

THE IMPACT OF KNOWLEDGE AND RISK PERCEPTIONS ON INDIVIDUAL NEWS CURATION

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Abstract. During the outbreak, news curation about COVID-19 among social media users became a phenomenal form of information dissemination. However, there is minimal research on what factors influence individual social media users' news curation practices. To fill this gap, this study, based on KAP theory, aims to identify the relationship between knowledge of COVID-19, risk perception, and news curation among social media users, as well as the mediating role of risk perception. In this regard, cross-sectional data were collected from 422 Chinese social media users, and the data were analysed using structural equation modelling (SEM). The results show that there is a positive and significant direct relationship between knowledge of COVID-19, risk perception and social media users' news curation, respectively, and that risk perception mediates the impact of knowledge of COVID-19 on news curation. Therefore, it can be concluded that knowledge of COVID-19 and risk perception are significant factors impacting news curation among social media users.

Keywords: *knowledge, news curation, risk perception, social media*

Introduction

In December 2019, there was an outbreak of a new coronavirus (COVID-19) in the city of Wuhan, China, which caused a range of symptoms of lung infections and spread rapidly to other countries and regions in a short period of time. Due to its highly infectious nature and serious health consequences, COVID-19 was declared a global pandemic by the World Health Organisation (Zanke et al., 2020). As of January 8, 2023, China has reclassified the management of COVID-19 infections from "Class B infectious disease under Category A control measures" to "Class B infectious disease under Category B control measures," whereby health authorities have generally discontinued the implementation of strict quarantine measures for infection sources and close contacts. During the COVID-19 outbreak, social media became the main channel for the public to obtain, filter and disseminate information. A series of public issues became the object of news curation by social media users. News dissemination by social media users, which is characterised by curated news as an important practice, has a significant impact on the current ecology of public opinion. At the same time, social media provides more opportunities for news engagement for general audiences (Ksiazek et al., 2016). People get the information they are looking for from any source, which they often share with others immediately through social media (Zhang et al., 2022). News use in social media is complex and multilayered, with both passive forms of news reception and active news curation (Park and Kaye, 2018). News curation is the processing and dissemination of news based on existing news content. In social media communication practices, the news curation of news information by ordinary users has

become a communication phenomenon (Church et al., 2019; Chipp and Chakravorty, 2016).

However, this process also reveals a series of real problems. Firstly, facing the massive amount of information, the lack of scientific knowledge of ordinary users often makes it difficult for them to distinguish authoritative information from false content (Cinelli et al., 2020). Secondly, due to the uncertainty in the perception of how the virus spreads and the level of damage, the risk perception level of users shows significant differences (Zhong et al., 2020). This difference not only impacts their personal protection behaviours, but also how they select, edit and repost news about the outbreak on social media platforms, namely “news curation” behaviours (Pulido et al., 2020). In this context, the adequacy of knowledge that users possess and their risk perception of outbreak risk may greatly shape whether their news curation behaviour is scientific, responsible or even socially impactful. However, despite the fact that two years have passed since the COVID-19 outbreak, not enough attention has been paid to the predictors of individual social media users' productive news curation practices during COVID-19 (Chu et al., 2024), and in particular, there is a lack of systematic analyses based on theoretical modelling to reveal how knowledge and perceptions combine to inform users' information behaviour.

Therefore, this study attempts to fill the gap in the literature by examining the factors influencing social media users' personal news curation behaviour from the perspectives of knowledge and risk perception in the context of social media users' information dissemination practices of news curation for epidemic news in the context of risk communication processes. And KAP theory (Knowledge-Attitude-Practice) provides a powerful framework for understanding this mechanism, which emphasises that an individual's knowledge influences their specific practices, such as news curation, through attitudes, such as risk perception (Launiala, 2009). An empirical study examines the relationship between social media users' knowledge levels, risk perception and news curation behaviour during an epidemic in order to fill the research gap in this area and provide a theoretical basis for public health communication strategies.

Literature review and hypotheses

News curation

Lewis R. Binford introduced the concept of “curation” in 1973 and it has been cited repeatedly ever since (Shott, 2023). Essentially, “curation” refers to people adding their own comments to content that is collected and organised. Davis (2020) argue that curation is the selection and organisation that filters the richness of content into a manageable size, a composite that satisfies an informational or strategic need in a smaller shape. News curation is a way for curators to add value to information content by collecting, reading and combining it (Bruns, 2021). In the context of social media, curation refers to the aggregation, sharing, ranking, juxtaposition, and commenting of content by consumers on various platforms (Merten, 2021). On social media, news curation needs to be more active and engaged rather than replying, shallowly commenting or sharing news. Obviously, a single news re-post is not news curation. Personal news curation emphasises active, conscious customisation of one's media environment in order to pursue personal goals. According to Kompatsiaris (2024), news curation is catabolised into two curatorial practices, production and consumption. Productive curation refers to the selection of material to be shared and displayed,

specifically, the way people distribute content and how, when, and with whom they share it. However, consumptive curation refers to the allocation of attention, that is, the choices of how people allocate their attention in a crowded information, such as following, muting, and skimming in social networking sites (Davis, 2017).

It is important to point out that social media personal user news curation has received little attention (Merten, 2021), however, theoretically, these curatorial practices are particularly noteworthy as they facilitate the “in-between of news exposure” (Stroud et al., 2020). In this study, news curation refers to social media users' news reproduction, news dissemination behaviours about COVID-19, including sharing, integrating, commenting, summarising and recreating news related to the outbreak. It is a personal behavioural change made by the audience in risk communication after perceiving the risk. The main concern of this study focuses on what antecedents influenced social media users to engage in productive news curation practices during the COVID-19 outbreak in China.

KAP Theory

This study uses the Knowledge-Attitude-Practice (KAP) theory to compare the structure of Knowledge of Risk-Perception-Personal News Curation Practice (KAP) developed in this research. KAP is a proven theory that divides changes in human behaviour into three sequential processes: acquiring knowledge, generating beliefs, and shaping behaviour (Liao et al., 2022). Different from other theoretical models on behaviour, KAP theory mainly aims to explore the correlation between knowledge, attitude and behaviour. In terms of the knowledge-practice relationship, behaviour change requires knowledge of the problem and skill acquisition (Liao et al., 2022). For the relationship between attitudes and behaviours, a person holds positive attitudes and behaviours, she/he will have better motivational intentions (Hallett et al., 2023). The KAP theory is one of the most commonly used models to explain how an individual's knowledge and attitudes influence their behaviour (Xu et al., 2021). In the existing literature, it has been widely used in medically related fields (Chen et al., 2023). During the COVID-19 outbreak, KAP theory was frequently used in studies of knowledge, attitudes, and practices in response to COVID-19 (Lee et al., 2021), for example, Wu and Munthali (2021) used KAP theory to investigate the relationship between knowledge, attitudes, and prevention practices of Chinese international students. In this study, we concentrate on how risk knowledge influences attitudes and thus news curation practices among social media users, and for this reason we chose the KAP theory. According to KAP theory, there is a direct relationship between knowledge and attitude, attitude and practice, and knowledge and practice.

Knowledge and news curation

News curation in this study is defined as the behaviour of personal news curation, which is a practice during the COVID-19 pandemic. Social media users reflect on the value of news content based on their existing knowledge, rewrite the news with their own knowledge, add their own unique insights, and disseminate this rethought and rewritten news to others (Park and Kaye, 2018). There are effective effects of disease knowledge for improving health management, and it can even serve as a predictor of individual behavioural change (Lee et al., 2021). Insufficient knowledge about COVID-19 may lead to low levels of protective measures and high levels of anxiety (Saqlain et

al., 2020), thus contributing to the public about COVID-19-related behaviours. For instance, disease knowledge can change attitudes and practices towards rabies prevention (Pal et al., 2021), the level of oncology knowledge has an impact on an individual's decision to agree to a specific medical procedure (Wei et al., 2025), and higher public health knowledge is positively associated with more frequent hand washing (Omari et al., 2022).

Research on COVID-19-related knowledge and news curation has confirmed that frequency of viewing social media has a small positive association with COVID-19 knowledge (Mousavi et al., 2023). Li and Liu (2020), in their study of social media use and disease knowledge among Chinese Internet users in the COVID-19 pandemic confirmed that disease knowledge positively moderated the relationship between frequency of social media use and preventive behaviour. The lower the users' need for cognition and the more a priori knowledge they had about COVID-19, the more they believed that social media news contained all the facts about the disease, and the more they believed that the news accurately described the actual facts about COVID-19, the more they were interested in engaging with social media news (Kožuš & Čakš, 2021). Based on this, the following hypothesis is proposed: (H1): Knowledge of COVID-19 has a significant relationship with social media users' news curation.

Knowledge and risk perception

It has been shown that risk perception is usually determined by a person's knowledge, which provides an appropriate self-assessment of the risk of an event and its associated consequences (Rattay et al., 2021). The disease knowledge enables people to identify symptoms, understand causes, and perceive risks of chronic or infectious diseases (Chimezie, 2023). Learning about and experiencing risk impacts people's assessment of risk: when people lack learning about risk, they will overestimate the risks they meet, whereas when they have experienced or learnt about risk sufficiently, they will tend to be more objective in their assessment of risk (Wen et al., 2020). In order to reduce the impacts of disasters, it is important to understand how people living in risky areas perceive disasters and risks, as well as their knowledge and preparedness for disasters (Alam et al., 2022). Knowledge is an important component in studies of people's risk perceptions within the COVID-19 pandemic. A study by Al-Hanawi et al. (2020) investigated the Saudi public's knowledge, attitudes, and behaviors towards COVID-19 during the epidemic, confirming that a high level of knowledge about COVID-19 during a COVID-19 pandemic can be translated into good and safe Practices. In a cross-sectional survey of knowledge, attitudes and practices related to COVID-19 among university students in China, it was shown that public health education is an effective measure for the prevention and control of public health emergencies, that it can increase public awareness of public health emergency preparedness, and that the public's access to appropriate knowledge can reduce panic, search for positive attitudes, and follow consistent and desired practices (Peng et al., 2020).

However, there are contradictory research findings on the knowledge related to COVID-19 and risk perception. Some studies hold the opposite view; during a study of risk perception and knowledge among COVID-19 patients in Wuhan, China, Zhong et al. (2021) confirmed that risk perception was negatively associated with COVID-19-related knowledge. Taghrir et al. (2020) also found high levels of COVID-19-related knowledge but moderate levels of risk perception among Iranian medical students in a

study assessing their COVID-19-related knowledge, self-reported preventive behaviors, and risk perceptions during the first week after the outbreak in Iran. Based on this, the following hypothesis is proposed: (H2): Knowledge of COVID-19 has a significant relationship with social media users' risk perceptions.

Risk perception and news curation

In the information communication environment, audiences have become important news producers and disseminators with the help of self-media, and some researchers have started to pay attention to the news curation of general audiences. Park and Kaye (2018) conducted an empirical study on news curation of general audiences, exploring the effects of political knowledge, intrinsic political efficacy, and on-line and off-line political participation on news curation of social media users. Social media users curate news from a social perspective, focusing on sharing and interacting with others and not necessarily focusing on the original content of the news, instead, adding their own personal thoughts, in order to gain approval and retweeting from members of the social relationship, and thus obtaining a sense of psychosocial identity (Swart, 2023). Existing research on risk communication focuses on the impact of media information dissemination on public risk perceptions. The question that needs to be considered is how the public's risk perception impacts the subsequent dissemination of information. This question is in fact also about the communication effects of risk communication on the audience. However, exploring the effect of risk perception on audience information dissemination is not the major focus of current risk communication research, perhaps because traditional information dissemination research is communicator orientated, treating the audience as passive recipients of information and ignoring the audience's re-dissemination of information governed by risk perception. In such an information dissemination environment, how audience risk perception effects their subsequent information dissemination behaviours should become an important topic in risk communication research in the social self-media environment. Based on this, the following hypotheses are proposed and the conceptual framework of this study is shown in *Figure 1*: (H3): Risk perception has a significant relationship with social media users' news curation; (H4): Risk perception mediates the relationship between knowledge of COVID-19 and social media users' news curation.

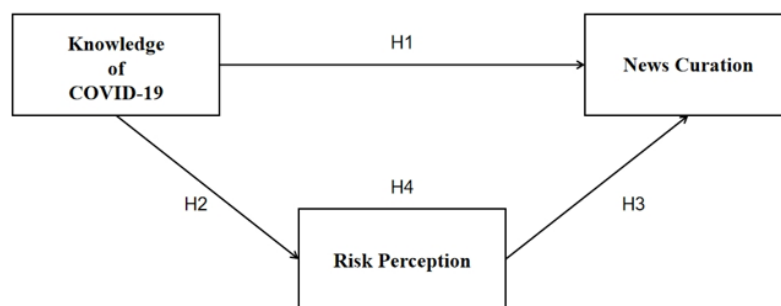


Figure 1. Conceptual framework.

Materials and Methods

Participants and survey

This study used a cross-sectional survey design with an anonymous online questionnaire to assess the public's knowledge, risk perceptions, and personal news curation practices among social media users during the COVID-19 outbreak. The study was conducted on Chinese social media users and was not limited to any particular gender, age group or income level. It used purposive and random sampling methods to select five cities as sampling locations from the nine major national centres in China: Beijing, Shanghai, Guangzhou, Wuhan and Zhengzhou. The study used an online questionnaire collection method, which was collected using the sample service function of the Tencent questionnaire platform. Inclusion criteria required each participant to, first, be Chinese, second, be a social media user, and, third, use social media for news curation during the COVID-19 epidemic in China. According to the 54th Statistical Report on the Development of the Internet in China, as of June 2024, the number of social media users in China was 1,099.67 million. There are two main criteria for obtaining a good sample in a study, namely sufficiency and representativity. In order to meet these criteria, this study utilised Krejcie and Morgan (1970) research table to determine the sample size for a given population, which according to Krejcie and Morgan (1970) is 384 sufficiently representative of the population when the given population is 100,000 or more. In this study, over 1,000 participants completed the survey, and after excluding incomplete responses, 422 were included in the analyses.

Measurements

Participants' knowledge of the COVID-19 was assessed using a five-item, five-point questionnaire developed by Zhu and Deng (2020) that has been used in other similar studies. The questionnaire included knowledge of the causes, harms, clinical signs, prevention, and control of COVID-19. Participants were asked to rate the items on a 5-point Likert-type scale ranging from 1 (Strongly disagree) to 5 (Strongly agree), with higher scores indicating greater knowledge of COVID-19. Risk perception was measured using four items adapted from Wu et al. (2021) that primarily cover subjective judgements of COVID-19 risk threats. Participants were requested to rate the statements on a 5-point Likert scale from 1 (Strongly disagree) to 5 (Strongly agree), with higher scores indicating a higher perceived risk of COVID-19. To measure social media users' personal news curation practices, we adapted four items from Park and Kaye (2018) study to understand news curation practices including commenting, integrating, summarising, recreating, and posting in relation to the COVID-19. Participants were required to rate on a Likert-type scale from 1 (Strongly disagree) to 5 (Strongly agree), with higher scores indicating a greater degree of news curation being performed. The specific questionnaire items are shown in *Table 1*.

Table 1. Questionnaire items.

V	Item details	Reference
KOC	KOC1: You know about the initial cause of COVID-19. KOC2: You realize the harm caused by COVID-19. KOC3: You are aware of the latency of COVID-19. KOC4: You understand the affected range of COVID-19. KOC5: You know about the monitoring of COVID-19.	Zhu and Deng (2020)
RP	RP1: You are very worried that your family and you will be infected with the COVID-19. RP2: You think the actual numbers of people infected are much higher than the official figures. RP3: You are afraid that you will be infected with the COVID-19 when you go out. RP4: When it is necessary to go out (such as purchasing daily necessities), you will be far away from the crowds.	Wu et al. (2021)
NC	NC1: You may post related news about the COVID-19 on social media. NC2: You may post news about the COVID-19 together with your own comments on the COVID-19	Park and Kaye

news on social media.

(2018)

NC3: You may post integrated and related COVID-19 news on social media.

NC4: You may aggregate news about COVID-19 on social media.

Note: V=Variable; KOC=Knowledge of COVID-19; RP=Risk Perception; NC=News Curation. All items were measured on a five-point Likert scale from 1 (Strongly disagree) to 5 (Strongly agree).

Statistical analysis

This study was conducted using SPSS27 for descriptive statistics, which according to Walker (2005) descriptive statistics describes the basic characteristics of the individuals and situations in the study and is considered as the first stage of data analysis. In addition, we used AMOS 27 to test the direct relationship between the variables, and based on the structural model of this study, we conducted regression analyses to test the regression weights between knowledge, risk perception, and news curation. The decision criterion for significant correlation was based on alpha=0.05, and Hair et al. (2018) noted that traditional guidelines usually recommend setting the alpha level at 0.05 or 0.01. Social science research generally uses a sizable threshold of $p < 0.05$ in statistical tests (Kline, 2011). Therefore, this study set a statistical significance level of 0.05 for all statistical analyses. Meanwhile, we also calculated the indirect effect of knowledge through risk perception on social media users' personal news curation through 5,000 bootstrap samples, and obtained bias-corrected 95% confidence intervals for the mediating paths to determine whether a mediating effect exists.

Results and Discussion

Demographic characteristics

This study was conducted using SPSS27 for descriptive statistics, which according to Walker (2005) descriptive statistics describes the basic characteristics of the individuals and situations in the study and is considered as the first stage of data analysis, as shown in Table 2.

Table 2. Distribution of participants (n=422).

Profile	Frequency	Percentage (%)
Gender		
Male	213	50.5%
Female	209	49.5%
Age		
19-28	141	33.4%
29-40	167	39.6%
41-65	78	18.5%
66 or above	36	8.5%
Education Qualification		
High school or below	18	4.3%
Specialized	84	19.9%
Bachelor's degree	232	55.0%
Master's Degree	66	15.6%
Doctoral Degree	22	5.2%
Monthly Income		
No monthly income	39	9.2%
Less than 3000RMB	25	5.9%

3000-6000RMB	190	45.0%
6001-9000RMB	116	27.5%
9001-12000RMB	45	10.7%
Above 12001RMB	7	1.7%
Employment Status		
Full-time student	29	6.9%
Temporary/part-time job	35	8.3%
Full-time job	253	60.0%
Freelance/Self-Employed	95	22.5%
Unemployed	10	2.4%
Marital Status		
Unmarried	141	33.4%
Married	258	61.1%
Separate	23	5.5%
City of Residence during the COVID-19 Outbreak		
Beijing	81	19.2%
Shanghai	70	16.6%
Wuhan	103	24.4%
Guangzhou	92	21.8%
Zhengzhou	76	18.0%

Relationship between knowledge, risk perceptions and news curation

As shown in *Table 3*, we used regression analyses to examine the direct relationship between knowledge, risk perception and news curation with each other. The results of the data indicated that knowledge of COVID-19 has a positive and significant relationship with social media personal news curation behaviour ($\beta=0.26$, $p<0.001$). There is a positive and significant relationship between knowledge of COVID-19 and risk perception ($\beta=0.33$, $p<0.001$). Between risk perception of COVID-19 and social media personal news curation behaviour, there is a positive and significant relationship ($\beta=0.33$, $p<0.001$). Based on the data results, firstly, H1 is proven that the level of knowledge about COVID-19 significantly and positively predicts the news curation behaviour of social media users. This suggests that more knowledgeable users tend to actively curate news content related to the outbreak. Secondly, H2 is also confirmed with a significant positive correlation between knowledge level and risk perception, suggesting that the more knowledgeable users have higher risk perception of COVID-19, which provides further explanatory power to the effect of knowledge on individual psychological mechanisms. Thirdly, H3 is accepted that risk perception significantly and positively predicts news curation behaviour, implying that risk perception is an important motivator for users to actively engage in information selection and dissemination in the context of an epidemic. These findings support the research objective of identifying the relationship between social media users' knowledge of COVID-19, risk perception and news curation behaviour.

Table 3. The result of direct effect.

	Construct		β	Beta	S.E.	C.R.	P
RP	<---	KOC	0.33	0.36	0.05	6.21	***
NC	<---	RP	0.33	0.36	0.06	5.86	***
NC	<---	KOC	0.26	0.31	0.05	5.25	***

Mediation effects test

We assessed the mediating effect of risk perception by using bootstrap analyses (based on a sample of 5,000). AMOS 27 was used to generate 95% bias-corrected confidence intervals (CI) for the relative indirect effects. The mediation effect is considered significant if the confidence interval for the effect does not include zero and does not fall between the lower bound (LB) and upper bound (UB) of the confidence interval. As shown in *Table 4*, the data results indicate that the regression estimate(β) of the indirect effect of knowledge of COVID-19 on news curation through risk perception is 0.110 with a p-value of less than 0.05. The significance of the indirect effects was based on bootstrapped (5,000 runs) confidence intervals around the unstandardized parameter estimate. Meanwhile, the Bias-corrected 95% confidence intervals had a lower bound of 0.064 and an upper bound of 0.175, the Percentile 95% confidence intervals had a lower bound of 0.061 and an upper bound of 0.171, and the 95% confidence intervals for bootstrap did not include 0 and did not range between the lower bound (LB) and the upper bound (UB) of the confidence intervals. This shows that knowledge of COVID-19 indirectly influences social media users' news curation through risk perception.

Table 4. *The result of mediation effect.*

Path	β	SE	Bias-corrected 95% CI			Percentile 95% CI		
			Lower	Upper	P	Lower	Upper	P
KOC-RP-NC	0.110	0.028	0.064	0.175	0.000	0.061	0.171	0.000

Thus, H4 is supported, the study confirms that risk perception plays a partially mediating role between knowledge and news curation. This indicates that users' knowledge of COVID-19 not only directly drives their curatorial behaviour, but also further indirectly influences their news curation motivation and behaviour by enhancing their risk perception of the outbreak. In other words, the impact of knowledge is not one-way, but deepens individuals' willingness to process and disseminate information by activating their risk perception. Meanwhile, this finding responds to the research objective of this study to identify the mediating role of risk perception in the relationship between social media users' knowledge of COVID-19 and news curation behaviours.

Relationship between knowledge, risk perceptions and news curation

Firstly, the analysis showed a positive and significant relationship between knowledge of COVID-19 and news curation among social media users during the COVID-19 outbreak in China. According to the results of the analysis, knowledge of COVID-19 is a significant predictor of news curation among social media users, and the higher the level of knowledge of COVID-19 among social media users, the more it influences their news curation behaviors on social media. In previous studies, knowledge about diseases has helped to improve people's health management and can act as a predictor of individual behavioral change (Kim and Choi, 2016), for example, the level of oncology knowledge has an impact on an individual's decision to agree to a specific medical procedure (Kowalska et al., 2019), and higher knowledge of public health is positively associated with more frequent hand washing (Alexander et al., 2019). In this study, news curation refers to personal news curation behaviors (Thorson and Wells, 2016), and according to Hungerford and Volk (1990), changes in people's behaviors require the acquisition of relevant knowledge and skills. Regarding the study on COVID-19 related knowledge and news curation, Yang et al. (2022) confirmed that

knowledge about COVID-19 and information sharing are positively correlated. This is consistent with the results of the positive and significant relationship between knowledge of COVID-19 and social media users' news curation in this study. In the COVID-19 outbreak in China, social media users have developed news production and dissemination practices on social media platforms based on their knowledge of COVID-19. According to Kožuh and Čakš (2021), the more a priori knowledge people have about COVID-19, and the more they believe that news on social media accurately describes the real situation, the more they pay attention to news about COVID-19 on social media, and the more they are interested in engaging in social media news about COVID-19, just like reading the news and performing further news practices, such as sharing.

Secondly, the analysis showed that there was a positive and significant relationship between knowledge of COVID-19 and risk perception among social media users during the COVID-19 outbreak in China. According to the results of the analysis, knowledge of COVID-19 is a significant predictor of risk perception among social media users, and the higher the level of knowledge of COVID-19 among social media users, the higher their level of risk perception of COVID-19. In previous research, an individual's knowledge is a predictor of risk perception (Wachinger et al., 2013), and knowledge about the disease prompts people to recognize symptoms, understand causes, and perceive risks of the disease (Burns and Rapee, 2006). Studies have shown that people with high levels of knowledge are in a better position to understand how COVID-19 is transmitted, the health consequences, and the probability of infection. This knowledge of the details allows them to perceive risk more accurately and thus demonstrate a higher level of risk awareness (Lin et al., 2020).

In addition, knowledge reduces an individual's fear of the unknown, but it also makes them more aware of the reality of potential threats. For example, knowing the extent and severity of virus transmission may enhance people's risk perception (Ning et al., 2020). During the epidemic, many of the findings from the KAP studies on the level of knowledge of COVID-19 among Chinese people showed that Chinese people generally had higher levels of knowledge of COVID-19 (Deng et al., 2024; Ning et al., 2020) and higher perceptions of the severity of the COVID-19 (Ning et al., 2020). This also supports the findings for COVID-19 in this study. During the COVID-19 outbreak in China, social media users had a high level of knowledge of COVID-19, which made them likely to be more aware of the speed of transmission of the virus, its potential lethality, the symptoms of the outbreak, the likelihood of infection, and the potential threat, and the greater the knowledge, the more the individuals were aware of the long-term impact and global implications of COVID-19, which contributed to the higher level of risk perceptions.

Thirdly, in this study, the direct relationship between risk perception and social media users' news curation resulted in positive and significant findings during the COVID-19 outbreak in China. This suggests that risk perception is one of the important factors impacting social media users' news curation, and the higher the level of social media users' risk perception, the more it will influence them to engage in news curation behaviors on social media. Perceiving the severity of the risk may lead to a sense of social responsibility and the need to help others become more aware of prevention through news curation behaviors (Bavel et al., 2020). High levels of risk perception make social media users aware of the importance of disseminating accurate information, and for reasons such as altruism and pro-social motives, people believe that the

production and dissemination of news through social media is a way for them to warn others to take relevant action (Dryhurst et al., 2022). These emotions motivate social media users to release psychological stress by sharing news while seeking social feedback and emotional support. Social media provides a convenient and low-cost communication platform for risk perceivers, and social media users with high levels of risk perception can easily post, comment, and share risk-related news to amplify their influence. Producing and disseminating risk-related news not only fulfills social media users' need to disseminate information, but also facilitates interactions with others, which strengthens their social relationships and self-identity (Saud et al., 2020). This also supports the findings of the direct relationship between risk perception and social media users' news curation in the present study; during the COVID-19 outbreak in China, people had high levels of risk perception about the outbreak, which may have been motivated by altruism and the need to warn others of the danger or to satisfy their own need for social interaction, and the high levels of risk perception significantly influenced social media users' news curation behavior.

Risk perception as mediator

The results of the multi-group analyses indicated that risk perception had a mediating effect in the relationship between knowledge of COVID-19 and social media users' news curation during the COVID-19 pandemic in China. Chinese social media users' relatively high levels of knowledge of COVID-19 during the pandemic resulted in high levels of risk perception, which in turn influenced their news curation practices on social media platforms. Higher levels of knowledge of COVID-19 can increase an individual's level of risk perception, and stronger risk perception may drive individuals to curate news related to the outbreak on social media due to their desire to warn others of the risks through news production and dissemination and to spread prevention information in order to reduce the impact of the outbreak (Bavel et al., 2020). Information sharing serves as one of the tools of protection, and when individuals perceive a higher risk, they may be more inclined to curate news through social media in order to direct themselves and others to take the necessary precautions, such as getting vaccinated or wearing a mask (Dryhurst et al., 2022). In addition, knowledge can indirectly influence behavioural decisions by enhancing risk perception (Bavel et al., 2020). Curatorial news is seen as an action of production and dissemination of information, and therefore risk perception is a key mediating variable in this process.

In previous studies, social media provides convenience and a wide audience for individuals' production and dissemination of news, and knowledge and risk perceptions combine to motivate social media users to use this platform to influence others' perceptions and behaviours (Zhao et al., 2023; Li et al., 2020). The results of this study are supported by previous research. In addition, the results of the analyses showed that the mediating effect of risk perception on the relationship between knowledge of COVID-19 and social media users' news curation was not fully mediated, but partially mediated, that is, the direct relationship between knowledge of COVID-19 and social media users' news curation was significant, in addition to risk perception, knowledge of COVID-19 still influenced social media users' news curation through other pathways.

Conclusion

Focusing on the personal news curation behaviour of social media users during the COVID-19 pandemic, this study provides a systematic examination of the relationship between knowledge, risk perception and news curation behaviour, and introduces risk perception as a mediating variable, which fills in a number of gaps in the existing research and has the following theoretical and practical contributions: In terms of theoretical contributions, this study extends the theoretical perspective of social media user behaviour research. This study applies KAP theory to the field of news curation by social media users, constructs an explanatory framework of knowledge-attitude-practice, verifies how personal knowledge influences news curation behaviours through risk perception, and promotes the application of KAP theory in the field of risk communication. In addition, this study identifies the mediating role of risk perception between knowledge and news curation behaviour through empirical analysis, which provides a new perspective for understanding the psychological pathways of users' behaviour in risk communication, and contributes to the further development of psychosocial models in the application of risk information communication. In terms of practical contributions, this study provides empirical support for risk communication strategies in public health events. It was found that enhancing the public's knowledge and risk perception can effectively promote their active participation in information selection and dissemination, providing data for governments and organisations to design more effective social media communication strategies in future crises. Meanwhile, the results of the study emphasise the importance of knowledge in risk communication. Therefore, risk communication should not only focus on information coverage, but also on information accuracy and comprehensibility, in order to enhance the public's risk perception and behavioural response.

This study was subject to several limitations. Firstly, the demographic sample of participants in this study was primarily Chinese and therefore not representative of the general population, and future research should ensure the inclusion of populations from a wider range of countries. Second, this study was conducted based on a cross-sectional survey and was unable to measure the causal relationship between knowledge, risk perception, and news curation among social media news users. Future studies may consider using more enriched study designs to explore causal relationships and temporal changes among variables. Finally, this study aimed to identify predictors of social media users' news curation behaviours during the COVID-19 outbreak period in China, which refers to the period from December 2019 to 8 January 2023, however, the survey took place in 2024, and therefore, recall bias may be present in the study.

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Conflict of interest

The authors confirm that there is no conflict of interest involved with any parties in this research study.

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