# What Motivates Information Seeking and Sharing During a Public Health Crisis? A Combined Perspective From the Uses and Gratifications Theory and the Social-Mediated Crisis Communication Model

Yuan Wang<sup>1</sup> o and Junhan Chen<sup>1</sup>

1. Department of Communication, University of Maryland, College Park, MD, USA

#### **ABSTRACT**

Combining the uses and gratifications theory (U&G) and the social-mediated crisis communication model (SMCC), this study examined why and how Chinese publics sought and shared information during a public health crisis in China—the Quanjian crisis. Through a survey of 309 Chinese adults, we found that Chinese publics sought and shared crisis information to gratify socializing, guidance, medium appeal, mood management, and habitual diversion gratifications. In addition, publics sought medium appeal gratification through information seeking and sought competence and reciprocity gratifications through information sharing. Moreover, the study examined the relationships between gratifications-sought and forms (i.e., traditional media, social media, offline word-of-mouth communication) and sources (i.e., government, news agency, health professionals, Quanjian company, other public members) of information that Chinese publics sought and shared during the Quanjian crisis.

**KEYWORDS:** crisis communication, public health crisis, information seeking, information sharing, social media, gratifications

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**CONTACT** Yuan Wang (M. Phil) **.** E-mail: yuanwang@umd.edu **.** University of Maryland **.** 2130 Skinner Building, 4300 Chapel Ln **.** College Park, MD, 20742, USA



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## Introduction

On December 25, 2018, Doctor Clove, the largest online health information sharing platform in China, posted an article that reported that an illegal healthcare product produced by the company Quanjian had caused the death of a 4-year-old girl. Quanjian, one of the biggest health product firms in China, was charged with exaggerating the potency of its health products and operating organized pyramid selling, whose illegal practices have caused bankruptcy, injuries, and even deaths for some of its consumers (Zeng & Liu, 2018).

Although the case is alarming, it is not a small probability event. With health products getting more and more popular in China, the risks underlying the growth of this industry are also getting more prominent. The health products industry revenue reached 293.89 billion Yuan (about 43.791 billion U.S. dollars) in 2017 and was expected to keep growing in the future (AskCI Research, 2018). According to the State Administration for Market Regulation of China (2019), 6,535 cases of illegal health product industry practices were identified as of March 10, 2019, in the national crackdown right after the Quanjian crisis. Publics' increasing healthcare consumption and misperceptions about health products make the situation worse. Chinese residents' expenditure on medical services and healthcare has kept increasing since 2013, both in rural and urban areas (National Bureau of Statistics of China, 2019). However, more than one-third of patients in China cannot distinguish medication and health supplements, and 27.91% used health supplements to treat diseases (Y. Y. Wang et al., 2017). Given the prevalent misperceptions held by Chinese consumers and the severe consequences of illegal health product practices, it is important for communication practitioners and health professionals to strategically communicate guidance information during and after a public health crisis.

A deep understanding of publics' information seeking and sharing behavior during a crisis serves as the foundation for developing effective crisis communication strategies (Kim, 2016). However, limited studies have explored why and how publics seek and share information during a public health crisis, especially in a non-Western context (J. Chen & Wang, 2021a; Cheng, 2019).

To fill this gap, the current study combines the uses and gratifications (U&G) theory (Katz et al., 1973) and the social-mediated crisis communication (SMCC) model (Liu et al., 2011) to understand what motivates Chinese publics to communicate during the Quanjian crisis and whether these motivations interplay with information forms and information sources.

## **Literature Review**

Public health crises—including health product scandals—have gained increasing attention. Communication researchers have been studying health product scandals starting from the Johnson & Johnson's Tylenol crisis in 1982 (Snyder, 1983), to the recent drug recalls of Novartis's medication in 2012 (Ledford & Anderson, 2013) and Pfizer's Celebrex Case (Stone et al., 2015). In China, there is a heightened need for research in this area considering several health product scandals happened in the last 20 years. Communication researchers have paid attention to the melamine milk contamination in 2008 (Gong & Jackson, 2012), the vaccine scandals in 2016, 2018, and 2019 (J. Z. Yang & Liu, 2021), and the Quanjian scandal in 2018 (J. Chen & Wang, 2021b). These public health crises could exert negative impacts on the health, social, and economic well-beings of affected publics and their communities (Lee & Jin, 2019).

To alleviate the negative impacts brought by public health crises, researchers have been investigating factors that affect effective crisis communication from the perspective of different actors in crisis communication, including organizations and publics (e.g., S. Yang & Shi, 2017). The role of publics, however, received much less research attention than organizations (Fraustino & Liu, 2017). An increasing number of studies have emphasized the importance of taking a public-centric perspective in crisis communication research (e.g., J. Chen & Wang, 2021b). A public-centric approach "genuinely incorporates message receivers' thoughts, feelings, and behaviors into organizational decision making and communication" (Fraustino & Liu, 2017, p. 132). Research with a public-centric perspective can enhance our knowledge in publics' communication behaviors (e.g., Zhao et al., 2018) and motivation to comply with directives during crises (e.g., Avery & Park, 2016).

Such knowledge will provide insights in promoting effective crisis communication practices that are tailored to publics' needs (Zhao et al., 2018).

Although a growing body of literature has taken a publiccentric approach to understand what factors are related to publics' information seeking and sharing behaviors during crises, most of these studies focus on publics' perceptions (e.g., perceived risk; Zhou, 2021) or individual characteristics (e.g., health literacy and knowledge; J. Chen & Wang, 2021). Limited studies have examined the motivations that drive individuals' information seeking and sharing during public health crises, especially in China (Cheng, 2019). Understanding the motivations helps build a more comprehensive theoretical model for publics' crisis communication behaviors and provides insights for tailoring crisis communication to publics' motivations. Therefore, we need more studies to investigate the motivations underlying publics' various crisis communication behaviors. Our current study aims to fill this gap by integrating the uses and gratifications (U&G) theory with the social-mediated crisis communication (SMCC) model.

# The Uses and Gratifications (U&G) Theory

The uses and gratifications (U&G) theory has long been considered as one of the most effective approaches to understand why audiences engage in media consumption. Viewing audiences as goal-oriented, active media consumers, the U&G theory proposed that audiences consume certain kinds of media and certain types of content to satisfy their social and psychological needs (Rubin & Perse, 1987). Scholars differentiated gratifications-sought from gratifications-obtained, with gratifications-sought referring to publics' "expectations about content or media related satisfactions to be derived from consumption" and gratifications-obtained referring to satisfactions that publics obtained from media or content consumption (Palmgreen et al., 1980, p. 164). According to the U&G theory, the gratifications that publics *sought* motivate the use of a particular medium (Leung, 2013).

Information seeking and information sharing have become two common ways that publics consume media platforms (Chung & Koo, 2015). Previous studies have identified several social

psychological gratifications that motivated publics' information seeking and sharing behavior, including needs for reliable information (e.g., Kavanaugh et al., 2016), socializing (e.g., Y. Chen et al., 2018), and entertainment (e.g., Y. Wang, 2020). More recently, the U&G scholarship suggested that gratifications were not only borne out of publics' innate needs but also shaped by the affordances of media technology (Sundar & Limperos, 2013; Y. Wang, 2021a). This approach argued that U&G research should examine both social psychological gratifications that are user-oriented and affordance-related gratifications that are platform-oriented (Rathnayake & Winter, 2018). For example, Connaway et al. (2011) suggested that convenience and perceived ease of use of information platforms motivated publics' everyday information-seeking. Khan (2017) found that the anonymity affordance of YouTube motivated publics to share YouTube videos on social media.

Although a growing number of studies have examined what gratifications motivate publics to consume information, limited studies have examined these gratifications-sought in a crisis context. People often show different needs and patterns for information consumption in crisis situations than in an everyday routine context (Gutteling & De Vries, 2017). During crisis, uncertainty increases and publics have a stronger need for credible information (Chang & Huang, 2020); they may rely more on information from authorities (Gutteling & De Vries, 2017) and online channels (Kavanaugh et al., 2016). Moreover, gratifications such as mood management, socializing, and habitual use may play an important role in driving publics to seek and share information during crises. For example, R. Chen and Sakamoto (2014) found that people would share disaster-relevant information when they experienced negative feelings from crisis information. Another study (Y. Chen et al., 2018) suggested that people shared crisis information on social media to obtain information from others' comments, socialize with other users, or complete their social media usage routines. To understand the gratifications that publics sought from information seeking and sharing in a crisis context, we asked:

RQ1: What gratifications motivate Chinese publics to seek and share information during the Quanjian crisis?

# The Social-Mediated Crisis Communication (SMCC) Model

The social-mediated crisis communication (SMCC) model (Liu et al., 2011) proposed that organizations are expected to fulfill publics' needs for information during crises via various information forms (e.g., social media, traditional media, and offline word-of-mouth communication) and information sources (e.g., organizations, third parties). To that end, it is important to understand publics' motivations behind using different forms and sources of information (Lai & Tang, 2021).

The SMCC model identified crisis information seeking and crisis information sharing as two core behavioral outcomes of exposure to crisis information (Lee & Jin, 2019). Information seeking is defined as "planned scanning of the environment for messages about a specified topic" (Clarke & Kline, 1974, p. 233). Information sharing refers to "the collaboration between two groups of actors in order to exchange information with the purpose to achieve their individual or common interests" (Bao & Bouthillier, 2013, p. 4). According to the SMCC model (Austin et al., 2012), information source is defined as "where the crisis information originates from: either the organization experiencing the crisis or a third party such as an influential social media creator or journalist" (p. 193) and information form is defined as "whether the crisis information is transmitted via traditional media, social media, and/or offline word-of-mouth communication" (p. 193). In other words, information source refers to whom the information is sent, and information form denotes how the message is conveyed (Jin et al., 2014).

Previous studies of the SMCC model have examined how publics seek and share information in different forms and from different sources during a crisis. For example, Liu et al. (2016) found that publics were most likely to seek disaster information from television when the crisis information was from the national government, and they were most likely to share disaster information via interpersonal communication during a disaster crisis. More recently, Adi (2020) found that publics who are geographically close to the crisis relied more on social media than traditional media for information. Moreover, Lai and Tang (2021) found

that Americans and Chinese were different in their repertoire for disaster information; Americans used official media (e.g., emails, brochures), popular media (e.g., TV, internet), and social media whereas Chinese relied on traditional media, official media, interpersonal media, and popular media. Overall, publics' preference of information forms and sources may vary across crisis situations and cultural contexts (Cheng, 2019). Therefore, there is a need to examine what information forms and sources publics seek and share when studying their communication behaviors in a new crisis or cultural context.

Sources and forms of crisis information can affect whether publics accept messages and, therefore, are important for crisis management (Jin et al., 2014; Y. Wang, 2021b). For example, Liu et al. (2011) found that publics were more likely to accept an organization's defensive, supportive, and evasive crisis responses via traditional media than via social media or offline word-of-mouth communication. Moreover, learning about a crisis through an organization's offline WOM communication may drive publics to communicate negatively about the crises whereas learning about a crisis through social media triggered positive information sharing on blogosphere regardless of information source (Liu et al., 2013). Another study (Freberg, 2012) found that messages from organizations were more persuasive than user-generated messages in persuading audiences to take protective behaviors during a food-recall crisis. Given the impact of information forms and sources on publics' behavior responses, it is important to understand what forms and sources of information that publics seek and share during crises. Therefore, we asked the following research question:

**RQ2:** What forms and sources of information do Chinese publics seek and share during the Quanjian crisis?

Linking motivations (e.g., gratifications-sought) with the information seeking/sharing of different sources and forms has theoretical values for both U&G theory and the SMCC model. Although the SMCC model provides a comprehensive overview of how information is communicated during crises, it does not explain

why publics engage in communication behaviors. Previous SMCC literature mainly focused on how environmental factors shape publics' communication behaviors yet ignored the underlying motivations (Gutteling & De Vries, 2017). Crisis communication from a U&G perspective could provide insights about publics' needs and motives to engage in various communication behaviors online and offline (Zhao et al., 2019). Moreover, a more nuanced understanding of how motivations are associated with seeking and sharing information of different forms and sources would help advance the U&G theory to be applied in the increasingly diverse media landscape. The current study contributes to the literature by combining the U&G theory and the SMCC model: we aim to explore how publics' gratifications-sought drive them to seek and share different forms and sources of information. Therefore, we asked:

RQ3.1: How do gratifications-sought predict the information forms (RQ3.1a) and the information sources (RQ3.1b) that Chinese publics seek during the Quanjian crisis?

RQ3.2: How do gratifications-sought predict the information forms (RQ3.2a) and the information sources (RQ3.2b) that Chinese publics share during the Quanjian crisis?

#### Method

## **Procedure**

Two steps including a pilot test and a final online survey were conducted under Institutional Review Board (IRB) approval. The first step involved a convenience sample of 20 Chinese bilingual participants. Participants were given a gratification measure (in Chinese) developed by the researchers. They were then asked if they sought the listed gratifications when seeking and sharing information about the Quanjian crisis, if there were other gratifications that were not included in the list, and whether the items (in Chinese) are easy to understand and fluent in flow. Based on participants' responses in the pilot test, the researchers modified the gratification measure. In the second step, an additional group of Chinese participants were recruited from the participant pool of

51 diaocha, a commercial online survey company in China. In this step, participants were asked to fill out a new questionnaire consisting of (1) the revised gratification measurement, (2) questions about information seeking and sharing behaviors during and after the Quanjian crisis, and (3) questions asking about demographics. Participants received 5 Chinese Yuan (about 0.74 U.S. dollars) for their participation.

# **Participants**

The final sample consisted of 309 completed responses. Age was measured using age brackets. Except for one missing value, 192 (62.1%) participants were in the 18–25 age group, 99 (32.0%) in the 26–35 age group, 10 (3.2%) in the 36–45 age group, and 7 (2.3%) in the 46–55 age group. There were 186 (60.2%) males and 123 (39.8%) females in the sample. In terms of education level, 6 (1.9%) participants graduated from middle school, 27 (8.7%) earned a high school degree or equivalent, 257 (83.2%) earned a bachelor's degree or equivalent, and 19 (6.1%) earned a master's degree or higher. Regarding occupation, 32 (10.4%) participants worked in a health-related sector and 118 (38.2%) participants had family members or close friends who worked in a health-related sector.

#### Measurements

# **Gratifications-Sought for Information Seeking and Sharing**

In the first step, 29 items measuring information seeking gratifications and 38 items measuring information sharing gratifications on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree) were developed from previous studies (i.e., Leung, 2001; Wolny & Mueller, 2013). After obtaining feedback from participants in the pilot test, the researchers revised the measurement. The final survey included 22 items measuring gratification-sought from information-seeking behaviors (see Appendix A) and 31 items measuring gratification-sought from information sharing behaviors (see Appendix B).

#### Information Form

Participants were asked to indicate how often they sought and shared information about the Quanjian crisis during and after the crisis through (1) traditional media (i.e., television, newspaper, radios, and news apps), (2) social media (i.e., WeChat, Zhihu, and Weibo), and (3) offline WOM communication (i.e., talk face-to-face, text, and call) on a 7-point Likert scale ranging from 1 (never) to 7 (very much). The scale was adapted from Austin et al. (2012).

# **Information Source**

Participants were asked to indicate how often they sought and shared information about the Quanjian crisis from the following sources: (1) government, (2) news agencies, (3) health professionals, (4) the Quanjian company, and (5) other members of the public on a 7-point Likert scale ranging from 1 (*never*) to 7 (*very much*). The scale was adapted from Austin et al. (2012).

## Results

# **Gratifications-Sought**

RQ1 asked what gratifications motivated publics to seek and share information during the Quanjian crisis. To answer RQ1a, we conducted a principal component factor analysis (with Varimax rotation) of gratifications-sought on information seeking. One item was dropped due to low factor loading (i.e., "seeking information after a crisis is part of my routine activities"). The analysis identified five factors, which in total explained 62.79% of the variance (see Appendix A). The first factor is *socializing* (eigenvalue = 7.13), representing the motivation to build social relationships with other publics. The second factor is guidance (eigenvalue = 2.92), referring to the motivation to obtain guidance on how to react to the crisis. The third factor is medium appeal (eigenvalue = 1.43), suggesting that publics seek information on this particular medium because of its affordances. The fourth factor is mood management (eigenvalue = 1.30), representing the motivation to adjust moods and vent negative feelings during and after crisis. The fifth factor is habitual diversion (eigenvalue = 1.03), referring to the motivation to escape from reality or routine.

To answer RQ1b, a similar factor analysis was conducted to examine gratifications-sought items on information sharing. One item was dropped due to low factor loading (i.e., "sharing information after a crisis is part of my routine activities"). The analysis identified six factors, which in total explained 64.65% of the variance (see Appendix B). The first factor is socializing (eigenvalue = 13.11), referring to the motivation to build social relationships with others by sharing information. The second factor is *competence* (eigenvalue = 1.96), representing the motivation to influence other stakeholders' responses to crisis. The third factor is *reciprocity* (eigenvalue = 1.65), suggesting that publics expect to obtain reciprocal information by sharing information. The fourth factor is *guidance* (eigenvalue = 1.28), referring to the motivation to obtain guidance on crisis responses. The fifth factor is mood management (eigenvalue = 1.04), representing the motivation to adjust moods and vent negative feelings. The sixth factor is habitual diversion (eigenvalue = 1.00), referring to the motivation to escape from reality or routine by consuming media.

## Information Forms and Sources

RQ2 asked which forms and sources of information people sought and shared during the crisis. In terms of information forms, participants reported the highest frequency of seeking information from social media (M = 4.25, SD = 1.50), followed by traditional media (M = 3.05, SD = 1.22), and offline WOM (M = 2.81, SD = 1.28). Regarding information sources, people sought information most frequently from other members of the public (M = 3.82, SD = 1.77) and government (M = 3.75, SD = 1.92), followed by health professionals (M = 3.38, SD = 1.93), news agencies (M = 3.26, SD = 1.36), and the Quanjian company (M = 3.20, SD = 1.97).

Regarding information sharing, participants shared information more frequently through social media (M = 3.69, SD = 1.61) than through offline WOM (M = 2.60, SD = 1.44). The more frequently shared sources were news agencies (M = 3.89, SD = 1.90), government (M = 3.82, SD = 1.91), and other members of the public (M = 3.78, SD = 1.82), followed by the Quanjian company (M = 3.39, SD = 1.84) and health professionals (M = 3.32, SD = 1.90).

# **Linking Gratifications-Sought With Information Forms** and **Sources**

RQ3.1 asked how gratifications-sought predicted the forms and sources that people sought. Table 1 shows the results of the three regression models in which frequencies of seeking information through traditional media, social media, and offline WOM were predicted by gratifications-sought of information seeking after controlling for demographic variables. Frequency of seeking information through traditional media was significantly related to gratification of guidance (b = .20, p < .05) and socializing (b = .23, p < .01), while not related to other gratifications of medium appeal, mood management, and habitual diversion. Frequency of seeking information through social media was also significantly related to gratification of guidance (b = .25, p < .05) and socializing (b = .27, p < .01). Frequency of seeking information through offline WOM was significantly related to gratification of socializing (b = .26, p < .01) and mood management (b = .25, p < .01).

Table 2 shows the results of the five regression models in which frequencies of seeking information from different sources were predicted by gratifications-sought of information seeking after controlling for demographic variables. Gratification of guidance (b = .33, p < .05) significantly predicted frequency of seeking information from government. Gratification of guidance (b = .26, p < .01) and socializing (b = .27, p < .01) both predicted frequency of seeking information from news agencies. People more frequently sought information from health professionals when they were driven by gratifications of guidance (b = .34, p < .05) and medium appeal ( $\tilde{b} = .30, p < .05$ ). Frequency of seeking information from the Quanjian company was strongly related to gratifications-sought of medium appeal (b = .27, p < .05) and mood management (b = .27, p < .05). Gratification-sought of socializing was a significant predictor of frequency of seeking information from other members of the public (b = .27, p < .05).

RQ3.2 asked how gratifications-sought predicted which forms and sources of information people shared. Table 3 shows the results of the three regression models in which frequencies of sharing information through traditional media, social media, and offline WOM were predicted by gratifications sought from information

	Traditio	nal Media	Social	Media	Offline	WOM
	В	SE	В	SE	В	SE
Constant	02	.88	.97	1.10	.45	.91
Guidance	.20*	.08	.25*	.10	00	.08
Socializing	.23**	.08	.27**	.10	.26**	.08
Medium Appeal	.11	.08	.13	.10	.03	.09
Mood Management	01	.07	11	.08	.25***	.07
Habitual Diversion	06	.07	10	.08	04	.07
R <sup>2</sup>	.15		.13		.18	

**TABLE 1** Predicting Seeking Information From Difference Forms

*Notes.* Demographic variables including age, gender, education, income, marital status, and occupation have been controlled. \*p < .05, \*\*p < .01, \*\*\*p < .001.

**TABLE 2** Predicting Seeking Information From Difference Sources

	Gover	nment	Ne Age		Hea Profes		Quanjian Company		Pul	her blic ibers
	В	SE	В	SE	В	SE	В	SE	В	SE
Constant	.54	1.42	.39	.98	.47	1.41	45	1.43	.29	1.32
Guidance	.33*	.13	.26**	.09	.34**	.13	.08	.13	.19	.12
Socializing	.15	.13	.27**	.09	.07	.13	.16	.13	.27*	.12
Medium Appeal	.23	.14	.08	.09	.30*	.13	.27*	.14	.23	.13
Mood Management	.14	.11	07	.08	.16	.11	.27*	.11	08	.10
Habitual Diversion	19	.11	06	.08	15	.11	10	.11	04	.10
R <sup>2</sup>	.11		.15		.13		.17		.10	

*Notes.* Demographic variables including age, gender, education, income, marital status, and occupation have been controlled. \*p < .05, \*\*p< .01, \*\*\*p< .001.

sharing after controlling for demographic variables. Frequency of sharing information through social media was significantly related to gratifications of guidance (b = .30, p < .05), reciprocity (b = .37, p < .01), and mood management (b = .23, p < .05). However, frequency of sharing information through offline WOM was not significantly predicted by any of the listed gratifications.

<b>TABLE 3</b> Predicting Sharing Information From Difference Forms
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	Social	Media	Offline WOM			
	В	SE	В	SE		
Constant	-1.17	1.08	87	.99		
Guidance	.30*	.12	.13	.11		
Reciprocity	.37**	.14	.01	.13		
Socializing	01	.15	.24	.14		
Mood Management	.23*	.09	.11	.08		
Competence	09	.09	.15	.09		
Habitual Diversion	.01	.09	.11	.08		
R <sup>2</sup>	.26		.22			

*Notes.* Demographic variables including age, gender, education, income, marital status, and occupation have been controlled. \*p < .05, \*\*p < .01, \*\*\*p < .001.

Table 4 shows the results of the five regression models in which frequencies of sharing information from different sources were predicted by gratifications sought from information sharing after controlling for demographic variables. Gratification of competence (b = .28, p < .05) significantly predicted frequency of sharing information from the government. Gratification of reciprocity (b = .39, p < .05) predicted frequency of sharing information from news agencies. Gratifications of guidance (b = .36, p < .05) and competence (b = .24, p < .05) conjointly predicted frequency of sharing information from health professionals. People more frequently shared information from the Quanjian company were driven by the gratification of reciprocity (b = .40, p < .05). However, sharing information from other members of the public cannot be significantly predicted by any of the listed gratifications.

# **Discussion**

Taking a public-centric perspective, this study aims to explore what gratifications motivated Chinese publics to seek and share information during the Quanjian crisis. We also examined how these gratifications were linked with the forms and sources of crisis information that Chinese publics sought and shared.

Gover	nment						*	Pul	her blic ibers
В	SE	В	SE	В	SE	В	SE	В	SE
05	1.39	93	1.38	.26	1.33	.35	1.37	17	1.32
.24	.16	.30	.16	.36*	.15	.14	.16	.18	.15
.35	.18	.39*	.18	.06	.17	.40*	.18	.14	.17
09	.19	15	.19	.06	.18	.06	.19	.23	.18
.01	.12	.08	.12	.05	.11	.22	.12	.09	.11
.28*	.12	.14	.12	.24*	.12	.06	.12	.06	.12
03	.11	07	.11	11	.11	11	.11	02	.11
.13			.13	.15		.15		.13	
	B05 .24 .3509 .01 .28*03	05 1.39 .24 .16 .35 .18 09 .19 .01 .12 .28* .12 03 .11	B         SE         B          05         1.39        93           .24         .16         .30           .35         .18         .39*          09         .19        15           .01         .12         .08           .28*         .12         .14          03         .11        07	B         SE         B         SE          05         1.39        93         1.38           .24         .16         .30         .16           .35         .18         .39*         .18          09         .19        15         .19           .01         .12         .08         .12           .28*         .12         .14         .12          03         .11        07         .11	B         SE         B         SE         B          05         1.39        93         1.38         .26           .24         .16         .30         .16         .36*           .35         .18         .39*         .18         .06          09         .19        15         .19         .06           .01         .12         .08         .12         .05           .28*         .12         .14         .12         .24*          03         .11        07         .11        11	B         SE         B         SE         B         SE          05         1.39        93         1.38         .26         1.33           .24         .16         .30         .16         .36*         .15           .35         .18         .39*         .18         .06         .17          09         .19        15         .19         .06         .18           .01         .12         .08         .12         .05         .11           .28*         .12         .14         .12         .24*         .12          03         .11        07         .11        11         .11	B         SE         B         SE	B         SE         B         SE	News Agency         Health Professional         Quanjian Company         Pul Mem           B         SE         <

**TABLE 4** Predicting Sharing Information From Difference Sources

*Notes.* Demographic variables including age, gender, education, income, marital status, and occupation have been controlled. \*p < .05, \*\*p < .01, \*\*\*p < .001.

# What Motivates Chinese Publics to Seek and Share Crisis Information

Applying the U&G theory in a crisis context, we found that Chinese publics sought crisis information to fulfill their gratifications of guidance, mood management, socializing, medium appeal, and habitual diversion. Chinese publics shared crisis information to gratify guidance, mood management, socializing, competence, and reciprocity needs. These findings extend the traditional scope of the U&G literature by exploring publics' gratifications-sought in a crisis context. For example, gratification of guidance suggests that in a crisis context, publics seek and share information to make sense of the crisis event and obtain instructions on protective actions. Gratification of mood management suggests that communication behaviors in crises can also work to mitigate publics' negative emotions that emerged from crises (Kavanaugh et al., 2016). Gratification of socializing, the most salient motivation underlying both information seeking and sharing, suggests that publics seek and share information to prepare themselves for public debate and social interaction. Medium appeal and habitual diversion, echoing the recent trend in U&G literature that calls

for studying technology gratification (Sundar & Limperos, 2013), suggest that publics could obtain gratifications not only from the media content but also from the medium itself. Competence and reciprocity, as two gratifications that publics seek from sharing information, suggest that publics may share crisis information to influence the crisis agenda and contribute to the community.

These findings suggest that publics' expectations for communicating crisis are much more than fulfilling information needs. Instead of simply providing information, effective communication practices during a public health crisis should fulfill diverse gratifications of publics such as guidance, mood management, socializing, and competence. During crises, communication professionals should not only deliver evidence-based guidance to fulfill guidance and competence gratifications but also build a dialogue with publics and facilitate publics' emotional coping with the crisis to fulfill publics' socializing and mood management gratifications. The implications of caring for publics' emotions resonate with the recommendations of previous studies (e.g., Fraustino & Liu, 2017) that call for addressing publics' emotional needs during crises.

# Forms and Sources of Crisis Information That Chinese Publics Seek and Share

Our second research question asked what forms and sources of information Chinese publics sought and shared during the Quanjian crisis. We found that social media was the major platform on which Chinese publics sought and shared crisis information. Government and other members of the public were the primary sources that Chinese publics relied on for seeking and sharing information. These findings echo the call for more crisis communication research testing publics' behaviors in various cultural contexts (Diers-Lawson, 2017). Our findings provide empirical evidence on crisis communication behaviors of Chinese publics.

First, this study identifies the key role of social media in navigating Chinese publics' communication behaviors during crisis. Chinese publics both sought and shared crisis information more frequently through social media than other communication

channels. This is consistent with previous findings that Chinese publics were highly dependent on social media for expressing opinions (Xie et al., 2016). As suggested by Cheng (2019), Chinese social media function dialogically and contain an enormous number of highly engaged users. The heavy reliance of Chinese publics on social media creates potential for communication practitioners to approach and influence publics via social media.

Second, regarding information sources, we found that Chinese publics more frequently sought and shared information from the government and other members of the public. These findings suggest that Chinese publics rely on information from authorities and peers to take actions in times of crisis. Therefore, it is important for the government to provide up-to-date crisis information and deliver timely advice to publics. Moreover, Chinese publics highly rely on other public members for information during crises; therefore, crisis communication practitioners should cooperate with social media influencers to build dialogues on social media (e.g., Weibo, WeChat) for crisis communication.

# Linking Gratifications With Communication Behaviors During the Quanjian Crisis

Next, we examined how these gratifications-sought were associated with the forms and sources of information that Chinese publics sought and shared during the Quanjian crisis. First, guidance was a strong predictor of information seeking across various forms (i.e., traditional media and social media) and sources (i.e., government, news agencies, and health professionals). It also significantly predicted information sharing from health professionals and sharing on social media. These findings suggest that Chinese publics trust official sources such as the government and health professionals when they make sense of a crisis and learn about protective actions. Moreover, competence significantly predicted publics' information sharing from government and health professionals, suggesting that Chinese publics considered spreading information from these official sources as a way of showing competence.

Second, socializing significantly motivated publics to seek information from news agencies and other members of the public

but not from other sources. Perhaps these two sources provided more information about public opinion toward the Quanjian crisis than that provided by the government, health professionals, and the Quanjian company. However, socializing did not significantly predict publics' information sharing behavior, suggesting that Chinese publics shared information about the crisis not for the purpose of facilitating social interaction but for other types of gratification, such as showing competence and obtaining reciprocity.

Third, mood management motivated publics to seek information from Quanjian and to share information on social media. This finding is consistent with previous studies, which suggest that people will communicate crisis information when they want to adjust negative emotions (Jin et al., 2016). Similarly, previous studies (Hoewe & Parrott, 2019) found that publics who experience greater anger engaged in more information seeking and sharing. The reason might be that people who consumed Quanjian's products tended to relieve anxiety, manage anger, and reduce uncertainty through obtaining firsthand information from Quanjian.

Fourth, medium appeal significantly predicted information seeking from health professionals. Previous research found that health professionals used social media to disseminate health information to publics, provide health advice to patients, and correct misinformation during routine times (Benetoli et al., 2017). The current finding implies that media technology also makes health professionals more approachable during a public health crisis. However, habitual diversion, the other affordance-related gratification, was not a significant predictor of information seeking and sharing. This finding suggests that publics were more likely to actively engage in communication behaviors during crises rather than discussing information habitually.

Overall, taking a public-centric perspective, these findings suggest that the motivations underlying Chinese publics' communication behaviors are much broader than simply information needs. Effective crisis communication should fulfill publics' various needs such as the need for showing competence, adjusting mood, and socializing with other publics. Moreover, our results reveal that publics seek and share different forms and sources of

information for different gratifications. Therefore, health professionals should design tailored messages to fulfill publics' specific needs. For example, when mood management is the most salient gratification, communication professionals should develop social support messages. These findings also open a new avenue for SMCC research, calling for integrating motivational factors into the model.

## **Limitations and Future Research**

We acknowledge several limitations in this study. First, this study employed a cross-sectional design and, thus, causal relationships were not established. In addition, information seeking and sharing behaviors were self-reported by participants. Self-reported measures may not accurately reflect publics' actual information seeking and sharing behaviors during the crisis. Future research may use an experimental design to examine whether these gratification items causally lead to information seeking and sharing during crises and measure communication behaviors with observed data. For example, researchers may conduct a content analysis of the web pages and social media pages that people browse for crisis information. Second, the current study only focused on gratifications-sought prior to communication behaviors, whereas gratifications-obtained after communication were not examined. Additional studies are encouraged to explore whether there exists a discrepancy between the gratifications that publics sought and that they obtained in crises. Future studies may also explore how the obtained or non-obtained gratifications lead to further communication behaviors during a crisis. Lastly, the current study only examined publics' gratifications-sought in the Chinese context and in the Quanjian crisis—a health product crisis. Future studies could examine whether publics are driven by similar gratifications in other cultural contexts and during other health crises.

## **Conclusion**

This study contributes to both crisis communication theories and practices. Regarding theoretical implication, first, this study extends the U&G theory to a crisis context and identifies nuanced,

crisis context-specific gratification items. Second, this study contributes to the SMCC model by incorporating motivational forces underlying publics' crisis information seeking and sharing behaviors based on the U&G theory. Third, by applying the combined approach in a Chinese context, this study enriches the literature by providing empirical evidence of publics' crisis communication practices in a non-Western context.

This study also has several practical implications. First, we encourage communication practitioners to tailor crisis messages to publics' various gratification needs. Second, we suggest the government and health organizations collaborate with other stakeholders to maximize their capabilities to spread up-to-date information to publics. Third, this study highlights the key role of social media in Chinese crisis communication. We suggest that communication professionals utilize a variety of media technologies to disseminate crisis information and build dialogues with publics.

## **ORCID**

Yuan Wang https://orcid.org/0000-0002-8378-8002 Junhan Chen https://orcid.org/0000-0001-9936-3933

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# APPENDIX A Exploratory Factor Analysis of Gratifications Sought From Crisis Information Seeking

Gratification instrument	Crisis Information Seeking Gratifications							
I seek information about the Quanjian crisis because:	so	GD	MA	ММ	HD			
Socializing (SO)								
SO1: To feel like I belong to a community.	.53							
SO2: To give me something to talk about with others.	.79							
SO3: To stay in touch/have common topics with people I know.	.83							
SO4: To follow the trend in the social discussion.	.77							
SO5: To learn about hot topics that other people are paying attention to.	.77							
SO6: Because I feel peer pressure to participate.	.68							
Guidance (GD)								
GD1: To keep up with main issues of this crisis event.		.67						
GD2: To get a sense of how the government responded to the health crisis issue.		.77						
GD3: To get a sense of how the company (i.e., Quanjian) responded to the health crisis issue.		.72						
GD4: To get a sense of how other stakeholders (i.e., publics) responded to the health crisis issue.		.69						
GD5: To help me get a sense of whether I am susceptible to similar crisis events.		.75						
GD6: To help me decide how to protect my life in the future during a similar health crisis event.		.76						
GD7: To help me decide which health product company and/or what kind of health product to trust in the future.		.60						
Medium Appeal (MA)								
MA1: I can obtain information that I want to know immediately on this channel.			.75					
MA2: It's easy for me to obtain information through this channel.			.83					
MA3: I can get a sense of human contact through seeking information on this channel.			.57					
Mood Management (MM)	J.							
MM1: To reduce anxiety.				.85				
MM2: To get rid of stress and achieve relaxation.				.88				
MM3: To obtain emotional support.				.75				
Habitual Diversion (HD)								
HD1: Browsing information that I encounter is part of my communication habit.					.36			
HD2: I just want to do something to pass time.					.88			
Eigenvalue	7.13	2.92	1.43	1.30	1.03			
% of variance explained	32.40	13.27	6.51	5.91	4.70			

# **APPENDIX B** Exploratory Factor Analysis of Gratifications Sought From Crisis Information Sharing

	Crisis Information Sharing Gratifications							
I share information about the Quanjian crisis because:	so	СР	RC	GD	мм	HD		
Socializing (SO)								
SO1: The information about this health crisis event can be a good topic for starting a conversation with others.	.62							
SO2: Sharing information/opinion about this health crisis event helps me keep in touch with friends.	.71							
SO3: Sharing information/opinion about this health crisis event would create new relationships with new friends.	.71							
SO4: My sharing would help me build relationships with others who share the same feelings or opinions about this health crisis event with me.	.74							
SO5: To follow the trend in the social discussion about the health crisis event.	.54							
SO6: To join the discussion of hot topics.	.72							
SO7: Because I feel peer pressure to participate in the conversation about this health crisis event.	.69							
SO8: I can share the information/opinion about this health crisis event I have with others immediately on this channel.	.66							
SO9: It's easy for me to share information/opinion about this health crisis event through this channel.	.58							
SO10: I can get a sense of human contact through sharing information/opinion about this health crisis event on this channel.	.66							
SO11: I can show my personality through sharing.	.68							
SO12: I can tell others about myself through sharing.	.63							
SO13: I can express my feelings and opinions about this health crisis event through sharing.	.50							
Competence (CP)								
CP1: My sharing can influence how people talk about the health crisis event.		.65						
CP2: My sharing can influence how the government deals with the health crisis event.		.76						
CP3: My sharing can influence how the company responds to this event.		.76						

	Crisis Information Sharing Gratifications							
I share information about the Quanjian crisis because:	so	СР	RC	GD	ММ	HD		
Reciprocity (RC)						,		
RC1: Sharing information/opinion about this health crisis event helps me get other people's opinions regarding the information/event.			.72					
RC2: I expect to receive tips from other people to help me make sense of the information/event.			.76					
RC3: I hope to receive advice from others that help me make a decision about taking protective actions during similar events in the future.			.65					
RC4: Sharing can help others who also want to learn about the information.			.43					
RC5: I want to return the favor because I found interesting information/opinions about this health crisis event from others' postings.			.35					
RC6: It may encourage people to "pay it forward" by sharing their information/opinion about this health crisis event with others.			.39					
Guidance (GD)								
GD1: Sharing information/opinion about this health crisis event helps me keep updated on the latest happenings.				.75				
GD2: Sharing information/opinion about this health crisis event helps me get other related information.				.72				
GD3: Sharing information/opinion about this health crisis event helps me bookmark useful information.				.37				
Mood Management (MM)								
MM1: To reduce anxiety about the health crisis event.					.77			
MM2: To get rid of stress about the health crisis event and achieve relaxation.					.79			
MM3: To obtain emotional support.					.66			
Habitual Diversion (HD)								
HD1: Sharing information that I encountered is part of my communication habit.						.35		
HD2: I just want to do something to pass time.						.60		
Eigenvalue	13.11	1.96	1.65	1.28	1.04	1.00		
% of variance explained	42.30	6.31	5.32	4.12	3.37	3.23		