

Drivers of social media use among African Americans in the event of a crisis

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Abstract Research has examined the role of social media during the time of a crisis in various fields; however, there is a paucity of research in this area as it relates to tourism. Moreover, few studies have examined at-risk populations, such as tourists, in times of crisis. To assess the drivers of turning to social media during a crisis, a national survey of 1,018 African American travelers was conducted. Respondents were asked to indicate on a 5-point scale the likelihood of turning to social media for information “if they were currently in the middle of their trip and heard that a crisis has just occurred within the immediate vicinity of their current location.” Hierarchical regression analysis was conducted to determine drivers on African American travelers’ decisions to use social media during a crisis. These drivers were age, perceptions of risk during their trip, and frequency and type of social media use engaged in on a regular basis. Overall, findings suggested that when controlling for age only, crime, financial, and physical perceptions of risk drove social media use during a crisis, while controlling for age and perception of risk, use of social media in one’s daily life showed no influence.

Keywords Risk perception · Tourists · African American · Social media · Crisis

1 Introduction

Global crisis of varying types and magnitudes is on the rise (Drabek 2009). Although natural hazards have dominated the news globally in the past year (i.e., Japan earthquake/tsunami, Chilean earthquake, flooding in Peru, snow storms that crippled the United States), there has also been a rise in man-made crisis, particularly in the Middle East. The interaction between these crises and responses by different populations is a growing area of research. Specifically, there has been an interest in better understanding how at-risk populations respond to crisis (National Academy of Sciences 2007).

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Many studies have examined response behaviors of minorities as an at-risk population category (Grandy 2001; Elliott and Pais 2006). But, in the tourism field and when examining tourists as an “at-risk population,” there is no study that examines minorities, such as African American tourists’, responses to crisis. Past research has suggested that minorities may value different sources of media to receive information than other sub-groups of the population (i.e., Perry and Lindell 1991). Thus, different minority groups may have different information search behaviors during a crisis. It is imperative that the industry understands the sources tourists, especially minorities, will seek during a crisis to protect this group through the creation of pertinent safety policies. Therefore, understanding the combination of a minority and at-risk population can shed more light on the needs of this group during and after a crisis. This will help tourism organizations understand the drivers of social media use during a crisis for a specific target market. As a result, tourism organizations will be able to incorporate minority tourists into their crisis response plans.

Response behaviors of at-risk populations have focused mostly on information search behaviors and interpretations of media messages by minority groups. An emerging area of research comes under the umbrella of “new media.” New media includes social networking sites, blog sites, Internet sites, user-generated media, and digital photos. New media “radically break the connection between physical place and social place, making physical location much less significant for our social relationships” (Croteau and Hoynes 2003: 311). The emergence of new methods of communication with new technologies shifts the model of mass communication and reshapes how we interact and communicate with each other. Use of social media during crises has mainly been related to resident populations. These studies have ranged in topics from emergent uses of social media during crises (Sutton et al. 2008), to knowledge management via social media (Yates and Paquette 2011), to crisis informatics (Palen et al. 2007), and to retweeting in mass emergencies (Starbird et al. 2010). Studying tourist populations during crisis is an important area for research given that tourists have been accepted as an “at-risk” population (Pan American Health Organization 2009). Tourists are considered at-risk because they are unfamiliar with the details of the surroundings they are traveling in and they lack the normal support systems from their home community (Burby and Wagner 1996; Matyas et al. 2011; World Tourism Organization 1998).

This study is one of the first studies to examine both minorities and tourists as types of at-risk populations and the relationship to social media in the event of a crisis. Thus, this study extends our understanding of behaviors of at-risk populations during a crisis. We examined a national sample of African American tourists to determine the drivers of turning to social media in the time of a crisis. Our three main research questions were as follows:

1. Age: What is the influence of age on the use of social media during a crisis among African Americans?
2. Risk Perceptions: What is the influence of the perception of risk occurring during a trip on the likelihood of using social media during a crisis among African Americans?
3. Social Media Usage: Does the type of social media outlet and the user involvement level influence the likelihood of using social media during a crisis among African Americans?

The following figure represents our hypothesized model (Fig. 1).

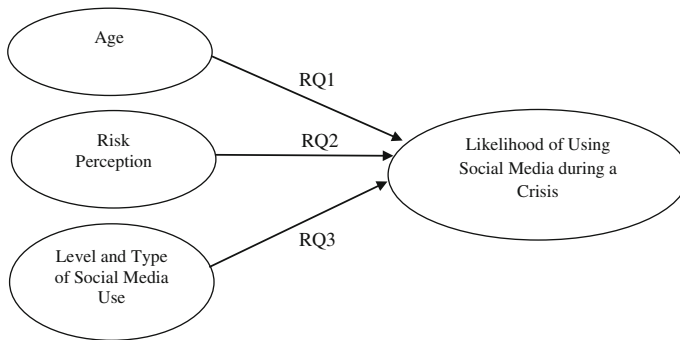


Fig. 1 Conceptual model presenting the three research questions of the study

2 Relevant literature

2.1 Risk perception of tourists

Research in the travel industry has repeatedly found that tourists believe safety and security are of primary concern while traveling (Poon and Adams 2000). In the tourism scholarly literature, researchers have studied risk perceptions according to the type of risk, classified as either natural or man-made risks. Several types of risk factors have been extensively studied, as related to tourism: (1) terrorism (Aziz 1995; Brady and Widdows 1988; Bar-On 1996; Enders et al. 1992; Floyd et al. 2004; Leslie 1999; Richter and Waugh 1986; Sönmez 1998; Sönmez and Graefe 1998a, b; Sönmez et al. 1999); (2) crime (Bruno et al. 2000; Dimanche and Leptic 1999; Floyd et al. 2004; Pizam 1999; Pizam et al. 1997); (3) war and political instability (Clements and Georgiou 1998; Gartner and Shen 1992; Hall and O’Sullivan 1996; Hollier 1991; Ioannides and Apostolopoulos 1999; Mansfeld 1996, 1999; Richter 1992, 1999; Pitts 1996; Seddighi et al. 2001; Teye 1986; Wall 1996); and (4) health concerns (Carter 1998; Cossens and Gin 1994; Floyd et al. 2004; Lawton and Page 1997). In addition, research has investigated risk associated with natural disasters and how this risk affects tourism demand (Faulkner 2001; Floyd et al. 2004; Mazzocchi and Montini 2001). Recently, Harris Interactive found that a majority of Americans believe that destructive natural disasters are increasing in occurrence, thus becoming a greater perceived risk (eTurboNews 2011). Americans also perceive different types of natural disasters as pertinent risks, depending on geographical location. For example, residents of the Northeast are more concerned with the risk of snow storms, while residents of Western states indicated that earthquakes were their primary concern (eTurboNews 2011, July 7).

Several studies have examined the effects of perception of risk on decision making (Park and Reisinger 2010; Pizam and Fleischer 2002; Kozak et al. 2007; Roehl and Fesenmaier 1992; Sönmez and Graefe 1998a, b). Using consumer behavior models, Roehl and Fesenmaier (1992), in an early study on risk perceptions and tourism, categorized seven types of risk (e.g., Brooker 1983; Cheron and Ritchie 1982) that may impact travel decisions. The risk factors identified were as follows: financial (likelihood of the vacation not providing value when compared to the monetary expense), physical (likelihood of injury, sickness, or physical danger while traveling), social (likelihood that others’ will think differently of the traveler for taking the trip), equipment (likelihood of equipment/mechanical issues while traveling), psychological (likelihood of the trip not mirroring the traveler’s persona), time (likelihood of the trip not being worth the travelers’ time), and

satisfaction risks (likelihood of the trip not being satisfying for the traveler) (Roehl and Fesenmaier 1992). However, Roehl and Fesenmaier (1992) found that the social risk factor may not be associated with risk perceptions in the context of pleasure travel. An important finding of the study was that distinctions among tourists can be made based on risk perceptions; for example, different tourists can have different levels of risk aversion. In addition to the seven types of risk studied by Roehl and Fesenmaier (1992), Sönmez and Graefe (1998a, b) investigated political instability, health, and terrorism risks. In general, tourism was not considered risky to the sample of middle-age individuals with past experience traveling internationally, although political instability and terrorism were particularly concerning to the sample (Sönmez and Graefe 1998a). While attitudes toward international travel were more favorable among those with higher income and education levels, Sönmez and Graefe (1998a) found that, on their own, demographic variables were not adequate predictors of risk perceptions associated with travel. When faced with the risk of terrorism and political instability, the likelihood of travel was best predicted by favorable attitudes toward international travel and risk seeking, as well as higher income levels.

Although past travel experience did not appear to have an effect on the decision-making process in Sonmez and Graefe's study, those who had visited a destination in the past were likely to indicate that they would visit the destination in the future, rather than staying away because of the risk. Mazursky (1989) postulated that the nature of past travel experience, in addition to the extent of experience, can affect travel behaviors in the future. To the same effect, Sönmez and Graefe (1998a) suggested that, despite the level of past travel experience, experiencing or observing terrorist activity can have a greater effect on future travel behaviors. Additionally, the frequency of terrorist activity has a greater effect on tourism demand in the long term (Pizam and Fleischer 2002), as frequent attacks can cause an individual to perceive the destination as risky, and therefore, the tourist is likely to avoid the destination (Sönmez and Graefe 1998b). On the other hand, the severity of the attack has a shorter-term effect: approximately 6–9 months (Pizam and Fleischer 2002). Floyd et al. (2004) investigated tourists' risk perceptions after September 11, 2001 and found that perceived social risk was the only risk factor that was a significant predictor of intentions to travel. Also, the propensity for travel in the year following the terrorist attack was associated with safety concerns, perceived social risk, travel experience, and income (Floyd et al. 2004).

Travel statistics have demonstrated that risk perceptions related to a destination and tourism demand at the destination are inversely related (Sönmez et al. 1999). Tourists' rational decision-making process can be affected by risk perceptions and concerns for safety, as tourists may change their modes of travel and destination choice (Sönmez and Graefe 1998b). Changes in behavior due to perceived risk include substituting a risky destination with a safer alternative, as well as generalizing the risk and associating it with other areas within the region (Sönmez 1998). Similarly, Kozak et al. (2007) found that a majority of travelers surveyed would alter their travel plans due to any perceived risk at their evoked future destination. Despite previous travel experiences, travel intentions have been found to be affected specifically by perceptions associated with terrorism and political instability risk factors (Sönmez and Graefe 1998a). For example, Travel Industry Association of America (2001) found that following September 11th, about two-thirds of US leisure travelers indicated a reluctance to fly. Overall, there is a negative correlation between perception of risk and likelihood to travel. The media also has an impact on risk perceptions. As the international media covers incidents involving tourists, risk perceptions associated with the destination increase (Richter 1983). Perceived risk, as a result of media

coverage, can prevail over the actual conditions at a specific destination, as well as an entire region (Sönmez 1998).

2.2 At-risk populations and crisis communications

Responses to crisis are an area of research, which has received tremendous attention in the last decade; however, responses by at-risk populations (such as minorities, the elderly, people with disabilities, and tourists) are a far less studied area within the crisis literature. This study extends the current literature and examines minorities who are tourists. Most crisis-related studies have concentrated on residents (Phillips and Morrow 2007; Leisero-witz et al. 2007). However, tourists are considered vulnerable in the event of a crisis (Phillips and Morrow 2007), mostly because they may be unable to respond appropriately to warning messages. This inability to respond arises mostly from (1) tourists being in “vacation mode”; (2) being away from their support system; and (3) being in unfamiliar surroundings, which may increase vulnerability (Burby and Wagner 1996; World Tourism Organization 1998). International tourists are especially at-risk of not having the requisite communication skills to decipher warning messages and, in addition, may have a greater lack of knowledge about the potential risks in a destination due to greater proximity to home.

Behaviors during crises, particularly related to information search, often depend on the social affiliations of an individual, which may vary depending on race (Elliott and Pais 2006). Elliott and Pais (2006) explain that understanding human responses to crisis and natural disasters requires understanding social affiliations among people, because people respond to crisis as members of these social affiliations (i.e., church, close friendships, social clubs, family). Research shows that these social affiliations extend beyond local networks in times of crisis (Morrow 1997) and that these networks are critical in terms of responding to crises. Thus, it is critical to understand how minorities will search for information during a crisis. African Americans represent the largest minority in the United States; thus, we chose to examine the drivers of social media use among this minority group in times of crisis.

Thus, we argue it is critical to understand African American tourists’ response to crisis. Literature related to African American populations and communication needs in the time of crisis is sparse (Baker 2001; Bolin and Bolton 1986; Peacock and Girard 1997; Spence et al. 2007). What we do know is that, in general, people tend to direct information seeking toward others who have similar attributes as themselves (Ibarra 1995). In particular, research has found that African Americans are less likely to accept a risk or warning message as credible without confirming the message from peers (Fothergill et al. 1999; Lindell and Perry 2004). Additional research on race and information search indicates that African Americans often maintain a high level of distrust of mainstream institutions and are more likely to turn to peers than those institutions (i.e., government) (Quinn et al. 2005). This was apparent in the wake of anthrax attacks, where studies indicated that minorities, particularly African Americans, were less likely to adhere to government directives than Caucasian populations (Quinn et al. 2005). Thus, social forms of communication among peers are preferred methods of receiving information in times of crisis.

Extending social forms of communication to include new media forms is a logical transition to understanding the communication of African Americans during a crisis. Recent studies on new media have suggested that in the context of a crisis (Bracken et al. 2005), mobile phones have replaced interpersonal communications for African Americans. Bracken et al.’s (2005) study looked at new media after a crisis event and found that the

emergence of new media may affect the process of information diffusion. Spence et al. (2007) built on Bracken et al.'s study and explored minority populations and crisis communication during Hurricane Katrina. Interestingly, Spence et al. (2007) suggested that tweeting is merely interpersonal communications mediated by a new technology. More specifically, they found that African Americans again were more likely to turn to interpersonal communications (social communications among friends and family) than television precrisis and that new media was used post-crisis frequently to receive information about the crisis, as well as friends and family. Nevertheless, African American travelers and the use of new media during the response phase of a crisis is still an unexplored research territory. Thus, the literature related to at-risk populations and communication seems to indicate that personal relationships play a large role in both the type and method of communication.

2.3 Social media users

The Internet through social media and e-mail use has greatly affected our everyday lives. In the United States, there are approximately 240 million Internet users who each spend, on average, 21 h per week online (TNS Digital Life 2011). While half of US Internet users participate in social networking through a computer, 44% access social media through mobile phones (TNS Digital Life 2011). The latter statistics suggests that social networking on mobile phones has experienced very strong growth in 2011 (TNS Mobile Life 2011).

There is a great deal of variation in the age, sex, race, and educational attainment among those who use different social networking platforms (Hampton et al. 2011). In their national study of Americans, Hampton et al. (2011) found the following profiles of social networking site users:

- Nearly twice as many men (63%) as women (37%) use LinkedIn. All other social networking services SNS platforms have significantly more female users than male users.
- The average adult MySpace user is younger ($M = 32$), and the average adult LinkedIn user is older ($M = 40$), than the average Facebook user ($M = 38$), Twitter user ($M = 33$), and users of other SNS ($M = 35$).
- MySpace and Twitter users are the most racially diverse mainstream social network platforms. However, a large proportion of users of “other” social network services are racial minorities.
- MySpace users tend to have fewer years of formal education than users of other social network services, whereas most LinkedIn users have at least one university degree.

Findings suggest the age distribution of social networking sites for 23- to 35-year-olds represents the largest percentage of users for MySpace, Facebook, LinkedIn, Twitter, and all other sites. In addition, African American users range in participation of social networking sites from 2% of LinkedIn users to 16% of MySpace users (Table 1). Smith (2010) has also found that one-quarter of online African Americans use services like Twitter, which is significantly higher than the 15% of Caucasian Internet users who do so. Similar to the Smith (2010) findings, a recent study by the University of Illinois at Chicago (UIC) found that 37% of African American students were using Twitter in 2010 compared to 21% of Caucasian students (Hargittai and Litt 2011). Researchers found that students, regardless of race, with higher Internet skills, were more likely to start using Twitter (Smith 2010).

Table 1 Race and ethnicity by social networking site platform

Race	MySpace	Facebook	LinkedIn	Twitter	Other
White	70	78	85	71	68
Black	16	9	2	9	13
Hispanic	12	9	4	12	9
Other race	14	12	13	21	19
Total	112	108	104	113	109

Source: Pew Research Center's Internet and American Life Social Network Site survey conducted on landline and cell phone between October 20 and November 28, 2010. N for full sample is 2,255, and margin of error is $\pm 2.3\%$ points. N for social network site and Twitter users is 975 and margin of error is $\pm 3.5\%$ points

2.4 Social media use during travel

Understanding social media use during travel is an understudied area of research. In fact, the majority of social media research falls into three dominant themes: (1) the role of the tourism provider in the social media deluge, (2) the role of social media within the five phases of the tourist travel experience (i.e., information search, decision making), and (3) user-generated content surrounding the travel experience. However, the least researched area is how the tourist may use social media during the travel experience. One study, however, found that 72% of all social media users connect with their social media sites daily when traveling (Tripl n.d.). In addition, a study conducted by StudyLogic LLC (2010) revealed that when traveling, 20% of respondents say they still manage to check social media sites multiple times throughout the day and 36% say they would rather log into their social media account than make a phone call to share information (DeLollis 2010). Not surprisingly, the study also found young adults between the ages of 25–34 checked social sites most often, with nearly one-third of this group accessing social media multiple times in an hour.

2.5 Social media use in times of crisis

Similar to understanding social media usage in general, understanding social media usage in times of crisis is also a fairly new research topic. As would be expected, the majority of this research focuses on the resident population. This research has found that younger individuals are the most active population in seeking and posting information about a crisis through social media channels. While a majority of individuals still seek information about a crisis through television, 1 in 6 turn to social media in the event of a crisis (American Red Cross 2010). eTurboNews (2011) reported similar findings to the American Red Cross (2010), in that a majority of Americans seek information about a crisis from television, while younger individuals are more likely than older individuals to seek information from Internet sources, such as online news Web sites and social media sites (e.g., Facebook, Twitter).

While investigating residents' uses of social media during the Southern California wildfires crisis of 2007, Sutton et al. (2008) found that social media encouraged peer-to-peer communication during a crisis. Thus, information that is otherwise difficult to obtain during a crisis was generated by a greater extent of interaction between peers through the use of social media (Sutton et al. 2008). Posting information or pictures about a crisis or

newsworthy event is also gaining in popularity, with 18% of active social media participants having done so in the past and nearly half of the participants saying they would do so in the future. In addition, participants use social media to let family and friends know that they are safe during a crisis; almost half would post about their safety on social media, with Facebook being the most preferred channel (American Red Cross 2010).

Researchers found that people directly affected by the 2011 Japan Tsunami were more likely to “tweet” about their unsafe and uncertain situation, while people in remote areas posted messages to let their followers know they were safe. Twitter is defined as “a real-time information network that connects you to the latest information about what you find interesting” (Inderscience Publishers 2011, April 15). Thus, tweets allow people to connect to what they are interested in. The study by Acar and Muraki (2011) found that retweets were repeatedly inaccurate and hashtags were used inappropriately. This is most problematic when communicating during a crisis and the information is personally relevant, as retweets may be misinterpreted. Given that the majority of research on social media use in times of crisis is on the resident population, we are aware of only one empirical study examining tourist’s social media use in the time of crisis. A study conducted by the University of Florida’s Tourism Crisis Management Institute (TCMI) (2010) and Research Data Services found differences in social media use for two groups of tourists subsequent to the Gulf of Mexico Oil Spill of 2010. Findings suggested differences in social media use among tourists who indicated that the oil spill had affected their destination choice and tourists planning a Gulf Coast beach destination. Those whose destination choice was affected by the oil spill were less likely to use Facebook and Twitter than those who were still planning a trip to the Gulf Coast. Those whose destination choice was not affected by the oil spill were more likely to connect to social media sites to seek travel information (Tourism Crisis Management Institute (TCMI) 2010). Thus, the current study was undertaken to better understand the role of social media during the time of a crisis and specifically what the greatest drivers of this use might be. The following methods were undertaken to study these questions.

3 Survey methodology

3.1 Data collection

The data for this study were garnered from a larger study conducted by a private national research company. The Tourism Crisis Management Institute at the University of Florida formulated three questions related to travel in the time of crisis and paid to have them added to the larger study of African American tourists prior to data collection. The larger study was conducted among 1,018 African American leisure travelers in the United States in December of 2010. The data were collected online using Mandala Research’s *Travel Answer* domestic leisure travel panel, hosted by Conduit Systems. The overall response rate for the survey was 4.5%. To qualify for the survey, respondents must have taken at least one trip within the United States in the past 12 months for pleasure, vacation, or personal purposes that were 50+ miles away from home one-way OR where the traveler spent at least one night and have shared or have had sole responsibility for travel planning. The sample for the survey was weighted by age, gender, geographical region, race, and ethnicity according to the latest population parameters reported by the US Census Bureau, while simultaneously being adjusted for known response rates from previous studies conducted by the private research company among these demographics within the online panel.

For the purpose of the larger study, the following definitions were used:

African American: A person having origins in any of the Black racial groups of Africa. It includes people who indicate their race as “Black, African Am., or Negro,” or provide written entries such as African American, Afro American, Kenyan, Nigerian, or Haitian. (Source: US Census Bureau).

African American Travelers: Those who have taken at least one trip in the past 12 months for pleasure, vacation, or personal purposes within the United States that was 50+ miles away from home one-way OR where the traveler spent at least one overnight and has shared or has had sole responsibility for travel planning.

3.2 Operationalization of variables

The dependent variable “likelihood of using social media during a crisis” was measured by asking respondents “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 information.” One of ten variables was social media. This response became the dependent variable. The respondents provided their answers on a five-point scale where 1 = Very Unlikely and 5 = Very Likely.

Three sets of measures served as independent variables. First, age was measured as a continuous variable. Second, risk perception was measured using a 5-point Likert scale asking respondents “Using a scale of 1–5, 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.” Eleven responses measuring risk perception, which were adapted from the work of Sönmez and Graefe (1998b) and Floyd et al. (2004), included: crime (e.g., theft), natural disaster, disease (e.g., SARS, traveler’s diarrhea), food safety, financial (e.g., perceived value of vacation), health, physical accident (e.g., injury), equipment failure (e.g., airplane), weather, cultural barrier (e.g., not understanding the host community), and political coup. These risk types were asked in terms of pleasure travel in the United States. Following previous studies (see Floyd et al. 2004), individual risk items were included in subsequent analysis, rather than creating an index for risk perception.

Finally, level and type of social media use were measured with the following question, “Which of the following social networking sites, if any, do you use on a regular basis? Please indicate if you read this social networking site, post on this social networking site or both read and post on this social networking site.” Responses were coded 0 for READ ONLY and 1 for READ AND POST. The coding of the variables into two groups was based on Nielson’s participation inequality of social networks, which states that 90% of users are lurkers (read/observe), 9% are intermittent contributors (contribute time to time), and 1% are heavy contributors (account for most contributions) (Nielsen 2006). The three social networking sites that were used in the final analysis were Facebook, Twitter, and MySpace. This was because they had the highest response rate of participation in both reading and posting (see Table 2 for descriptive statistics).

3.3 Profile of the survey respondents

The demographic variables collected for each respondent showed that respondents were more likely to be females (59.3%). Age generally followed a normal distribution with the

Table 2 Participation rate profiles of social media among respondents

Social media site	N	Valid percent
Facebook*	471	46.3
Twitter*	130	22.7
MySpace*	129	12.7
LinkedIn	109	10.7
Bebo	16	4.40
Friendster	24	2.40
Second life	18	1.80
OurSpace	14	1.40
Total	1,018	100.0

* Used in the final analysis

largest percentage of respondents (30.0%) being in the age 50–59 category (Table 2) and either married (38.4%) or single (28.0%). Respondents were fairly well educated with more than one-third (35.9%) having some college education, and about one-fourth with a Bachelor's degree (24.5%). The majority of the sample earned between \$25,000 and \$74,999 (56.6%) and was employed full time (43.3%) (Table 3).

We found that the average number of trips per year for the sample was 3.20 where less than one ($M = 0.32$) was for an international destination (Table 4). Typically, people traveled with a group of between one and five other people from their household (95%). When asked the likelihood of a set of risks being encountered when traveling for leisure in the United States, the most frequent response was weather/storms ($M = 2.82$), followed by financial risks ($M = 2.81$) (Table 4). The least common response regarding the likelihood of risks included political coups ($M = 2.22$) or disease ($M = 2.26$) (Table 4).

3.4 Data analysis

In order to test the research questions of the study, hierarchical regression was used. This type of analysis was used because the authors deemed it appropriate based on a literature review. Hierarchical regression allowed for the control of the impact of age on social media use, as well as the control of any effects on the rest of the independent variables. The first step in the hierarchical regression included age as the independent variable, the second step included age and the risk perception types, and the third step included the variables above plus the type and level of use of three social media sites, namely Facebook, Twitter, and MySpace. The variables in the third step were dummy variables. The results were evaluated through the observation of significant path coefficients and significant model changes (ΔR).

Given the large number of independent variables measuring risk perceptions in the regression model, the authors checked for multicollinearity problems. The multicollinearity indicators, Variance Inflation Factor (VIF) and Tolerance, were examined and revealed multicollinearity among some of the independent variables of risk perception. Thus, three variables that contributed the least variance explained in the model and correlated highly with the rest of the variables were removed from the model (i.e., health, natural disasters, and food safety). The hierarchical regression model was re-estimated without these variables, and the new model did not present multicollinearity problems according to the acceptable levels of VIF and tolerance indicators (Hair et al. 1998).

Table 3 Frequency of demographic variables among African American travelers

Variable	Frequency	Valid percent
Age		
Under 19	8	0.8
20–29	129	12.7
30–39	173	17.0
40–49	214	21.1
50–59	305	30.0
60–69	165	16.2
70+	22	2.2
Gender		
Male	414	40.7
Female	604	59.3
Income		
Less than \$10,000	46	4.5
\$10,000–\$14,999	35	3.4
\$15,000–\$24,999	99	9.7
\$25,000–\$34,999	142	13.9
\$35,000–\$49,999	200	19.6
\$50,000–\$74,999	235	23.1
\$75,000–\$99,999	116	11.4
\$100,000–\$149,999	56	5.5
\$150,000–\$199,999	21	2.1
\$200,000 or more	16	1.6
Don't know/rather not say	52	5.1
Employment status		
Employed full time	441	43.3
Employed part time	97	9.5
Full-time homemaker	43	4.2
Full-time student	45	4.4
Self-employed	77	7.6
Retired	183	18.0
Unemployed	105	10.3
Other	27	2.7
Marital status		
Single, never married	285	28.0
Living with significant other	107	10.5
Married	391	38.4
Divorced/separated	181	17.8
Widowed	48	4.7
Don't know/rather not say	6	0.6
Education		
<9th grade	2	0.2
9th–12th grade	20	2.0
High school or GED	138	13.6
Some college, no degree	365	35.9

Table 3 continued

Variable	Frequency	Valid percent
Associates degree	127	12.5
Bachelor's degree	249	24.5
Graduate or professional degree	114	11.2

3.5 Drivers of use of social media during times of crisis by African American tourists

Upon examination of the results for the hierarchical regression, age accounted for 3% of variance in the model ($p < .05$) and had a negative relationship with the likelihood to use social media during a crisis ($\beta = -0.17$, $p < .05$). This means that the younger respondents were more inclined to use social media during a crisis. After controlling for this variable, risk perceptions related to the likelihood of crime, financial, and physical (accidents) crises happening accounted for an additional 21.9% of variance ($\Delta R^2 = 0.219$, $p < .001$) in the likelihood to use social media during a crisis among respondents. Crime ($\beta = 0.25$, $p < .05$), financial risk ($\beta = 0.29$, $p < .01$), and physical (accidents) ($\beta = -0.32$, $p < .01$) were all significant predictors of social media use during a crisis. Results of hierarchical regression analysis are presented in Table 5. Both crime and financial risk had a positive relationship with the likelihood of social media use during a crisis, while physical (accident) had a negative relationship suggesting that for trips where the perception of physical accidents is high, the intent to use social media during a crisis is lower. This second step revealed certain types of risks have a positive or negative influence on likelihood to use social media during a crisis. For the third research question, the results revealed that the level of involvement (reading only or reading and posting) of the users in each of the three social media sites (Facebook, Twitter, and MySpace) did not influence the likelihood of using social media during a crisis. This finding suggests that irrespective of the type of user of social media, the intent to use social media during a crisis for African American tourists remains the same.

3.6 Discussion of the findings

Our first research question asked whether there was an influence of age on the use of social media during a crisis. Our findings suggest that age indeed played a role in using social media during a crisis among African American tourists. Similar to use of social media in general, younger African Americans were more likely to turn to social media if a crisis were to occur while traveling. This is not surprising given that younger people are larger users of social media in general (DeLollis 2010).

Given the significance of age, our second research question controlled for its impact and sought to explore the influence of the perception of risk occurring during a trip and the likelihood of using social media during a crisis among African Americans. The findings here were interesting. Three of the seven remaining risk perception statements (after removing three due to multicollinearity) were significantly related to the likelihood of using social media during a crisis. The perception of crime occurring in the destination had a positive influence on the likelihood to turn to social media for more information. In other words, African American tourists who perceived the risk of crime to be higher during a trip had higher intent to use social media to seek information if a crisis were to occur during the trip. Likewise, if they perceived the risk of a financial crisis occurring in the destination,

Table 4 Frequency of travel variables among African American travelers

Variable	Frequency	Mean	SD
Thinking of all the trips you have taken away from home at least 50 miles one way or you have spent one night, approximately how many did you take last year?	1,014	3.20	4.06
Thinking of all the trips you have taken away from home, how many of these were international in their destination?	1,014	0.32	1.15
Please think about your next or upcoming leisure trip with the US and rate your perception of the likelihood that the following crisis will occur during your trip...			
Crime	1,018	2.70	1.15
Natural disasters	1,018	2.48	1.10
Disease (i.e., SARS)	1,018	2.26	1.11
Food safety	1,018	2.39	1.13
Financial	1,018	2.81	1.14
Health (i.e., travelers diarrhea)	1,018	2.47	1.11
Physical accidents	1,018	2.47	1.04
Equipment failure (i.e., airplane delay)	1,018	2.50	1.10
Weather/storms	1,018	2.82	1.10
Cultural barriers	1,018	2.41	1.11
Political coups	1,018	2.22	1.14

they were more likely to use social media in the event of a crisis. Contrarily, as perceptions of physical accidents occurring to African Americans while on vacation were higher, the likelihood of using social media to receive information about a crisis was lower.

These findings are interesting. Physical risk is a type of risk that is more personal in nature and is more apt to affect the individual. Thus, we suggest that use of social media may be used less during a personal crisis than an impersonal crisis, such as watching a “little old lady’s purse be stolen.” We have two thoughts on this. First, perhaps it is because of the temporal nature of the question, “turn to social media in the event of a crisis.” This phrasing suggests that one may do this while they were “in” crisis mode. However, we hypothesize that if one is “in” crisis mode during a personal crisis, such as injury or sickness, they may be more apt to turn to locals for information first. Second, research on modes of social media use for African Americans suggest that perhaps, African Americans might be more likely to text a message rather than tweet or post on Facebook (Smith 2010) to seek information. Research finds that African Americans are almost 1.5 times more likely to text than Caucasian Americans (Smith 2010).

One limitation of our research was that it did not examine how the type of vacation might influence the relationship between perception of risk and intent to use social media. We speculate that depending on the type of the vacation, one’s perception of risk would vary with the likelihood of turning to social media. In fact, depending on the type of vacation, one may not even be able to access social media. For example, if an individual was hiking in Zion National Park, that individual is likely to perceive the risk of a physical accident to be high; however, the individual would not be likely to have access to social media on this trip, thus making the intent to use social media to seek information to be lower. Hence, future research needs to be conducted on how the type of vacation may ultimately influence both risk perceptions and the likelihood to use social media to seek information during a crisis.

Table 5 Results of hierarchical regression analysis testing the effects of risk perception types, and social media involvement profiles on likelihood to use social media during a crisis

Variable	B	SE	B
Step 1			
Age	-0.019	0.009	-0.174*
Step 2			
Age	-0.02	0.01	-0.18*
Crime	0.27	0.11	0.25*
Disease	0.10	0.15	0.09
Financial	0.34	0.12	0.29**
Physical (accidents)	-0.36	0.16	-0.32**
Equipment failure (e.g., airplane breaking down)	0.25	0.14	0.22
Weather	-0.03	0.13	-0.02
Cultural barriers	0.08	0.15	0.08
Political	-0.08	0.16	-0.07
Step 3			
Age	-0.01	0.00	-0.17*
Crime	0.27	0.11	0.25*
Disease	0.10	0.15	0.093
Financial	0.33	0.12	0.29*
Physical (accidents)	-0.37	0.16	-0.33*
Equipment failure (e.g., airplane breaking down)	0.24	0.14	0.22
Weather	-0.01	0.12	-0.01
Cultural barriers	0.06	0.15	0.06
Political	-0.07	0.15	-0.06
Facebook involvement use	0.12	0.24	0.03
Twitter involvement use	-0.10	0.261	-0.03
Myspace involvement use	0.04	0.26	0.01

* $p < .05$, ** $p < .01$

$R^2 = 0.03$ for step 1, $p < .05$,
 $\Delta R^2 = 0.219$, for
step 2, $p < .001$, $\Delta R^2 = 0.002$,
for step 3, $p > .05$

Additionally, financial crises tend to be more global in effect, and therefore, it is interesting that for trips where the perception of value for one's vacation is poor and therefore the financial loss is high, the intent of African Americans to turn to social media for information is high as well. This is understandable given that social media, particularly Twitter, has become the source for real-time information that the "searcher" finds important (Inderscience Publishers 2011, April 15). Therefore, given that a financial crisis was to occur when one is vacationing, African Americans who think this crisis may impact their trip have expressed a greater intent to use social media to find more information.

Our final research question explored whether use of social media in African Americans' daily life would have an impact on whether they turned to social media in a time of crisis or not. However, our findings suggested this was not the case. In fact, whether African Americans were "intermittent contributors" (meaning they read and posted on social media sites) or were "lurkers" (meaning they merely read) had no impact on whether they would turn to social media for information during a crisis. Our explanation for this is that these users are already utilizing social media on a regular basis to receive information and a crisis event would not impact the likelihood of turning to social media for information.

Tourists are considered to be an at-risk population while traveling (Burby and Wagner 1996; Matyas et al. 2011; World Tourism Organization 1998), and this is further

compounded in the case of minority travelers. Behaviors during crises, particularly related to information search, often depend on the social affiliations of an individual, which may vary depending on race (Elliott and Pais 2006). Thus, this research fills an important gap in the literature, which addresses how the largest minority group in the United States might use social media in the time of a crisis.

This information is critically important for tourism organizations and emergency managers so that they can be better prepared to effectively communicate information about the crisis to different tourist groups. Specifically, organizations need to understand the appropriate channels for communicating with various groups of tourists (e.g., African Americans), as well as the types of information the tourists are likely to seek through social media. The findings of this study contribute to this understanding, and the information can be incorporated into tourism crisis management plans. We found that younger African Americans were more likely to seek information about a crisis while traveling via social media than older groups as well younger African Americans were more likely to seek information using social media when the perceptions of crime and financial crisis were high. Thus, tourism organizations should have a plan to disseminate information about crime and financial crises through social media, in an effort to convey information to African American tourists. As a result of these findings, we suggest that a social media component should be developed and included in tourism crisis management plans. Destination management organizations can use the social media component to communicate key messages effectively with tourists precrisis, during, and post-crisis. The effective communication of messages ultimately has the potential to save lives during a crisis.

This study was delimited to non-users of social, because a person who is not using social media would not turn to social media as a source of information in the time of a crisis. However, it is possible in a travel situation, particularly with international travelers, that social media may be the best way of determining what is happening in the destination by controlling for language and knowledge. For example, if traveling in a country with different levels of access to information, social media could provide access to information. This was found recently in the 2011 riots in Egypt when tourists turned to Twitter and Facebook for information until the government closed down Internet access (TCMI 2010). Based on that rationale, further research is necessary to explore which types of social media outlets African American travelers might engage in during a crisis if they were traveling internationally and if they were not users of social media to begin with.

While this study was one of first empirical studies to examine drivers of social media during a crisis event, it is important to emphasize that the actual behaviors of tourists in an event may differ from what they have said they would do. In addition, our dependent variable suggested that social media would be a tool to “turn to for information” in the event of a crisis. We must be careful not to interpret the findings as a lack of use of social media in general given that we did not ask if these tourists might turn to social media to “share” information. Recent statistics on the use of social media for sharing pictures, comments, and information have exploded (Smith 2010), as there has been a tremendous rise in “citizen journalism” in recent years (Mythen 2010). This study did not ask the respondent to indicate whether they would share information on sites, but rather whether they would turn to social media for information. Thus, future research needs to examine the relationship between these two behaviors particularly among at-risk populations. Finally, it has to be noted that our study was delimited to the impact of specific variables on the likelihood to use social media. Perhaps more variables, such as years of social media use, may be another predictor of turning to social media for information during crisis because it can provide a richer behavioral profile among tourists who are social media users.

One of the limitations of this study was the small sample sizes within the use levels and types of social media sites. Given that we were only able to analyze three social media sites, it is recommended that future studies focus on examining behavioral differences among types and levels of users. It is possible that with the growth in types of social networking outlets and the differences in use by African Americans that the results would vary.

In addition, this study was conducted on African Americans living in the United States and traveling in the United States, as previously mentioned, and it is possible that international travel might elicit different results.

Finally, the results of this study scratched the surface on social media during crises. Given the importance of at-risk populations during crises, it is critical to continue to research their various behaviors. Crisis mitigation is about saving lives, and if certain populations are more vulnerable to risk than others, then emergency management agencies need to continue to find ways to reach these populations. Given that tourists lack the requisite knowledge about the destination, it behooves emergency managers to include them in their “customer set.” More importantly, if different segments of the tourism market exhibit varying responses to receiving information on crises, then it is even more important to continue to research and explore ways to connect with these markets. Social media forms a channel of communication with a diverse array of customers. However, understanding which social media outlets serve which markets best and what messages need to be communicated is still an area of research, which requires extensive inquiry.

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