

PSYCHOLOGICAL ANALYSIS ON NETWORK RUMORS SPREAD IN COVID-19 EPIDEMIC

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received: 1.6.2022;

revised: 9.8.2022;

accepted: 19.8.2022

SUMMARY

Background: Since the outbreak of the COVID-19 epidemic, related rumors have been spread rapidly on social media, which has seriously affected public normal life and caused mental panic and anxiety. This paper, by analyzing the spread of online rumors and their impact on public mental health during the COVID-19 epidemic, aims to put forward relevant suggestions for dealing with rumors and improving public mental health.

Subjects and methods: According to the actual rumors collected during the epidemic period as the content of the questionnaire, an online rumor survey was carried out. A total of 1,200 questionnaires were distributed, and 1,165 valid questionnaires were collected.

Results: Among the sources of information about the epidemic, 78.2% of the respondents obtained epidemic information through online channels. 633 respondents were concerned about the epidemic situation, accounting for 54.3%. The respondents have different susceptibility to the epidemic sources, epidemic spread, epidemic treatment, epidemic influence, and epidemic prevention. They account for 37.2%, 43.4%, 45.2%, 39.4%, and 46.1% respectively. 646 respondents expressed great anxiety about the epidemic situation, accounting for 55.5%. The source ($t=26.33$, $P<0.05$), transmission ($t=28.32$, $P<0.05$), prevention ($t=35.36$, $P<0.05$), treatment ($t=40.32$, $P<0.05$), and impact of the epidemic ($t=42.01$, $P<0.05$) can significantly predict the transmission intention.

Conclusions: To control the spread of epidemic rumors and reduce the negative impact of such information on public mental health, the government and various walks of life need to collaborate to solve the problem from the aspects of information disclosure system, supervision means, and network communication system.

Key words: COVID-19 epidemic - network rumors - public anxiety - communication psychology - public mental health

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INTRODUCTION

In early 2020, novel coronavirus pneumonia outbreak, as a large-scale public health crisis, not only took away many public lives, but also disrupted the pace of public lives. Frequent and intensive epidemic reports have caused a lot of negative emotions. Rumors related to novel coronavirus pneumonia have also been reported on the Internet, and these rumors spread very quickly with the help of convenient network channels. In addition, with the continuous innovation of social science and technology and the reform of social governance, the carrier, the form of communication and the content of rumors have changed significantly (Shoib et al. 2022). Considering the necessity of epidemic prevention and control, it is necessary to analyze the channel and psychology of spreading rumors. Some scholars have analyzed the spread of the epidemic online rumors. For example, in this study (Gao 2020), the network rumors in the epidemic spread were taken as the object of analysis; the new characteristics presented in the rumors and the psychological reasons for the prevalence of rumors were analyzed, and specific countermeasures were also proposed. On the basis of clarifying the connotation of network rumors, this paper analyzes the factors that affect the generation, diffusion and dissemination of network rumors according to the three main bodies of the public, media and government and the network

communication environment in which network rumors are located (Yang & Wan 2020). Then, according to the main body and channel, the paper puts forward the improvement countermeasures, the media should bear the responsibility of communication, adhere to the professionalism of news, constantly improve the public media literacy, and build a more efficient rumor refuting platform. In their study, the COVID-19 epidemic situation was taken as an example, and some more effective sample data were collected with the help of online rumor dispelling platforms such as "Weibo Dispelling Rumors" and "Tencent Jiaozhen". The category, quantity, and characteristics of Internet rumors during the epidemic period were analyzed. It is of great practical significance and value to analyze the causes of network rumors in public health emergencies and put forward countermeasures accordingly (Sun & Pan 2020). Research believes that in order to improve the rumor spread of COVID-19 epidemic, it is necessary to first help the government sort out a good image, make epidemic information public in a timely manner, strengthen online legal supervision and management and ethics education for Internet users, and strengthen the governance of online rumors. In addition, he will further consider the deep reasons for the formation of Internet rumors of COVID-19 epidemic in his research (Liang 2020). Research suggests that the main reasons for the spread of online rumors are the concealment of social media, information asymmetry

and poor judgment of netizens, which all provide opportunities for the spread of online rumors (Zhang & Wang 2020). The network rumors bring great harm, which will affect political, economic, and social development. Meanwhile, the rumors have intensified the anxiety and fear of the epidemic, causing serious adverse effects on the normal life and mental health of the public (Agarwal et al. 2022).

In the studies carried out by the above-mentioned scholars, many of them elaborated the problems and causes of Internet rumor spread of COVID-19 epidemic, and also proposed corresponding solutions. However, these works are basically from the theoretical perspective, and it is rare to carry out specific investigation and research. While based on the real rumors in the COVID-19 epidemic, this study designed a corresponding questionnaire to investigate the spread of COVID-19 online rumors and the public's psychological status. With the specific data, the analysis is more convincing than the previous research results. There is also increasing research related to the psychology of COVID-19 transmission. Research has become more diverse.

THE RESEARCH METHODS

In order to better guarantee the situation and authenticity of the research object, the qualitative research method is adopted in this research. Authentic rumor texts that appeared during the COVID-19 epidemic were included to avoid external validity problems caused by the absence of realistic situations caused by the laboratory research paradigm. Rumors related to the COVID-19 outbreak were collected during the peak period of the outbreak, and the period from January 23, 2020 to February 15 was selected. These rumors can be searched on the Internet. According to the content of rumors, they can be divided into five aspects: epidemic source, epidemic transmission, epidemic impact, epidemic prevention, and epidemic treatment. Three rumor texts were selected from each category for analysis. Search relevant keywords on the largest search engine in China, including COVID-19 epidemic, rumors (hearsay, canard), etc., and find the true text of the rumors. The rumor texts that are not obviously related to this study were screened out, and 15 rumor text materials that are closely related to this study were finally selected.

In determining and screening rumor text, we need to rely on certain criteria, specifically: (1) In the network, we see the relevant articles, but also questioned its authenticity. This shows that there is obvious uncertainty in this text. (2) Rumor information has been mentioned or refuted by the authoritative media in China, which proves that the information has indeed achieved a wide range of dissemination. (3) The content of the rumor is directly related to the COVID-19 epidemic. (4) All epidemic rumors included in the study need to be approved by the researchers.

RESEARCH PROCESS

Samples

The study is aimed at the general population, including frontline health care workers, and people in a wide range of other professions that are not infected with COVID-19. A total of 1200 questionnaires were distributed, and 1165 valid questionnaires were collected. The distribution of gender, age and educational background of the samples is shown in Table 1.

Table 1. Basic demographic characteristics of survey participants

Survey items	Survey results	
	n	%
Gender		
Male	510	43.8
Female	655	56.2
Age		
18 to 30 years old	240	20.6
31 to 50 years old	638	54.8
51 to 72 years old	287	24.6
Educational background		
Master or above	185	15.9
Undergraduate	524	45.0
College degree and below	456	38.1

According to the statistical data in Table 1, it can be found that in terms of gender, the proportion of women is higher; in the age group, the number of people between 31 and 50 years old is the largest, accounting for 54.8%; in terms of educational background distribution, the proportion of undergraduates is the largest, accounting for 45.0%.

Evaluation Index

In this study, the evaluation indexes of Internet rumor propagation and psychological analysis in COVID-19 epidemic are mainly as follows: the propagation form of COVID-19 epidemic rumor; the general public's concern about COVID-19; the susceptibility to the source, spread, influence and prevention of epidemic rumors.

Statistical Methods

The statistical software used is SPSS21.0, the counting data is expressed by %, and χ^2 test is used; the measurement data is expressed by $(\bar{x} \pm s)$, and t value is used to test. $P < 0.05$ means that the data difference is significant, with statistical significance.

RESULTS

Access to epidemic information

Among the sources of information about the epidemic, 321 people got information from news, accoun-

ting for 27.6 percent; 305 people got information from QQ or WeChat, accounting for 26.2 percent; 287 people got information from Tiktok or Kwai, accounting for 24.6 percent; 146 people got information from gossip, accounting for 12.5 percent; and 106 people got information from other sources, accounting for 9.1 percent.

From high to low are news, QQ or WeChat, Tiktok /Kwai platform, grapevine, and other channels. As shown in Table 2.

Table 2. Access to COVID-19 epidemic information

Access	Number of people (person)	Proportion (%)
News	321	27.6
QQ or Wechat	305	26.2
Tiktok, Kwai	287	24.6
Grapevine news	146	12.5
Other channels	106	9.1
Total	1165	100.0

Public concern about the epidemic situation

Table 2 shows the survey results of the general public's concern about the epidemic situation. 633 people were very concerned about the epidemic, accounting for 54.3%, 403 people were generally concerned about the epidemic, accounting for 34.6%, 129 people were not concerned about the epidemic, accounting for 11.1%. As shown in Table 3.

Table 3. Public concern about the epidemic

Degree of concern	Number of people (person)	Proportion (%)
Very concerned	633	54.3
General concerned	403	34.6
Unconcerned	129	11.1
Total	1165	100.0

Public anxiety about the epidemic and willingness to spread

The degree of anxiety. Table 4 shows the survey results of the general public's anxiety about COVID-19 epidemic in this survey. According to the survey data in the table, 646 people said they were very anxious about the epidemic, accounting for 55.5%; 416 people expressed general anxiety about the epidemic, accounting for 35.7%; 103 people said they were not worried about the epidemic, accounting for 8.8%. Quantitatively, the number of people feeling anxious about the outbreak has increased significantly. In terms of population characteristics, individuals who are very anxious about the epidemic are highly overlapped with those who are very concerned about the epidemic. To analyze the influence of rumors on individual cognition and mental state, the group with high anxiety was investigated. According to the results, 82.5% of individuals said they were plagued by rumors about the pandemic; 79.3% of individuals said they couldn't tell the truth about the outbreak informa-

tion; 58.2% of individuals said rumors about the epidemic had seriously affected their quality of life. Statistics of concurrent symptoms were conducted for the anxious groups affected by the epidemic rumors. 45.2% of individuals reported varying degrees of sleep disturbance. 36.0% of the individuals thought that they had a depression tendency. 28.5% of individuals thought that irritability was controlling their mood. 7.6% of individuals reported symptoms of chest discomfort, and 13.4% of decreased appetite. In general, the epidemic rumors have had seriously aggravated public anxiety, including depression, irritability, and many other adverse conditions, which caused a serious negative impact on public physical and mental health.

Table 4. Public anxiety about the epidemic

Anxiety degree	Number of people (person)	Proportion (%)
Very anxious	646	55.5
General anxiety	416	35.7
No anxiety	103	8.8
Total	1165	100.0

The influence of anxiety level on the spread of epidemic rumors

In order to analyze whether public anxiety about COVID-19 epidemic would affect their willingness to spread epidemic rumors, a special regression analysis was carried out, taking the anxiety level as the independent variable and the willingness to spread epidemic rumors as the dependent variable. The results showed that anxiety level could significantly predict the source of epidemic rumors, $t=5.12$, $P<0.05$; Significantly predicted the spread of epidemic rumors, $t=5.14$, $P<0.05$; Significantly predicted rumors of epidemic prevention, epidemic treatment, and epidemic impact, with t values of 4.69, 4.15 and 5.72 respectively, and P values <0.05 .

Survey on the susceptibility rate of COVID-19 epidemic rumors

Table 5 shows the survey results of the susceptibility rate of the general public to COVID-19-related rumors. The susceptibility rate is the proportion of people who believe the rumor of COVID-19 outbreak in the total number of people surveyed. The results showed that 732 people did not believe the rumor about the source of the epidemic, 433 people believed it, and the susceptibility rate was 37.2%. There were 659 people who did not believe rumors about the epidemic, and 506 people who believed rumors, with a susceptibility rate of 43.4%. 628 people did not believe in the epidemic prevention, while 537 people believed it, and the susceptibility rate was 46.1%. 706 people didn't believe in the impact of the epidemic, while 459 people believed it, and the susceptibility rate was 39.4%; 639 people didn't believe in the treatment of the epidemic, while 526 people believed it, and the susceptibility rate was 45.2%. As shown in the table below.

Table 5. Survey results of rumor susceptibility rate

Epidemic rumor type	Unconvinced		Convinced	
	n	%	n	%
Epidemic source	732	62.8	433	37.2
Epidemic transmission	659	56.6	506	43.4
Epidemic prevention	628	53.9	537	46.1
Influences of the epidemic	706	60.6	459	39.4
Epidemic treatment	639	54.8	526	45.2

Table 6. Analysis on the correlation between the susceptibility of epidemic rumors and rumor re-dissemination behavior

Epidemic rumor type	<i>t</i>	<i>F</i>	<i>R</i> ²	<i>P</i>
Epidemic source	6.56	45.72	0.04	<0.05
Epidemic transmission	11.31	136.25	0.08	<0.05
Epidemic prevention	15.31	229.42	0.12	<0.05
Influences of the epidemic	9.61	89.36	0.06	<0.05
Epidemic treatment	10.34	106.93	0.08	<0.05

After investigating the susceptibility of the general public to rumor information of different types of COVID-19 epidemic, further investigation is needed to study the influence of public belief in rumor on their subsequent rumor spreading behavior. The degree of public belief in rumors was taken as the independent variable, while the dependent variable was public willingness to spread rumors, and the corresponding regression analysis was carried out. The results showed that:

- The degree of belief in the source of the epidemic could significantly predict the willingness to spread, $t=26.33, P<0.05$.
- The degree of belief in epidemic transmission could significantly predict the willingness to spread, $t=28.32, P<0.05$.
- The degree of belief in epidemic prevention could significantly predict the willingness to spread, $t=35.36, P<0.05$.
- The degree of belief in the treatment of epidemic disease could significantly predict the willingness to spread, $t=40.32, P<0.05$.
- The belief degree of epidemic influence could significantly predict the willingness to spread, $t=42.01, P<0.05$.

At the same time, it is also necessary to analyze the relationship between the susceptibility of the public to the epidemic rumors and the retransmission behavior of rumors. The independent variable is the susceptibility of epidemic rumors, and the dependent variable is the retransmission behavior of epidemic rumors. The survey results are shown in Table 6.

DISCUSSION

The main cause of COVID-19 rumor propagation

In the existing research, the rumors that appear with the major epidemic belong to the social public rumors in essence. Therefore, it also has the common characteristics of such rumors, and the main reasons for the rumors can be summarized as follows:

First, there is obvious uncertainty in the epidemic. In a certain period of time, the spiritual state of the masses appears frequently, including the external environment of the society, the needs of the masses, the emotions and the ideological trend. The novel coronavirus pneumonia epidemic is a major epidemic, and the number of infected persons has exploded in a short time. Relevant experts cannot predict the turning point of the epidemic. The contradiction between the increasing number of patients and the limited number of health institutions is becoming more and more obvious, which leads to obvious uncertainty in the prevention and control of the epidemic (Wang et al. 2020, Slijivo et al. 2020). The convenience of network information transmission not only enables us to know the latest information about the epidemic, but also inevitably exposes us to information about the grim situation of the epidemic. For example, medical workers have also been infected or even died because of the epidemic. The whole social environment is affected by this burning atmosphere, and social members will have more concerns about their health and family members. In addition, in view of the needs of epidemic prevention and control, strict access control measures have been taken throughout the country, such as the closure of cities, villages or the use of loudspeakers to disperse crowds. These prevention and control measures, in the beginning of implementation, have brought great inconvenience to public lives and work. Ordinary people can't do anything to cope with the epidemic, and they can't stay out of the way. So, they will have more negative emotions such as anxiety and panic in their thoughts and psychology, which also provides a better environment for the generation and spread of epidemic related rumors (Karasar & Canli 2020).

Second, official information disclosure has been delayed. The most obvious representative of this is SARS outbreak in 2003. The information was not released in time and there were various rumors. According to the survey results at that time, more than half of the population believed that the reason for the high number of rumors during SARS was the absence of the

government and relevant departments. Information from the government and authoritative news media is the most trusted information of the public during a major epidemic. Naturally, the public also hopes to have access to authoritative information to understand the situation of the epidemic and reduce the fear of the unknown development of the epidemic. If the official does not give the latest data on the epidemic in time or does not give a more authoritative explanation. People will try to explain the causes of the epidemic, how to spread, and so on, which has formed rumors. Although during the COVID-19 outbreak, the vast majority of regions released the latest information on authoritative media in a timely manner, there were also some regions that did not release the information in a timely manner, and the channels for releasing information were relatively single (Lu et al. 2020). This will reduce the credibility and influence of local government departments, and it will be difficult for the public to have a comprehensive understanding of COVID-19 due to the impact of information asymmetry. If social information disclosure is not effective, the public will make wild and blind guesses about the situation of the epidemic.

Third, science popularization is not in place. In the prevention and control of COVID-19, President Xi pointed out that the COVID-19 epidemic is a major sudden health event with the largest number of people infected and the fastest transmission rate since the founding of the public Republic of China. It is precisely because of the urgency of this public health event and its widespread coverage that the epidemic prevention and control has become more difficult. Faced with such a severe situation, many medical workers and other workers from all sectors have been on the front line, making their own contributions and efforts for the prevention and control of the epidemic. But for the general public, what they can do is fight the disease at home. Many ordinary people are also following the progress of the COVID-19 epidemic all the time, but due to their lack of relevant professional knowledge, they make mistakes in the understanding and prevention of COVID-19 epidemic. If the authorities do not scientifically and comprehensively popularize the COVID-19 epidemic, the public will look for some explanation for itself. They may not be able to distinguish whether the explanations they have collected are reasonable or not. They just think that the explanations are reasonable within their own cognitive scope, and then they will spread the information to the people around them. This has become a way for rumors to spread (Fang 2020). For example, how is COVID-19 transmitted, and how can it be better prevented? If the general public does not have access to scientific knowledge in time, it is very likely that they will come into contact with some “quack doctor” remedies, so during the COVID-19 outbreak, we have seen a variety of remedies.

Fourth, the public's understanding of COVID-19 is not deep and comprehensive enough. In the social psychology level, it is pointed out that people are often under

the pressure and influence of the whole group in the process of cognition of something. Then individuals will adjust their behavior and consciousness, and finally keep consistent with the whole group, which is the conformity psychology. Influenced by the Internet news, the public will get a lot of information about the epidemic every day from various ways, and what they accept is fragmented reading. As information acceptors, it is difficult for the public to judge the authenticity and effectiveness of the information they have obtained scientifically. But because they need to get sense of belonging, security, and self-identity, they will spontaneously read and forward information related to the epidemic. This information is spread among the community, leading to the spread of some deceptive and inflammatory rumors more and more widely.

Fifth, the adverse effects of “We Media”. With the development of various platforms at present, we media have provided space for expressing opinions. They take responsibility for the dissemination of information, and gradually become the main task in crisis events. The development of we media will make the scope of information dissemination increase continuously, but at the same time, the professional level of these we media is different, and the communication platform is very diverse, and the information control is still in a relatively weak situation. Therefore, there will inevitably be a variety of different information mixed together, and the contradiction behind the information will inevitably have side effects (Lv 2020). The COVID-19 epidemic affects the hearts of the whole country. The epidemic information is also spread at a fast speed in the all-media environment. All kinds of rumors are spread in friends' circles, Tiktok, BBS, Weibo, etc., with an increasingly wide range of audiences. Compared with the traditional media, anyone who has the basic conditions to access the Internet can express their views and positions on the Internet. This leads to a vulnerability in filtering information. In addition, a lot of information can be reproduced freely on different network platforms, and a lot of information has not been authorized, which makes the process of rumor confirmation more difficult.

Sixth, the epidemic rumors themselves have attractive content. The spread of rumors requires an appropriate external environment, such as the audience, carrier, and information source, etc. The attraction of the rumor itself is also the reason why it can spread in large numbers. For example, some of the rumors in the COVID-19 epidemic have a lot of folk remedies for how to treat the epidemic, or how to prevent it better? At that time, the public generally hoped for a method to prevent and treat COVID-19, so the contents of these rumors well met the psychological needs of the audience. It makes the audience more willing to spread rumors and becomes the relay station of rumor transmission.

Analysis of the results

As far as the spread channels of COVID-19 epidemic rumors are concerned, news is the most popular one, followed by QQ or WeChat. In the process of

communication, WeChat or QQ are the main social media. News, QQ, WeChat, Tiktok, Kuai, etc. all belong to the network platform. And this study investigated the awareness and behavior of the general public regarding COVID-19 epidemic rumors. The results show that 55.5% of the population is very anxious about COVID-19, and the spread of epidemic rumors aggravates public anxiety, depression, and other adverse mental conditions. The mental health of the public is being endangered.

Some research results show that people will inevitably have anxiety, fear, depression, and other adverse emotions when facing public health events. In response to rumors about the source and impact of the epidemic, people are concerned about whether the current epidemic will continue to expand and whether it will have a more serious adverse impact on the current life and production activities. When individuals have these anxieties, they will be in the psychology of risk sharing and fear elimination, and they will spread the information they have obtained to others. At the same time, based on the analysis of the perspective of dual processing, public processing of emotional information belongs to automatic processing. After hearing the rumors related to the epidemic, people will inevitably be affected and infected by these emotions, and their own experience will be more intense. Because of the influence of these strong experience, people will be less able to distinguish the truth and falsehood of rumors. They will choose to believe such information directly and spread it out (Song et al. 2021).

The study also investigated the susceptibility of the public to COVID-19-related rumors, and further investigated the influence of the susceptibility of the public to COVID-19-related rumors on spreading awareness and resspreading behavior. The results show that the susceptibility to epidemic prevention, public opinion treatment and epidemic transmission is relatively high. This indicates that the public is eager to find a way to prevent and treat COVID-19 as soon as possible. And research has shown that public susceptibility does positively predict their rumor-spreading awareness and resspreading behavior. In short, the more people trust certain rumors, the more likely they are to spread them. According to Olbert's research, the process of rumor spreading follows certain rules: simplification, intensification, and assimilation. If the content of the rumor is rough, it will spread more strongly. This is because the lack of these details in the content will make ordinary people have no chance to think about more details, and they are more willing to believe in rumors. If the COVID-19 rumor is in line with current public opinion and accumulated experience, it will also spread rapidly.

The results of this research must also conform to the basic law of rumor spread. When people come into contact with rumors, they combine their accumulated experience and knowledge to process the information and integrate their own views, and finally spread the rumors mixed with their own ideas. From the perspective of cognitive resources, people will put more resources and attention on the content that is beneficial or potentially

beneficial to themselves after they are exposed to the rumors. Therefore, the information that seems to have obvious warning effect and high credibility is more likely to attract public attention, and has a greater chance to be reprocessed and spread. During the outbreak of COVID-19, the news published by People Daily mentioned a sentence that "Shuanghuanglian can inhibit COVID-19 virus", and this information became that it could prevent novel coronavirus after being reprinted and spread by many different media, and all the major drugstores were sold out overnight. Ordinary people will choose to forward the information after they see it forwarded by others. Even if some audiences are skeptical of the authenticity of information at the beginning, they will gradually change their attitude and keep in line with the group.

Analysis of the key countermeasures to control the spread of epidemic rumors and improve public mental health

First, the main responsibility of different government sectors must be clear to realize their supervision. Relevant departments should formulate various prevention and control measures and attach importance to the implementation. We shall pay attention to public mental health and provide regular psychological counseling. It is of great importance to promote the effective resumption of production and living activities so that the public can return to normal life at an early date. After social and psychological harmony and calm, rumors would stop spreading and gradually disappear. People would be able to devote more time to their studies and work. The fear of a city shutdown that occurred during the height of the COVID-19 epidemic is no longer there, nor is there much attention paid to the "super-spreaders" of news and public accounts.

Second, the system of information disclosure is constantly improving. The reason why the public is willing to believe and spread rumors is that they are not professional enough to make professional judgments on rumors. Therefore, professional institutions should open relevant authoritative information in time to enhance the public reliability of society. In the specific work, we must ensure the credibility and accuracy of information to reduce the public misreading and misinformation. In addition to paying attention to the scientific and transparent information, we must also pay attention to the public's acceptance of the information, that is, the ultimate effect of information transmission. So not only do we need to publish news on official websites, but also publish news on platforms familiar to the public, such as Tiktok, Toutiao, micro-blog, etc. Dingxiangyuan is a more authoritative platform in medical circles. They will break many rumors by timely releasing news on various platforms. Government departments should not only publish statistics on infection, but also how to prevent and control the epidemic and the movements of infected people (Sun & Zhang 2020). More people should be involved in the prevention and control of epidemic in a more diversified way.

Third, improve the network communication system. Due to the imperfection of network related legal system, many people have taken advantage of it. After the outbreak of a major epidemic, we must do a good job in optimizing the network communication system to avoid all kinds of rumors to bring panic to the society. First of all, based on the existing legal rules, we should regulate the Internet communication. If we find people who spread rumors, we must let them bear the corresponding legal consequences and ring the alarm for other people who want to spread rumors. Then, we need to broaden the existing network supervision channels and formulate corresponding incentive measures. Encourage the public to report rumors after they find out, and they are more willing to report and spread rumors. Finally, we should build a more perfect mechanism for rapid response to the epidemic situation, and comprehensively carry out epidemic situation, prevention, policy and police rumor refutation, so as to let the rumor break itself.

CONCLUSIONS

To sum up, this study firstly elaborated on the current research progress of existing scholars on Internet rumor propagation of the COVID-19 epidemic, and clarified the necessity of conducting this research. The questionnaire was used to investigate the psychological, behavioral, and mental health status of the public during the spread of COVID-19 pandemic rumors. The results show that the main way for ordinary people to accept rumors is through the network channel. Epidemic rumors have a serious adverse impact on public mental health, which is one of the causes of psychological crises such as anxiety and depression. Public anxiety and susceptibility to epidemic rumors can positively predict their awareness and behavior toward spreading rumors.

Acknowledgements: None.

Conflict of interest: None to declare.

Contribution of individual authors:

Wutao Tian: conception and design of the manuscript and interpretation of data, literature searches and analyses, clinical evaluations, manuscript preparation and writing the paper.

Xiao Li: made substantial contributions to conception and design.

Shurui Jiao: literature searches and analyses, participated in revising the article.

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