn to the following sources of media to get more information (using a scale of 1 to 5, where 1=very much unlikely, 3=neutral, and 5=very much likely).” Social media was one item on a fifteen item list of information sources.

Cultural differences were measured by the country of origin. However, the hypothesis was based on Hofstede’s (1980, 1983) dimension of uncertainty avoidance, as well as G.J. Hofstede’s (2001) finding related to technological adoption and UAI. The dimension is negatively worded; the higher the dimension score, the less likely to accept uncertainty. For example, South Korea has an uncertainty avoidance score of 85, while the U.S. has a score of 46 and China has a score of 30 (Table1) (Hofstede & Hofstede, 2010). Thus, it was essentially hypothesized that South Korean travelers would be the least likely to use social media to seek information in the event of a crisis while traveling.

Table 1
Hofstede Uncertainty Avoidance Score (Hofstede & Hofstede, 2010)

Country	UAI
South Korea	85
Brazil	76
Australia	51
United States (<i>host</i>)	46
India	40
China	30

Note: the higher the UAI score, the less likely to accept uncertainty

To analyze the relationship between the cultural differences of international tourists and the likelihood to use social media to seek information during a crisis, a one-way analysis of variances (ANOVA) with Tukey HSD post hoc test was employed. Kruskal-Wallis test was used to examine if the different cultures had different preferred sources for seeking information during a crisis. This test allowed for the ranking of the cultures within each of the fifteen items associated with sources of risk information search. PASW Statistics 18.0 was utilized in analyzing the data.

RESULTS

The results of the study yielded interesting findings. Table 2 below outlines the results of the analysis of variances (ANOVA) between cultural differences and the likelihood to use social media to seek information in the event of a crisis while traveling. Significant effects were yielded for this relationship ($p=.000$). Interestingly, South Korean travelers ($\mu=3.52$) indicated that they were the most likely to use social media for the purpose of information search if a crisis were to

occur while traveling, while travelers from India ($\mu=2.99$) were the least likely to use social media in the event of a crisis. Tukey HSD post hoc test revealed that social media use during a crisis was significantly more likely for South Koreans ($\mu=3.52$, $SD=1.04$) than those from India ($\mu=2.99$, $SD=1.20$), Brazil ($\mu=3.06$, $SD=1.15$), and China ($\mu=3.08$, $SD=1.36$). Also, Australians ($\mu=3.41$, $SD=.93$) were significantly more likely to indicate the use of social media to seek information in the event of a crisis than travelers from India ($\mu=2.99$, $SD=1.20$), Brazil ($\mu=3.06$, $SD=1.15$), and China ($\mu=3.08$, $SD=1.36$).

Table 2
ANOVA Results of the Relationship between Cultural Differences and Likelihood of Social Media Use during a Crisis

	(b) India	(b) Brazil	(b) China	(c) Australia	(a) Korea	Total	F	Sig.
Likelihood of social media use	2.99	3.06	3.08	3.41	3.52	3.21	20.563	.000

Note: 1=very much unlikely, 3=neutral, 5=very much likely; (a) is significantly different than (b)'s, but (b)'s are not significantly different from one another

When comparing the likelihood of social media use to seek information during a crisis with fourteen other information sources, it was revealed that travelers from India were the only ones who ranked social media ($\mu=2.99$) as the top preferred risk information source. This is very interesting. Although when compared to the other cultures Indians were the least likely to use social media, among the information sources it was revealed that social media is actually the preferred source for seeking information in the event of a crisis, along with the local tourism office/CVB ($\mu=2.99$). Australian travelers ranked social media ($\mu=3.41$) as the second preferred risk information source, slightly behind local law enforcement/police ($\mu=3.42$). This is not surprising as Australia was the culture with the second highest likelihood of social media use to seek information during a crisis. For South Koreans, social media ranked third ($\mu=3.52$) along with the Internet ($\mu=3.52$), while they were most likely to turn to the local law enforcement/police ($\mu=3.77$) or friends and relatives ($\mu=3.62$) for information during a crisis while traveling. Therefore, even though South Korea was the culture with the highest likelihood of turning to social media in the event of a crisis, they would be more likely to turn to the local law enforcement/police or friends and family for information. While social media ($\mu=3.06$) ranked as the eighth most likely source used to seek information during a crisis, text messages ($\mu=3.51$) were the preferred information source for Brazilians in the event of a crisis. Not surprisingly, Chinese travelers would most likely turn to local law enforcement/police ($\mu=3.78$) if a crisis were to occur while traveling and social media was the seventh most likely information source ($\mu=3.08$).

Differences were found in the preferred risk information search sources for the five cultures studied. Kruskal-Wallis test revealed that within each information source, the culture that was the most likely to turn to the source for information in the event of a crisis while traveling varied. For instance, travelers from India were the most likely to turn to the radio, local tourism office/CVB, state tourism office/STO, or other tourists at the destination for information during a crisis, but were the least likely to turn to television, the Internet, friends and relatives, social media, a hotel concierge, the Consulate General/Embassy, or local law

enforcement/police. On the other hand, travelers from Brazil were the most likely to seek information from television or text messages and were the least likely to seek information from the local tourism office/CVB or state tourism office/STO. Chinese travelers ranked highest in the likelihood to turn to a travel agent, the Internet, a hotel concierge, or the Consulate General/Embassy for information and ranked lowest in the likelihood to seek information from local residents if a crisis were to occur while traveling. Australian travelers were the most likely to turn to a newspaper for information, while this same culture was the least likely to turn to the radio, a travel agent, or text messages. Lastly, South Koreans had the highest likelihood of seeking information from friends and relatives, social media, local residents, and local law enforcement/police; while they had the lowest likelihood of turning to the newspaper or other tourists at the destination for information.

Table 3
Kruskal-Wallis Results of the Risk Information Search Preferences of Different Cultures

Information Source	India	Brazil	China	Australia	Korea	Chi-Sq	Sig.
Newspaper	2	4	3	1	5	185.38	.000
Radio	1	3	2	5	4	158.45	.000
Television	5	1	4	3	2	75.62	.000
Travel agents	4	3	1	5	2	104.86	.000
Internet	5	4	1	3	2	152.06	.000
Friends/relatives	5	2	4	3	1	100.44	.000
Text messages	4	1	2	5	3	170.22	.000
Local tourism office/CVB	1	5	4	3	2	101.95	.000
State tourism office/STO	1	5	3	4	2	85.92	.000
Social media	5	4	3	2	1	75.03	.000
Local residents	3	2	5	4	1	111.72	.000
Other tourists in your destination	1	3	2	4	5	32.51	.000
Hotel concierge	5	4	1	3	2	97.58	.000
Consulate General/Embassy	5	4	1	3	2	41.99	.000
Local law enforcement office/police	5	4	2	3	1	234.46	.000

Note: Mean rank with 1-5 ranking among countries

Based on the results, the hypothesis that cultures with high uncertainty avoidance (UAI) scores were less likely to use social media in the time of a crisis was rejected. In fact, South Koreans, with the highest UAI score (85), were the most likely to use social media if a crisis were to occur while traveling. One explanation for this may be that South Korea is a technologically savvy country and is also home to Samsung, a technology giant. Perhaps having a significant technological presence at home, in addition to a relative high standard of living, explains why this culture is more likely to use social media in general, as well as in a time of crisis. Moreover, travelers from India, with the second lowest UAI score (40), were the least

likely to use social media to seek information if a crisis were to occur while traveling. Perhaps, again this is explained by the relative presence of social media in this country.

It was also hypothesized that different cultures would have different preferred sources for seeking information during a crisis while traveling. This hypothesis was not rejected, as it was found that different cultures have different risk information search preferences. The results revealed that travelers from different countries have significantly different intentions of social media use during a crisis. In addition, this relationship might be better explained by the level of development in the country (i.e., technological adoption, Internet penetration), rather than the uncertainty avoidance dimension. This may be an important differentiation when understanding the behaviors related to social media use during crises for international tourists.

CONCLUSIONS AND IMPLICATIONS

This study serves as one of the first to examine the likelihood of social media use during a crisis by international tourists. It is important that the tourism industry is aware of the best methods of reaching a large number of tourists during a crisis, as this can be vital to the safety of tourists. However, different subpopulations of tourists may seek information through different communication channels, as was evidenced by this study.

The importance of examining characteristics that influence the likelihood of social media use during a crisis has been highlighted by the findings of this study. As tourism research continues to focus on social media, there is a great need for further research to explore tourists' potential uses of social media during crises. We have learned that ease of access to the Internet and social media participation at home may influence the intention to use social media to seek information during a crisis while traveling. In the future, research is needed to determine if this indeed influences potential social media use in times of crises during travel. Additional work is also needed to understand the influence of other characteristics on the likelihood to use social media during a crisis, such as tourists' at-home social media behaviors and the types of technology international tourists have used while traveling internationally. It is also suggested that further research in the area of social media use during crises also utilize the theoretical framework of uses and gratifications.

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