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International Tourist's Perceptions of Safety & Security: The Role of Social Media

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Tourism research has recently begun to examine the role that social media plays in crisis communication, thus the purpose of this study was to understand the influence of social media on perceptions of travel safety and security. An online survey of 2416 tourists from Australia, Brazil, China, India, and South Korea was conducted. Descriptive statistics revealed differences in uses of social media relative to other crisis information sources. In addition, there were differences in the likelihood of turning to social media if travelers carried a smartphone. Implications and recommendations are discussed.

Key Words: Social media, international travel, tourism crisis management

Introduction

The tourism industry has experienced an increase in international travel (World Tourism Organization, 2012). Simultaneously, however, the frequency and intensity of crises has also increased (Drabek, 2009; World Travel & Tourism Council, 2012). Tourists themselves are vulnerable during travel because they are unacquainted with their setting at the destination and are not with their regular support system of friends and family (Burby & Wagner, 1996; Phillips & Morrow, 2007; World Tourism Organization, 1998). When traveling in a foreign country, tourists may be unaware of the appropriate sources to gather information and may not understand the actual risks present at a particular destination. While traditional media is still a major source for information during a crisis (American Red Cross, 2010, 2011), social media and smartphones have altered the crisis communication landscape. Smartphones are a

popular tool for seeking and sharing information, as well as accessing social media virtually whenever and wherever (Smith, 2012; TNS Mobile Life, 2011; Wang, Park, & Fesenmaier, 2011). As smartphone and social media use continues to be adopted globally, the tourism industry must understand that tourists may not disconnect from their devices and online social networks while at the destination. As a result, these technological advances can have an impact on the perceptions and behaviors of tourists. Further, social media needs to be better understood in order to effectively communicate with individuals at the destination in times of crisis.

The tourism industry is currently faced with a trifecta of opportunities and challenges. While there is an opportunity to increase international visitation to a destination, there is also an increased vulnerability to crises and exposure to the influences of modern technological and communication advances. Tourism research has only recently begun to study the role of social media in times of crisis (see Schroeder, Pennington-Gray, Donohoe, & Kiousis, 2013). Examples of social media platforms include blogs, virtual communities, wikis, social networks, collaborative tagging, and media files shared on sites (i.e., YouTube, Flickr) (Xiang & Gretzel, 2010). Although there is a wide range of social media sites (e.g., Facebook, Twitter, Google+), the most frequently used sites globally remain Facebook and Twitter (Messner & DiStaso, 2013).

Further, "the internet also increasingly mediates tourism experiences as tourists use these social media sites to portray, reconstruct and relive their trips" (Xiang & Gretzel, 2010, p. 179). As participation in social media continues to grow, tourism organizations should embrace social media as an important marketing and communications tool.

With regards to use of social media relative to other sources, the credibility and reliability of social media relative to other traditional sources of information is inconclusive. However, scholarly research has found that social media has even been perceived to be more credible than traditional media during a crisis (Horrigan & Morris, 2005; Johnson, Kaye, Bichard, &Wong 2007; Procopio & Procopio, 2007; Sweetser & Metzgar, 2007).

Thus, there are many aspects of the influence of social media that need further exploration, such as who uses what and when? In particular, there is a lack of information on the rank of social media relative to other sources of information that a traveler would turn to in the event that they encounter a crisis at the destination in which they are traveling. Therefore, this study will explore the role of social media in the crisis information seeking process of five international markets to the United States.

Purpose

This study sought to better understand the role of social media if a tourist were to encounter a crisis during their trip. Specifically, what is the likelihood that international tourists would use social media in the event of a crisis while traveling? This study examined social media use among international tourists from the top five emerging growth markets of inbound travelers to the United States: China, Brazil, South Korea, India, and Australia (ITA Office of Travel & Tourism Industries, 2010). Five questi-

ons guided this empirical research study:

1. What is the likelihood that international tourists will turn to social media to seek information in the event of a crisis while traveling in comparison with other traditional information sources?

2. Is there a relationship between nationality and the likelihood that international tourists will turn to social media to seek information in the event of a crisis while traveling?

3. When examining the different nationalities, what is the likelihood that international tourists will turn to social media to seek information in the event of a crisis while traveling in comparison with other traditional information sources?

4. What is the likelihood that international tourists will turn to social media vs. a local convention and visitor's bureau (CVB) to seek information in the event of a crisis while traveling among those who indicated the highest perceptions of different types of crises (terrorism, crime, natural disaster, disease, food safety, financial crisis, health, physical, equipment failure, weather, cultural, political coup)?

5. What is the likelihood that international tourists will turn to social media to seek information in the event of a crisis while traveling if they have carried a smartphone?

Methodology

Data collection

The data for this study was obtained as part of a larger study conducted by a private research firm in August and September of 2010. A university research institute worked with the proprietor to add three crisis-related questions to the larger study prior to data collection. The data was collected through an online survey of tourists (n= 2416) from the top five emerging growth markets for U.S. international tourism, as identified by the U.S. Department of Commerce: China (n= 479), Brazil (n= 483), South Korea (n= 479), India (n= 500), and Australia (n= 475) (ITA Office of Travel & Tourism Industries, 2010). In order to be eligible for completing the survey for the larger study, respondents must have made at least one trip to the United States within the past year, spent 250 U.S. dollars or more while shopping in the U.S., and have a household income of at least 75,000 U.S. dollars.

Operationalization of constructs

The *likelihood to turn to social media to seek information in the event of a crisis while traveling*, the dependent variable, was operationalized by the question: "Suppose 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 of the fifteen *information source*s measured for this question.

The information source variable was measured by the same question. The fourteen information sources examined for this independent variable were: local law enforcement/police, friends/relatives, Internet, hotel concierge, television, text messages, consulate general/embassy, travel agents, local residents, other tourists, state tourism office (STO), local tourism office (CVB), newspaper, radio.

To operationalize *perceptions of crises* tourists were asked: "Using a scale of 1 to 5, where 1= very much unlikely, 3= neutral and 5= very much likely, please think about your next or upcoming leisure trip within the United States and rate your perception of the likelihood that the following crises may occur." The question was posed for twelve crisis types: terrorism, crime, natural disasters, disease, food safety, financial, health, physical, equipment failure, weather, cultural barriers, and political (Floyd, Gibson, Pennington-Gray & Thapa, 2004; Moutinho, 1987; Roehl & Fesenmaier, 1992; Sönmez & Graefe, 1998). Only respondents who rated risk perceptions as a "5" (very likely) on each of the twelve risk types were included in the analysis comparing the likelihood that international tourists will turn to social media vs. a local convention and visitor's bureau (CVB) to seek information in the event of a crisis while traveling.

Finally, the variable which was used to understand social media behaviors was smartphone usage among international travelers. *Smartphone use during travel* was measured as a dichotomous variable by the question "Did you use a smartphone (such as iPhone, Blackberry, Droid/Android, etc.) while on your last trip to the U.S.?"

Profile of the survey respondents

Table 1 provides a demographic profile of the survey respondents. A majority of the international travelers were male (73.8%), and the most represented age groups were 18–30 (31.0%) and 31–40 (27.8%). As delimited by the larger study, all of the respondents had an annual household income of at least 75,000 U.S. dollars. Approximately one in two respondents were married (52.2%). The largest groups for employment status were full-time homemakers/self-employed (31.0%) and employed full-time (25.5%). Lastly, there were approximately 500 respondents from each of the five international markets of tourists to the United States.

Table 1. Frequency of demographic variables among international tourists

Demographic variable	Frequency	Valid percent
Gender		
Male	1784	73.8
Female	632	26.2
Age		
18-30	748	31.0
31-40	672	27.8
41-50	573	23.7
51-65	381	15.8
66-	42	1.7
Annual household income		
$75,000-$99,999	443	18.3
$100,000-$124,999	447	18.5
$125,000-$149,999	378	15.6
$150,000-$174,999	332	13.7
$175,000-$199,999	290	12.0
$200,000-$224,999	208	8.6
$225,000-$249,999	91	3.8
$250,000-$499,999	73	3.0
$500,000 or more	52	2.2
Not sure/rather not say	102	4.2
Marital status		
Single, never married	389	16.1
Living with partner/significant other	498	20.6
Rather not say	95	3.9
Divorced/separated	68	2.8
Widowed	31	1.3
Living with friends	74	3.1
Married	1,261	52.2
Employment status		
Employed full time	615	25.5
Employed part time	222	9.2
Retired	489	20.2
Full time homemaker/self employed	750	31.0
Unemployed	340	14.1
Nationality		
India	500	20.7
Australia	475	19.7
Brazil	483	20.0
South Korea	479	19.8
China	479	19.8

Table 2 provides an overview of the perceptions of different types of crises among international tourists. Overall, international tourists did not anticipate a crisis while traveling in the United States. The crises associated with the highest risk perceptions were disease (μ= 3.31), financial (μ= 3.13), and cultural barriers (μ= 3.13).

Table 2. Perceptions of different types of crises among international tourists

Variable	Frequency	Mean	SD
Please think about your next or upcoming leisure trip to the U.S. and rate your perception of the likelihood that the following crisis will occur during your trip (1= very much unlikely, 3= neutral, 5= very much likely).			
Disease (i.e., SARS)	2,416	3.31	1.24
Crime	2,416	3.13	1.19
Financial	2,416	3.13	1.35
Cultural barriers	2,416	2.98	1.08
Physical (accidents)	2,416	2.91	1.12
Food safety (i.e., outbreak of salmonella)	2,416	2.85	1.25
Political (i.e., coups)	2,416	2.76	.97
Weather (i.e., storms, flooding)	2,416	2.72	1.06
Equipment failure (i.e., airplane delay due to malfunctions)	2,416	2.55	1.15
Terrorism	2,416	2.54	.99
Health (i.e., traveler's diarrhea)	2,392	2.54	1.06
Natural disasters (i.e., hurricane)	2,416	2.34	1.05

Data analysis

In this study, crosstabs and ANOVAs were used to examine the likelihood to turn to social media to seek information in the event of a crisis while traveling and the other variables. The Kruskal-Wallis test was used to determine differences in rankings among information sources between the five international tourism markets.

Results

The first research question, "What is the likelihood that international tourists will turn to social media to seek information in the event of a crisis while traveling in comparison with other information sources?," was examined by comparing the mean scores of the fifteen information sources. Table 3 provides an overview of the information sources that tourists may turn to during a crisis. The top preferred information source that international tourists would turn to for information in the event of a crisis while traveling was local law enforcement (μ= 3.40). Social media ranked fifth among the fifteen information sources (μ= 3.21), behind local law enforcement, friends/relatives (μ= 3.27), the Internet (μ= 3.24), and a hotel concierge (μ= 3.22).

Table 3. Source of information used to seek information in the event of a crisis while traveling

Variable	Frequency	Mean	SD
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).			
Local law enforcement	2,416	3.40	1.20
Friends/relatives	2,416	3.27	1.23
Internet	2,416	3.24	1.19
Hotel concierge	2,416	3.22	1.24
Social media	2,416	3.21	1.16
Television	2,416	3.18	1.24
Text messages	2,416	3.16	1.24
Consulate general/embassy	2,416	3.11	1.27
Travel agents	2,416	3.10	1.18
Local residents	2,416	2.90	1.18
Other tourists	2,416	2.74	1.21
State tourism office (STO)	2,416	2.65	0.95
Local tourism office (CVB)	2,416	2.58	1.03
Newspaper	2,416	2.57	1.18
Radio	2,416	2.45	0.96

The second research question examined whether there is a relationship between nationality and the likelihood that international tourists will turn to social media to seek information in the event of a crisis while traveling. The results of an ANOVA, provided in Table 4, suggested that differences based on the nationality of international tourists were found. The social media preferences of the five different international markets indicated that South Koreans (μ= 3.52) were the most likely to use social media in the event of a crisis, followed by Australians (μ= 3.41). Tourists from India were the least likely to turn to social media to seek information in the event of a crisis during travel (μ= 2.99).

Table 4. ANOVA results of the relationship between nationality and the likelihood that international tourists will turn to social media to seek information in the event of a crisis while traveling

	India [(b)]	Brazil [(b)]	China [(b)]	Australia [(c)]	Korea [(a)]	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

Research question three looked within the different nationalities to examine the likelihood that international tourists will turn to social media to seek information in the event of a crisis while traveling in comparison with other information sources. The results of the crosstab are provided in Table 5. When comparing the nationalities in the likelihood of turning to social media 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 (μ= 2.99) as the top preferred risk information source. When compared to the other nationalities, Indians were the least likely to use

social media. However, 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 (μ= 2.99). Australian travelers ranked social media (μ= 3.41) as the second preferred risk information source, slightly behind local law enforcement/police (μ= 3.42). This is not surprising as Australians had the second highest likelihood of social media use to seek information during a crisis. For the South Koreans, social media ranked a joint third (μ= 3.52) along with the Internet (μ= 3.52), while they were most likely to turn to the local law enforcement/police (μ= 3.77) or friends and relatives (μ= 3.62) for information during a crisis while traveling. While the South Koreans had the highest likelihood of turning to social media in the event of a crisis, they were more likely to turn to the local law enforcement/police or friends and family for information. While social media (μ= 3.06) ranked as the eighth most likely source used to seek information during a crisis, text messages (μ= 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 (μ= 3.78) if a crisis were to occur while traveling and social media was the seventh most likely information source (μ= 3.08).

Table 5. Differences between nationality and source of information used to seek information in the event of a crisis while traveling

Information source	India	Australia	Brazil	South Korea	China
Social media	*2.99*	*3.41*	*3.06*	*3.52*	*3.08*
Newspaper	2.92	3.03	2.39	2.17	2.34
Radio	2.91	2.08	2.33	2.32	2.60
Television	2.82	3.28	3.42	3.30	3.06
Travel agents	2.91	2.72	3.25	3.28	3.36
Internet	2.89	3.32	2.90	3.52	3.60
Friends/relatives	2.86	3.34	3.40	3.62	3.13
Text messages	2.87	2.66	3.51	3.34	3.44
Local tourism office (CVB)	2.99	2.41	2.39	2.70	2.36
State tourism office (STO)	2.96	2.55	2.34	2.75	2.63
Local residents	2.86	2.78	3.12	3.22	2.50
Other tourists	2.94	2.68	2.75	2.49	2.83
Hotel concierge	2.77	3.29	3.20	3.37	3.49
Consulate general/embassy	2.91	3.04	3.02	3.23	3.36
Local law enforcement/police	2.74	3.42	3.30	3.77	3.78

Note: means reported on a 5-point scale where 1= very much unlikely, 3= neutral, 5= very much likely

The Kruskal-Wallis test revealed that within each information source, the nationality 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. 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 informa-

tion 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, they were the least likely to turn to the radio, a travel agent, or text messages. 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 6 provides the results of research question four. In comparing the likelihood that international tourists will turn to social media vs. a local convention and visitor's bureau (CVB), tourists from India who believed it was very likely that crime, disease, food safety, financial crisis, or health concerns were likely to occur during their trip were more likely to turn to the CVB for information. In comparison, visitors from the other four countries would more likely turn to social media than the CVB in the event of a crisis.

Table 6. Likelihood that international tourists will turn to social media vs. CVB to seek information in the event of a crisis while traveling among those with high risk perceptions

Crisis type		India	Australia	Brazil	South Korea	China
Terrorism	Social media (n=78)	5.00	5.00	5.00	5.00	5.00
	CVB (n=78)	5.00	4.33	4.82	5.00	5.00
Crime	Social media (n=78)	4.79	4.65	4.71	5.00	5.00
	CVB (n=78)	5.00	3.44	3.82	4.76	3.37
Natural disaster	Social media (n=365)	5.00	5.00	5.00	5.00	5.00
	CVB (n=365)	5.00	5.00	4.56	5.00	5.00
Disease	Social media (n=61)	4.65	4.66	4.97	4.80	4.64
	CVB (n=61)	4.83	3.44	4.13	3.63	3.17
Food safety	Social media (n=519)	4.65	4.66	4.97	4.80	4.64
	CVB (n=519)	4.83	3.44	4.13	3.63	3.17
Financial crisis	Social media (n=393)	4.79	4.66	5.00	5.00	5.00
	CVB (n=393)	5.00	3.44	4.27	5.00	4.13
Health	Social media (n=478)	4.29	4.51	4.92	5.00	5.00
	CVB (n=478)	4.37	3.34	4.08	5.00	3.29
Physical	Social media (n=124)	5.00	5.00	5.00	5.00	5.00
	CVB (n=124)	5.00	3.00	4.82	4.86	3.47
Equipment failure	Social media (n=163)	5.00	5.00	5.00	4.94	5.00
	CVB (n=163)	5.00	4.08	5.00	3.74	5.00
Weather	Social media (n=170)	5.00	5.00	5.00	5.00	5.00
	CVB (n=170)	5.00	5.00	4.49	4.43	3.40
Cultural barriers	Social media (n=424)	5.00	4.60	5.00	5.00	5.00
	CVB (n=424)	5.00	3.40	4.67	5.00	3.96
Political coup	Social media (n=213)	5.00	5.00	5.00	5.00	5.00
	CVB (n=213)	5.00	4.23	5.00	4.76	3.31

Note: means reported on a 5-point scale where 1= very much unlikely, 3= neutral, 5= very much likely

The final research question examined whether carrying a smartphone during travel was related to the likelihood that international tourists will turn to social media in the event of a crisis during travel. Results are provided in Table 7. Those who carried a smartphone were generally more likely to turn to social media in the event of a crisis than those who did not carry a smartphone. This was consistent across all five nationalities except Brazilians, where those who responded that they did not carry a smartphone were more likely to turn to social media than those who did.

Table 7. Likelihood that international tourists will turn to social media to seek information in the event of a crisis while traveling if they have carried a smartphone while traveling

	India	Australia	Brazil	South Korea	China
Those who carry a smartphone when traveling	3.08	3.38	2.92	3.86	3.05
Those who do **not** carry a smartphone when traveling	3.07	3.31	2.99	3.21	2.74

Note: means reported on a 5-point scale where 1= very much unlikely, 3= neutral, 5= very much likely

Discussion and conclusions

Data shows that social media is one of the preferred information sources for international tourists in the event of a crisis while traveling. This is consistent with research conducted by the Red Cross which found for the general public social media was also the preferred source of information in the event of a crisis (American Red Cross, 2010, 2011). Further, differences were found in the likelihood to turn to social media to seek information in the event of a crisis during travel among the five nationalities in this study. South Korean travelers were found to be significantly more likely to turn to social media for information during a crisis, as opposed to travelers from India who were the least likely to turn to social media. The findings related to this research question may be related to the social media and Internet penetration rates of the countries. While South Korea has the highest social media and Internet usage rates of the five nations, India has the lowest (Pew Research Center Global Attitudes Project, 2010; Global T.N.S., 2011).

When examining the differences between the likelihood to turn to social media compared to other sources of information between the nationalities, differences were found within each information source. As a result, the findings suggest that different nationalities have different preferences for the information sources they would turn to in the event of a crisis during travel.

Findings revealed that those tourists from India who believed it was "very likely" that crime, disease, food safety, financial crisis, or health concerns would occur during their trip were more likely to turn to the local convention and visitor's bureau (CVB) for information than social media. Arguably crime, disease, food safety, and health are all risks which are more "individual" in nature. Thus, turning to a CVB

would provide the tourist with a better solution to solve their "problem" than friends who may not be in the area or know the area well enough to make suggestions on how to manage the risk. The reason that this finding was not significant across all five nationalities in this study, provides scope for further research. Given that eight of the twelve risk perception types were significant among international tourists, international tourists with high perceptions of the likelihood of crime, disease, physical, equipment failure, weather, cultural barriers, and political crises occurring during an upcoming trip to the U.S. had a higher likelihood of using social media to seek information if a crisis were to occur while traveling. This is consistent with previous research which found that among a sample of African American tourists, the association between risk perceptions related to crime and the likelihood of using social media in the event of a crisis were also positive (Pennington-Gray, Kaplanidou, & Schroeder, 2013).

Finally, it was found that international tourists who had carried a smartphone during travel had a higher likelihood to turn to social media to seek information in the event of a crisis during travel. This finding is consistent among all nationalities in this study with the exception of the Brazilians. The positive association between smartphone use and the likelihood to turn to social media may be explained by the fact that smartphones provide fast access to online social networks. In addition, those who own smartphones tend to participate more frequently in social media than those who access social media via other devices (Chang, 2012; Facebook, 2011). Thus, it is hypothesized that smartphone users are generally more active social media users and thus, their social media habits may spillover during a crisis situation. Interestingly however, Brazilians who did not travel with a smartphone indicated a higher likelihood to use social media to seek information during a crisis. While the exact reason behind this finding remains to be determined by further research, it is hypothesized that this is because this specific group of travelers may be carrying other technological devices, such as laptops or tablets, which they might access first.

A major implication of this study is that tourists are not homogenous in the information sources that they are most likely to turn to in the event of a crisis. As a result, tourism planners and managers need to create plans for different subpopulations accordingly. The study further supported the notion that tourists are likely to turn to social media if a crisis were to occur within their immediate vicinity during travel. Tourism crisis management and communication plans should be adapted to include geographically specific social media plans. Social media activity tends to increase during crises (Pew Internet and American Life Project, 2006; Scherp et al., 2009; Sutton, Palen, & Shklovski, 2008); therefore, the tourism industry must be proactive in planning to communicate during future crises. Although we are not sure if seeking information on social media sites actually translates into behavioral changes, we hope that having more information during a crisis may translate into saving lives. Further, international tourists in this study indicated that they were generally more likely to turn to social media than the CVB. Thus, the tourism industry should make efforts to communicate with tourists at the destination via social media during a crisis.

Given the growth in social media use and the increase in crises additional research is required. Future studies should examine which type of social media that tourists are

most likely to use to turn to. For instance, twitter has gained in popularity recently. However, there is a lack of current research to understand whether tourists use twitter to guide them through the crisis situation. Crisis communication plans can then be tailored to the specific social media sites which may have greater reach at the destination during a crisis.

As the crisis communication landscape continues to be altered by technological and communication advances, the tourism industry should make efforts to adapt to the changes. Tourists are now faced with many information sources and have greater options during crises. Additional research is needed to better understand the preferred information sources of tourists from different markets.

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