

Believe it or not? Comparing Experience of Rumor on Traditional and New Media

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Abstract

As rumor and false information have come to occupy more media space and time, this study looks into the impact of people's experience of rumor on five types of media including newspaper, TV, radio, news websites and social media, and how that experience affects the credibility of each media. A survey was conducted towards media users (n=189) in the United Arab Emirates, where it has the highest penetration of digital devices across GCC countries. The findings show that people experience rumors the most from social media and the least from newspapers, while people perceive the credibility of newspaper to be the highest and social media the lowest. The experience of rumor made a significant difference on the credibility of TV and newspaper, with those who claim to have no experience of rumor perceive higher credibility and those who had rumors perceive lower media credibility. However, rumor had no impact on the credibility of social media, news websites, and radio. These findings are discussed along with the limitations of the study and suggestions for future research.

Keywords: rumor, media credibility, social media, UAE

Today, with the easy access and availability of all types of media, people can get information more easily and faster than ever before. However, among the fast updating information from all sources, rumors about celebrity deaths, political leaders, contagious diseases and nature disasters are very common on the media, especially on the Internet and social media such as Facebook and Twitter (Clark, 2012; Ma, 2008; Mendoza, Poblete, & Castillo, 2010). Many recent cases of rumor outbreak have brought the social instability. For example, after the 9-magnitude earthquake and tsunami caused Fukushima nuclear leakage disaster in March 2011, rumors about taking iodine could help ward off nuclear radiation led to the public panic buying and storing of iodized salt in China (Zhao et al., 2012). In the 2013 Boston Marathon bombing, rumors about the death of an 8 year old girl, claiming U.S. government involvement in the bombings, as well as misidentification of a missing 22-year-old university student as a bomber, went viral on Twitter right after the crisis event (Starbird, Maddock, Orand, Achterman, & Mason, 2014). A recent case in Dubai, United Arab Emirates is the circulation of a false message on WhatsApp, cautioning residents about gangs allegedly operating in several Dubai communities. It was later dismissed by Dubai police through tweet stating that the message is a rumor and denied the presence of gangs in some of the emirate's most popular residential areas (Khamis, 2015). When rumor takes the ride of media, especially social media, it can affect people more rapidly and intimately (Kostka, Oswald, & Wattenhofer, 2008; Ma, 2008).

As rumor and false information have come to occupy more media space and time, scholars believe that rumor erodes media credibility (Greer & Gosen, 2002; Gregerson, 2012; Mendoza, Poblete, & Castillo, 2010). Credibility is always a key concern when people consume news information from the media. Lack of credibility becomes the most important problem facing news media today. The media environment has dramatically changed in the recent years. People are immersed in all types of media both traditional and new. What is people's experience of rumor on different types of media? How does that experience affect their perception of the credibility of each media? No previous research has systematically studied the impact of rumor on media credibility and how it varies across different types of media. Therefore, this study aims to address these questions.

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Rumor

Rumor is not something new. It is actually an ancient phenomenon. There is a goddess named Pheme in Greek mythology. The word Pheme (Φήμη), literally means to speak, fame, report, and rumor. In other words, Pheme is the goddess of fame and rumor, which can also be found in Roman mythology, in which the Romans call it Fama (rumor). In Virgil's *Aeneid*, Fama ("rumor") was described as having multiple tongues, eyes, ears, and feathers, living in a home with 1000 windows so she could hear all being said in the world and having her feet on the ground, and her head in the clouds, making the small seem great and the great seem greater (Virgil, 1990).

Scientific studies of rumors started in the twentieth century. Behavioral psychologists studied rumor from a cognitive point of view focusing on transmission process and the nature of recall of rumor. Knapp (1944) attempted to systematize the field of rumor—its causes and consequences—with an eye to the problem of rumor control. He believed that people have an impulse to interpret the world meaningfully, ease anxiety especially under the conditions of instability, fear, and uncertainty.

Sociologists analyzed rumor within a societal structure and stress collective actions. Shibutani (1966) studied 60 occurrences of rumors in about 120 years and found that rumor substitute for news under circumstances in which access to official channels of communication is restricted. Anthropologists and folklorists are interested in what is revealed about societies and harmonize rumors with the traditions of cultures in which rumors circulate. Scholars compared rumors with legends and believed that the motives that sustain legends are the same as in spreading rumors. The two both have certain elements of recall, forgetting, imagination, and rationalization (Allport & Postman, 1947). Nkpa (1975) related rumors to the folklore found in cultural groups of people who warn each other about apocryphal tales. Historians focused on the effects of rumor in war and economic crises (Caputo, 2014). Because of the conditions of instability, rumors have thrived during those periods of social upheaval. For example, in 1938 Orson Welles's radio broadcast, *War of the Worlds*, terrified over six million listeners (Lowery & DeFleur, 1988), indicating the strong impact of rumor transmitted through electronic media, where the magic bullet theory was grounded.

In the area of communication, rumors are a form of persuasive messages (Berenson, 1952). A rumor involves the communication of information that has not been confirmed by a reliable source. As such, rumor is closely related to source credibility. Source credibility as a concept in communication can be dated back to the middle of the fourth century BC, Athens. In Aristotle's work, *The Rhetoric*, he mentioned the available means of persuasion are based on three kinds of proofs ---Logos, logical proof; Pathos, emotional proof, and ethos, ethical proof. The ethos, which is the characteristic of the communicator, his authority, and credibility, indicates that persuasion occurs when the communicator is credible. In Hovland (1951)'s study on communication effect, he found out that communication effectiveness depends on the credibility of the communicator, e.g. "trustworthiness" and "expertise". So credibility is a key element in communication effectiveness and persuasion. Rumor, as an unconfirmed message, lacks credibility, may eventually affect the credibility of the media source it carries.

Media Credibility

In the 1960s, there was a boom of study on media credibility, due to the decline of newspaper readership and the emergence of TV (Jacobson, 1969; Gaziano, & McGrath, 1986; Meyer, 1988). Many studies have provided ways to measure media credibility. Early measurement came from Roper Organization (1979), whose operational definition of credibility is to ask the respondents the question: "If you got conflicting or different reports of the same news story from TV, Newspaper, Radio, and magazine, which one would you be most likely to believe?" The limitation of Roper's measurement is: First, it cannot tell the exact level of media credibility of each kind of media; Second, it is based on the condition of facing "conflicting or different reports of the same news", however conflicting and different reports on the same news on different kinds of media doesn't happen all the time. Then the question cannot be applied to the similar report of the same news on different media; Third, the question doesn't differentiate the different territory of the news media, for example national TV or local TV, national newspaper or local newspaper. Lastly, the different genre of the TV program and newspaper will also affect the media credibility, but it was not indicated in this question.

Later on, many researchers try to improve the measurement of the credibility by defining it as a multi-dimensional concept. Hovland (1951) first identified two main dimensions of source credibility: "trustworthiness" and "expertise". This leads to many scholars' interest in identifying underlying dimensions of credibility through factor analysis. For example, factors like "safety", "qualification", "dynamism", "knowledge ability", "accuracy", "fairness", and "completeness" turn out to be significant (Jacobson, 1969).

Also, the difference between media and people as communication source is mentioned by some researchers (Kang, 2010). In Gzaiano and McGrath's (1986) factor analysis of TV and newspaper credibility, it produces 12 factors, i.e., 1) Is fair or unfair? 2) Is biased or unbiased? 3) Tells the whole story or doesn't tell the whole story. 4) Is accurate or inaccurate? 5) Invades or respects people's privacy 6) Does or does not watch after readers'/viewers' interests; 7) Is or is not concerned about the community's well-being; 8) Does or does not separate fact and opinion; 9) Can or cannot be trusted; 10) Is concerned about the public interest or making profits; 11) Is factual or opinionated; 12) Has well-trained or poorly trained reporters.

With the emerging of new media, such as the Internet and social media, the measurement of credibility has been revised and modified according to the different media platforms. For example, Johnson and Kaye (1998, 2010) used the same four items (believability, accuracy, fairness, and depth of information) to measure media credibility when comparing the Internet and traditional sources in two of their studies. Kang (2010) measures blog message/content credibility using 9-item measure: authentic, insightful, informative, consistent, fair, focused, accurate, timely, and popular. However, limited research has been done on the media credibility of social media, especially compared with that of traditional media.

The rise of the mass media has expedited the spread of rumors from word of mouth to mass media. As Rosnow (1988) pointed out "The efficiency of the news media, including both the print and electronic media, also contributes greatly to the perpetuation of hearsay by producing an expansive rumor mill" (p579). Today, the wide use of digital media has accelerated the spread of rumors. Neither old nor new media are immune to imparting information that is not true.

As rumor is a common occurrence on media, the experience of rumor on different types of media will affect people's perception of the credibility of each type of media. Therefore, this study aims to explore the following questions:

Research Question 1: What is the experience of rumor on different types of media?

Research Question 2: What is the credibility of news on different types of media?

Research Question 3: How will the experience of rumor affect the media credibility of different types of media?

According to the literature review above, we also want to test the hypothesis for each type of media including traditional and new ones:

Hypothesis: Those who have rumor experience in the media (i.e. newspapers, TV, radio, news websites, and social media) will perceive lower credibility of that type of media.

Methods

The study was conducted in the UAE. Given the favorable demographics of a large young population and high per capita income in the UAE, digital devices growth in recent years has been one of the highest in the world. The UAE has the highest penetration of digital devices across GCC countries with 78% of people having a laptop, 66% owning a Smartphone, 47% having a PC-desktop, 21% having a tablet, and 11% having a smart TV (Dubai Press Club, 2012).

Survey

The survey method was used in this study. The population for the survey is people living in the UAE. Given the difficulty of the accessibility of obtaining a probability sample of the UAE population, the convenient/snowball sampling method was used. The questionnaires were distributed online through emails and social media in November 2014.

The reason for using online questionnaire is to target people who are users of new media, e.g. news websites and social media. Due to the international population of the UAE, the survey was available in two languages, Arabic and English, the two commonly used languages in the country.

Measures

Experience of Rumor

Participants were asked whether they had ever come across rumors of news from each type of media, i.e. social media, news websites, TV, newspapers, and radio.

Media credibility

Eight items constitute this scale. Participants were asked to rate on a 5-point Likert-type scale ranging from 1=strongly disagree to 5=strongly agree on the following eight items for each type of media, including social media, news websites, TV, newspapers, and radio: (1) "Is (media type) believable?" (2) "Is (media type) accurate?" (3) "Is (media type) unbiased?" (4) "Is (media type) in-depth?" (5) "Is (media type) consistent?" (6) "Is (media type) timely?" (7) "Is (media type) professional?" (8) "Is (media type) popular?". Cronbach alpha of social media credibility is .85; News websites credibility is .90; TV credibility is .92; Newspaper credibility is .92; and Radio credibility is .88.

Demographics

Respondents' demographic information was also asked including age, gender, income, education level, nationality, and residence. Income is measured by the following options: no income, less than AED 3,000, AED 5,000 - 10,000, AED 10,000 - 15,000, AED 15,000 - 20,000, AED 20,000 - 25,000, AED 25,000 - 30,000, more than AED 30,000. Education level was asked by five categories: less than high school, high school, college/university, master, and Ph.D. Nationality is an open question. Residence measures the emirate the participants live, which includes the seven emirates in the UAE: Abu Dhabi, Dubai, Sharjah, Ajman, Umm Al Quwain, Fujairah, and Ras Al Khaimah.

Results

Subjects

The respondents in this study were 189 (42% male and 58% female) UAE residents whose age ranged from 15 to 55 with an average age of 23. Their nationality indicated that they come from 28 different countries (Figure 1) and 82% of them has college and above education. 42% of the respondents reported having no income as they are probably students. 70% of them live in the Emirate of Abu Dhabi, which is the biggest emirate in the UAE. Table 1 shows the demographic information of the respondents. All of the respondents reported to use social media, among which, WhatsApp is mostly used (89%), followed by YouTube (80%), Instagram (80%), Facebook (56%), Twitter (56%), Blackberry Messenger (56%), Snapchat (46%), LinkedIn (12%) and WeChat (8%).

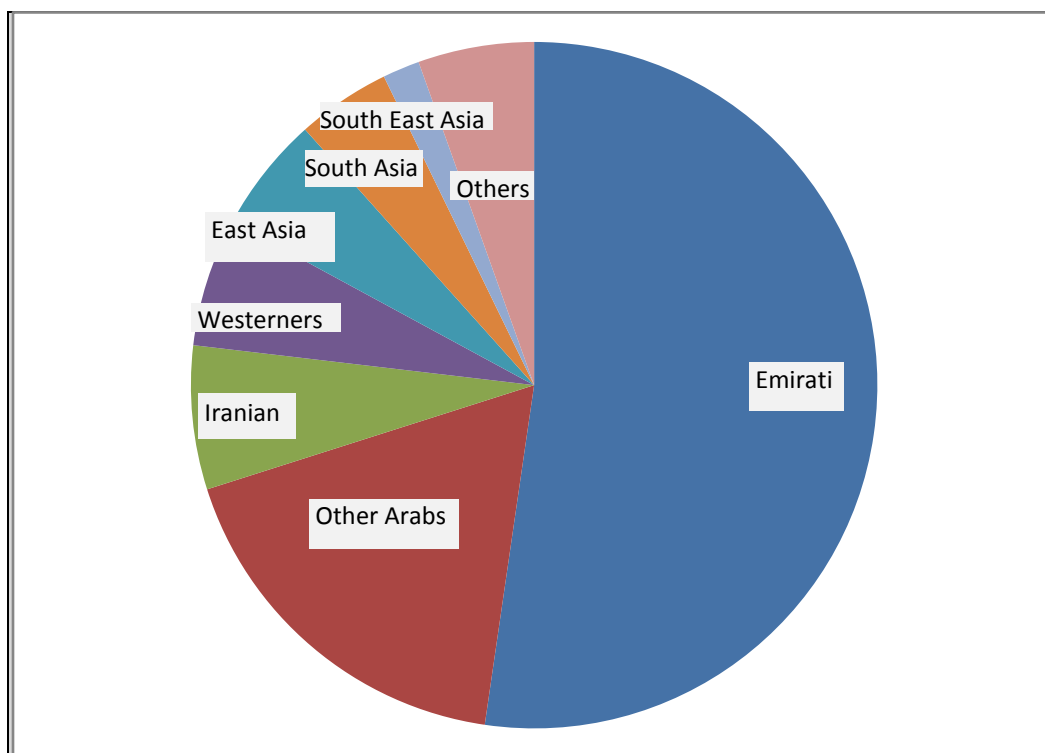


Figure 1 Nationality of respondents

Table 1 Respondents' Profile

Demographics	%
Gender	
Male	42
Female	58
Age (Mean)	
	23
Income	
No income	42
Less than AED 3,000	24
AED 3,000 - 5,000	8
AED 5,000 - 10,000	8
AED 10,000 - 15,000	2
AED 15,000 - 20,000	3
AED 20,000 - 25,000	4
AED 25,000 - 30,000	2
More than AED 30,000.	4
Education	
Less than high school	1
High school	17
College/university	73
Master	5
PhD	4
Residence	
Abu Dhabi	70
Dubai	9
Sharjah	9
Ajman	2
Umm Al Quwain	1
Fujairah	7
Ras Al Khaimah	4

Experience of Rumor

Figure 2 shows that people experience rumors the most on social media, followed by TV, news websites, radio, and newspaper. About 89% of people reported experiencing rumors on social media, 63% on TV, 58% on news websites, 41% on radio, and 38% on newspaper. These descriptive results provide answers for Research Question 1 which is about the experience of rumor on different types of media.

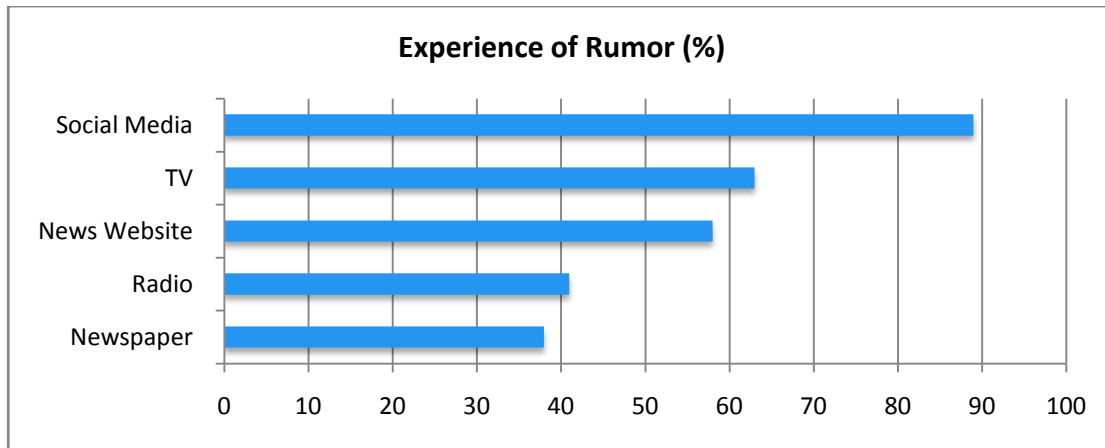


Figure 2. Experience of rumor on traditional and new media platforms.

Media Credibility

For Research Question 2 which is asking about the credibility of news on different media, Table 2 shows that newspaper has the highest credibility with $M=3.55$, followed by news websites ($M=3.43$), TV ($M=3.41$), and Radio ($M=3.21$). Social media ($M=3.02$) has the lowest credibility. On a 5-point Likert-type scale ranging from 1=strongly disagree to 5=strongly agree for media credibility, all means are higher than 3 except social media, which is at the neutral level. This shows that people have positive perception of the credibility of all four media types: Newspaper, News Websites, TV, and Radio.

Table 2 Means and standard deviation for media credibility of social media, news websites, TV, newspaper, and radio.

<i>Variables</i>	<i>Mean</i>	<i>SD</i>	<i>N</i>
Social Media Credibility	3.02	.69	178
News Websites Credibility	3.43	.73	175
TV Credibility	3.41	.83	176
Newspaper Credibility	3.55	.80	173
Radio Credibility	3.21	.68	176

Responses were coded by 5-point Likert-type scale: 1=strongly disagree to 5=strongly agree

Rumor and Media Credibility

Regarding the influence of rumor on media credibility, T-test was performed to test the hypothesis about the impact of rumor experience on the perception of media credibility. Significant differences were found in perceiving the credibility of two traditional media, TV and newspaper. For TV, the means for people who didn't encounter rumor and who had rumor were $M=3.56$ ($SD=0.78$), $M=3.28$ ($SD=0.83$) respectively, $t(df) = -2.16$, $p < .05$, with those who had no rumor perceive higher credibility than those who did. For newspaper, the means for people who didn't have rumor and who did were $M=3.69$ ($SD=0.72$), $M=3.27$ ($SD=0.85$) respectively, $t(df) = -3.47$, $p < .01$, with those who had no rumor perceive higher credibility than those who did. Research Question 3 was answered in that the experience of rumor made significant difference on the credibility of TV and newspaper, with those who claim to have no experience of rumor has higher credibility and those who had rumors have lower media credibility. However, experiences of rumor made no difference on the credibility of social media, news websites, and radio (Table 3). So the hypothesis on the negative impact of rumor on media credibility is partially supported.

Regression analysis was also conducted to check the influence of demographic variables (i.e. age, income, and education) on media credibility. No significant findings were found.

Table 3T-test on Impact of Rumor on Media credibility

Variables	Rumor		t value	df	Significance
	Yes	No			
Credibility of Social Media	3.03 (.68)	2.98 (.75)	.28	170	ns
Credibility of News Websites	3.38 (.82)	3.47 (.59)	-.88	165.31	ns
Credibility of TV	3.28 (.83)	3.56 (.78)	-2.16	168	P<.05
Credibility of Newspaper	3.27 (.85)	3.69 (.72)	-3.47	162	P<.01
Credibility of Radio	3.13 (.70)	3.25 (.65)	-1.16	167	ns

Responses were coded by 5-point Likert-type scale: 1=strongly disagree to 5=strongly agree

Conclusion & Discussion

Amid the huge number of media credibility studies, few have investigated the impact of rumor on media credibility, especially comparing its effect on different types of media. This study looks into people's experience of rumor on five types of media including newspaper, TV, radio, news websites, and social media, and how that experiences affect the credibility of each media. Our findings show that people experience most rumors on social media, followed by news websites, TV, radio, and newspapers. No previous study has ever compared rumor experiences on different kind of media except one study claimed there were more rumors on the online websites than traditional media during 9/11 crisis (Lasorsa, 2003). This study has provided proof that people do report to experience more rumors on social media than on traditional ones. This is not surprising as the content on traditional news media goes through a well-developed gate keeping process which can stop rumors to be finally disseminated. While on social media and some online news websites, the lack of scrutiny mechanism and the underlying network structure leads to the easy and fast spread of rumors and their massive reach of people (Kostka, Oswald, & Wattenhofer, 2008; Ma, 2008; Mendoza, Poblete, & Castillo, 2010).

The study also found that newspaper has the highest credibility, followed by news websites, TV, radio, and social media. A couple of things are worth discussing in this finding. First, newspapers have the highest credibility among all, a result that is similar from previous studies on comparing the credibility of different media. Newspapers, in most studies, turn out to be the most credible, especially when they are considered as the media platform in general (Flanagin & Metzger, 2000; Kioussis, 2001). However, some studies show TV has higher credibility than newspapers, especially when referring to the coverage of specific issues like political campaign and election (Luo, Lin, Niu, & Cai, 2003). It is believed that when specific issues are mentioned, people believe what they see rather than what they read (ASNE, 1985; Gantz, 1981; Times Mirror, 1986). In the new media era, while new media such as the Internet and social media can play a better role than TV in a sense of what is called "seeing is believing", it is very positive to know from this study that newspapers still win out when perceiving media credibility generally.

Second, news websites, which are a rather new type of media, have higher credibility than broadcast media such as TV and Radio. Although it is quite disappointing for those broadcast media practitioners, the pattern is quite consistent over a couple of studies. People trust the Internet as a news source as much as or even more than other traditional media, with the exception of newspapers (Flanagin & Metzger, 2000; Kioussis, 2001; John & Kay, 2010). It seems that news website has gained more credibility over the years, as the technology and devices become more accessible and more people are using it as the main source of news. While Luo et al (2003) explained that the lower credibility of online news than TV in their study was mainly caused by the lower Internet coverage and its less popularity among people (20%) fifteen years ago, it is no longer a problem today. The current study was conducted in the UAE, where the penetration rate of digital devices and the Internet coverage is one of the highest in the world (Dubai Press Club, 2012), most people can easily get news from the Internet and social media as from traditional ones. Since the survey was distributed online, the sample is a little biased in favor of people who have the skills and technique related to using the Internet. The younger average age (23) and well-educated background of the respondents also leads to the preferable use of online news over traditional ones, which possibly contributed to the higher perceived credibility.

Besides, the higher credibility of news websites may also be due to their superior features than traditional media in that they are easier to access (accessibility), contain more multimedia and interactive content (content richness) and update faster (timeliness). The results lend support to previous studies that credibility should not only be studied and measured as a multidimensional concept but also be modified and adapted to the emergence of the new media and the change of the media ecosystem.

Third, the findings show that social media has the lowest credibility among all media types. It is the first time when social media credibility is compared with other media and the finding is quite comprehensible. Unlike other media types, social media is more personal with its interface varying from one person to the other. The sources on the social media are a combination of all kinds of origins, varying from official news accounts of well-established media institutions to celebrities, friends, public figures, political leaders, etc. The information on social media is not strictly scrutinized, therefore not as verifiable and credible as its traditional counterparts.

From this study, we can also conclude that overall, people are skeptical about media credibility of the five media. All the ratings are slightly more than neutral and no one reached the level above neutral. Most of the previous studies showed the similar pattern, in which people never believed media to be very credible. They are all around neutral, with some media on the positive side and some on the negative (Johnson & Kay, 1985; Kioussis, 2001). Johnson and Kay's study (2010) showed a decline of credibility score in a longitudinal study across three presidential campaigns. Studies on social media credibility find out that people actually have the ability to identify rumor and false information on social media such as Twitter (Mendoza, Poblete, & Castillo, 2010). Scholars believed that people become more savvy media users when they are exposed more to the media (Johnson & Kay, 1985; Mendoza, Poblete, & Castillo, 2010). It will be very interesting to see how people's perception of media credibility evolves over the years with more media platforms at hand and more affluent information available. Longitudinally, studies are suggested to check the variation of media credibility over time and the reasons behind them.

The study hypothesized that rumor will reduce credibility; however, our findings don't simply support that rumors reduce credibility in each type of media. It only finds that the experience of rumor significantly affects the credibility of traditional and highly credible mainstream media, i.e. TV and newspapers but not on new media, i.e. social media and news websites, nor on less popular media such as radio, which has rather lower credibility. It indicates that the credibility of traditional media is more vulnerable than that of new media and less popular media. Since rumors rarely appear on traditional media, once it happens, it will significantly damage their credibility. It turns out that people are more immune to rumors on the new media as they are quite common. In other words, people have different expectations for different types of media in terms of news consumption. A rumor on social media may be tolerated while a rumor in the newspaper may not be accepted. The results confirmed some scholars' claim that credibility is context specific and fragile (Budd, 2000; Alwang, Siegel, & Jørgensen, 2001). Future media credibility studies should also consider the different roles each media play in terms of news consumption.

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