

Study on the Evolutionary Mechanism of Social Stability Risk of Major Public Health Emergencies

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Abstract: The outbreak of major public health emergencies and the spread of epidemics often seriously threaten people's lives, hinder normal economic development, and even endanger social order and lead to social instability, therefore, it is important to study the evolution mechanism of social stability risk of major public health emergencies. Based on the definition of social stability risk of public health emergencies and identification of major risk categories based on existing research results, the evolution mechanism of social stability risk of public health emergencies is analyzed using social combustion theory, and relevant suggestions are made from the perspective of the three elements of social combustion in order to provide reference for risk management.

Keywords: Social stability risk, Evolutionary mechanism, Major public health emergencies.

1. Introduction

Since the turn of the century, major public health emergencies have occurred frequently, causing great harm and damage to people's physical and mental health and social and economic development, as well as causing great disturbance and deterrence to the credibility of the government and national governance. In particular, once a public health emergency, mainly major infectious disease outbreaks, has broken out, it may lead to one or more risk events in other different areas in addition to the great risk it poses, causing multiple risks to overlap and expanding the impact and damage of the original risk, such as the SARS virus in 2003 and the new coronavirus outbreak starting in 2019 (COVID-19, hereinafter referred to as the "new coronavirus outbreak" or "outbreak"). In recent years, how to avoid risk nesting and reduce the difficulty of risk management after public health emergencies has been an issue of close attention from academics and governors at all levels. The current academic research on the risk of social stability in public health emergencies mainly includes:

A study on the connotation of social stability risk. The term "social stability risk" was first proposed by the Suining Municipal Government of Sichuan Province in 2006 in the process of risk assessment of major local engineering projects. The term "social stability risk" has attracted the attention of all walks of life, but the concept of social stability risk is not yet clear in the academic community. Some scholars, from a broad perspective, believe that the concept of social stability risk is the same as that of "social risk" in the West, i.e., any risk factor in the political, economic, and cultural systems that interferes with the social order and causes social unrest can be considered as social stability risk (Chen, Jing, 2010[1]; Zhou, Hongyun, 2013[2]); some scholars, from a narrow perspective, emphasize the direct and specific root cause of social stability risk, considering social stability risk as the possibility of social destabilization due to relevant risk factors brought about by major policies, projects or unexpected public health events (Zhang Huan 2016[3]; Chen Chang 2021[4]). Considering that social stability risk arises from the needs of China's political practice, it is suspected that it is

detached from China's social practice if it is equated with "social risk" in the West[5]. Therefore, this paper argues that the concept of social stability risk should be defined from a narrow perspective, and defines social stability risk of public health emergencies as the possibility that the social system changes from order to disorder under the joint action of relevant risk factors due to the emergence and development of the event, which endangers social development, affects the normal order of society, and causes social conflicts.

Research on the evolutionary mechanism of social stability risks. Most of the existing studies have focused on the field of engineering projects and natural disasters, such as Hu Xiangming (2014[6]), who argued that risk is a product of the subjective perception of the population and cannot be measured, applied risk perception theory to examine the inner mechanism of social stability risk of large-scale engineering projects and revealed its evolutionary logic as: "risk source generation- media communication-population perception-social destabilization"; Wang Weiquan (2015[7]), when studying the social stability risk of environmental projects, applied risk amplification theory to analyze and found that the public would generate a lot of negative emotions after realizing the possible environmental pollution caused by the project, and if the negative emotions were not relieved in time, then social stability risk will be generated under the stimulation of media reports and mass events; Li Fei (2022[8]) analyzed the evolution mechanism of social stability risk of major railroad projects with the help of social combustion theory and revealed that three basic elements are required to cause social stability risk: the breeding of interest conflicts, the promotion of network media, and sudden social events, and these three elements are in the form of a one-way chain. The social stability risk is generated in the form of a one-way chain of action. In addition to the relevant studies in the field of engineering projects, Cao Feng (2014[9]), based on the social-ecological system theory, believed that social stability is closely related to individual behavior and social environment, and put forward 36 risk factors affecting social stability from eight aspects of environmental dimension and elaborated the internal logic of each factor causing social destabilization; Wang Jin

(2015[10]), through combing the existing relevant literature, explained the general generation process of social stability risk as "risk source-risk amplification-risk detonation-social instability", and used this logical process to analyze the evolution of social stability risk brought by resettlement.

In summary, the current research on the social stability risk of public health emergencies has achieved some milestones, but there are still some shortcomings. Most studies on the evolutionary mechanism of social stability risk have focused on engineering and natural disasters, and very few studies on the evolutionary mechanism of risk in the field of public health emergencies have been conducted. In order to enrich the relevant research content, this paper defines the connotation of social stability risk of public health emergencies based on the existing research results and analyzes the evolution mechanism of social stability risk of public health emergencies based on the identification of main risk categories using social combustion theory.

2. Identification of Social Stability Risk Impact Factors for Public Health Emergencies

The development of public health emergencies often triggers many potential risk factors that endanger social development and social order and cause social conflicts. First, studies have found that the occurrence of public health emergencies can lead to damage to government trust mechanisms[11]. The occurrence and development of public health emergencies often reduce the people's sense of well-being and security, and at this time, if the government performs poorly in emergency response, it will cause public dissatisfaction, damage the government's credibility, and cause political trust risks that may affect social order (Xu Yuzhen, 2019[12]; Xu Biao, 2019[13]). And because of the intertwined relationship between trust and risk, i.e., the "Tacitus effect," a fragile trust mechanism can hardly guarantee the normal development and smooth operation of society (Zhang Weiyong, 2002[14]). Secondly, with the advent of the new media era, a public sphere has been formed that allows the public to freely communicate, fully debate, and gather public opinions, and in this context, the occurrence of public health emergencies is prone to generate emotional online public opinion. According to Zhang Xiaorong. (2022[15]), there are two effects of online public opinion caused by public health emergencies: first, it can effectively collect public opinion and help decision makers make scientific decisions and communicate effectively; second, if emotional online public opinion is not properly guided, it will form a "butterfly effect" in cyberspace, which will not only drown the reasonable demands behind the public opinion, but also create a "butterfly effect" in cyberspace. It will not only drown the reasonable demands behind the public opinion and intensify the public's dissatisfaction with the government, but also endanger people's physical and mental health and social stability through extreme emotions and rumors, forming the risk of network public opinion. Finally, the occurrence of public health emergencies has a large psychological impact on the people and is likely to generate psychosocial risks. It has been found that patients who have experienced SARS still have obvious psychological disorders such as compulsion, hostility, and paranoia nearly one year after healing, and related medical personnel are also prone to negative emotions

such as depression and fear due to the high intensity of work and being away from their loved ones[16]. Further, some scholars have suggested that initial public health emergencies are prone to anxiety, depression, insomnia, and other problems due to the strong suddenness and uncertainty, and these problems will lead to psychological changes in the general public with the intensification of social circumstances such as people's lives and health and economic losses, inducing various kinds of psychological stress reactions, exacerbating various negative emotions, and causing psychosocial risks (Cheng Jin, 2018[17]; Motreff, 2020[18]). In summary, combined with the connotation of social stability risk of public health emergencies, it is known that political trust risk, network opinion risk, and social psychological risk caused by public health emergencies may be potential influencing factors or sub-risks that induce social stability risk. This paper intends to use social combustion theory to specifically analyze the generation mechanism of social stability risk of public health emergencies from these three aspects.

3. Analysis of the Evolutionary Mechanism of Social Stability Risk of Public Health Emergencies

3.1. Introduction of social combustion theory

Academician Niu Wenyuan first proposed the social combustion theory in 1994 in his Introduction to Sustainable Development, which argues that certain disorderly phenomena in the field of sociology can be analogous to the combustion phenomena in nature. The social combustion theory believes that when people and nature and people and people live together in harmony, the social system can maintain a stable state for a long time, but as soon as the above-mentioned relationship deteriorates, a large amount of combustion materials will be formed one after another, giving different degrees of negative contribution to the original social stable state and causing individual disorder and chaos in the social system. If incited by negative public opinion, the disorderly and chaotic individuals in the social system will continue to grow and assemble into a group full of negative emotions. At this time, under the stimulation of a certain point of fire temperature, the group full of negative emotions will produce a series of extreme behaviors, leading to a comprehensive outbreak of social stability risks. It can be seen that the social combustion theory describes the social system from order to disorder is the process of contradiction from quantitative to qualitative change, the process and the same as the natural combustion must also have combustion material, accelerant, ignition temperature of the three elements. The social stability risk of public health emergencies describes the possibility of the social system changing from order to disorder under the joint action of related risk factors after the occurrence of public health emergencies. Therefore, this paper has some applicability to analyze the evolution mechanism of social stability risk of public health emergencies by using social combustion theory.

3.2. Burning substance of social stability risk

Social combustion theory usually regards social conflicts as burning substances. Faced with the occurrence of public health emergencies, enterprises and civil organizations lack sufficient capacity and motivation to respond, leading to an obvious non-competitive and non-exclusive nature of event

governance, which requires government-led governance, which must be in the interest of the people[19]. This characteristic determines that social conflicts under emergencies basically arise between the people and the government, so this paper considers political trust risk as a burning substance of social stability risk of public health emergencies and identifies it from two perspectives: from the government and from the public.

From the government's perspective, the political trust risks are respectively: First, there is a time lag in the supply of government information. The development of sudden public health events is uncertain and destructive, and the timely release of information by the government can fully guarantee the public's right to know about the events and help individuals to do effective protection. However, the government information disclosure system requires the government to screen and analyze the collected information before releasing it, and the time lag will cause the government's information supply to fail to match the public's urgent needs and cause public dissatisfaction. Second, the collaboration between administrative regions and various departments is not efficient. In the face of public health emergencies, on the one hand, the progress of prevention and control of epidemics and disasters differs among administrative regions due to their different emergency response capabilities and resources, making it difficult to achieve joint prevention and control through unified dispatch. On the other hand, various departments in the same administrative region may suffer from the interference of limited rationality and interest preference, and are in a negative state of fragmented goals and unwilling to compromise or even resist each other. Waiting for these will lead to the government governance efficiency is lower than the public expectation, triggering trust risk.

From the citizens' perspective, the political trust risks are: first, the public's lack of relevant knowledge. The government with relevant specialized talents will assess the hazards of public health emergencies from a rational perspective, while citizens will generally assess the hazards of events according to their own subjective consciousness and personal experience, and their assessment results will often be biased due to the lack of professional knowledge[20], resulting in the trust risk of misunderstanding government actions and even blindly resisting government emergency measures. Second, citizens' political participation is not active. Due to limited participation channels and imperfect participation systems, citizens are less likely to participate in political activities under public health emergencies, which not only makes it difficult for citizens to express reasonable demands, but also does not help the government to collect ideas and make decisions that are in line with citizens' will and protect their interests, which in turn causes dissatisfaction among citizens.

3.3. Fuel for social stability risks

Social combustion theory considers social opinion as a fuel that drives the proliferation of social instability. With the rapid development of Internet technology and new media industry, cyberspace has become the most important gathering place for social opinion, and online public opinion has become the most powerful social opinion in terms of dissemination[21]. Therefore, this paper considers the risk of online public opinion as a fuel for the risk of social stability of sudden public health events and analyzes it from two aspects: online media and online public opinion information.

The risks of network public opinion in terms of network media are mainly the following: first, the authority of network media is not strong. When a sudden public health event occurs, the content delivered by network media to the public includes objective information and value concepts. If the authority of network media is low, the value concepts delivered by them often lack persuasive power, which makes it difficult to guide the public's emotions in the right direction and encourages the spread of negative social emotions. The second is the dereliction of duty of the network media. Due to the lack of corresponding supervision, some online media often report news oriented by their own interests, maliciously speculate on objective facts, and are late and absent in clarifying false news, which aggravates people's panic and anxiety.

The risks of network public opinion in terms of network public opinion information are: first, the generation and rapid spread of rumors. Rumors about public health emergencies often follow hot topics of current affairs and spread rapidly under the pretext of eliminating public panic and suppressing negative emotions to occupy public opinion positions. At the same time, online media often do not pay attention to the source management and clarification of rumors, which makes rumors grow geometrically in the online world and amplifies negative social sentiment. Secondly, due to the influence of "negative bias", positive public opinion is often not disseminated effectively. Although touching positive news can be found everywhere on the Internet, it is less attractive to the public than sensationalized negative news, which leads to the poor dissemination of positive public opinion, and the effective dissemination of positive public opinion is an inherent driving force to avoid the risk of online public opinion^[22]. public opinion risk.

3.4. Fuel for social stability risks

It has been studied that the occurrence of mass events is the fuse, or ignition temperature, that breaks the usual stable state of society. As the last straw that crushes the camel, mass events generate social stability risk only when the psychological tolerance of the population decreases to the extent that it prompts excessive perception of risk[23]. And both declining psychological tolerance and mass events belong to the category of social psychological risk[24], so this paper identifies social psychological risk as the ignition temperature of social stability risk formation in terms of both mass events and psychological tolerance.

Psychosocial risk in terms of psychological tolerance is that when faced with a crisis event, people with pessimistic traits such as uneasiness, distrust, and relative deprivation are more likely to overperceive risk than people with positive and optimistic feelings[25], inducing a variety of psychological stress reactions and keeping their bodies and minds in a state of long-term tension, leading to psychosocial risk.

The sources of psychosocial risk in the context of mass events are: first, a stronger sensitivity. Sensitivity[26] refers to the extent to which mass events involve sensitive topics such as government, people's livelihood, civil rights, property, etc. The stronger the sensitivity indicates that the public's personal interests are more negatively affected by mass events, and the more likely to lead to risk outbreak. The second is the larger scale. The scale refers to the geographical scope and number of people involved in mass events, and the larger scale means the greater the negative contribution of mass events to the pressure of government governance and social stability state, which in turn causes social psychological risk.

In summary, under the high stress environment caused by public health emergencies, the deterioration of the relationship between the public and the government caused by the lack of government credibility will cause political trust risk and exert a negative contribution to the original social stability state, resulting in individual disorder and chaos in the social system. Then, after the push of the risk of online public opinion, the disorderly and chaotic individuals will gradually

develop and grow into a group full of negative emotions. Finally, when the people's psychological capacity decreases to a certain threshold, the outbreak of group events will cause social psychological risk. At this time, if the social psychological risk cannot be effectively managed in time, the people will produce a series of extreme behaviors, causing social order chaos and generating social stability risk. The relevant risk evolution model diagram is shown below.

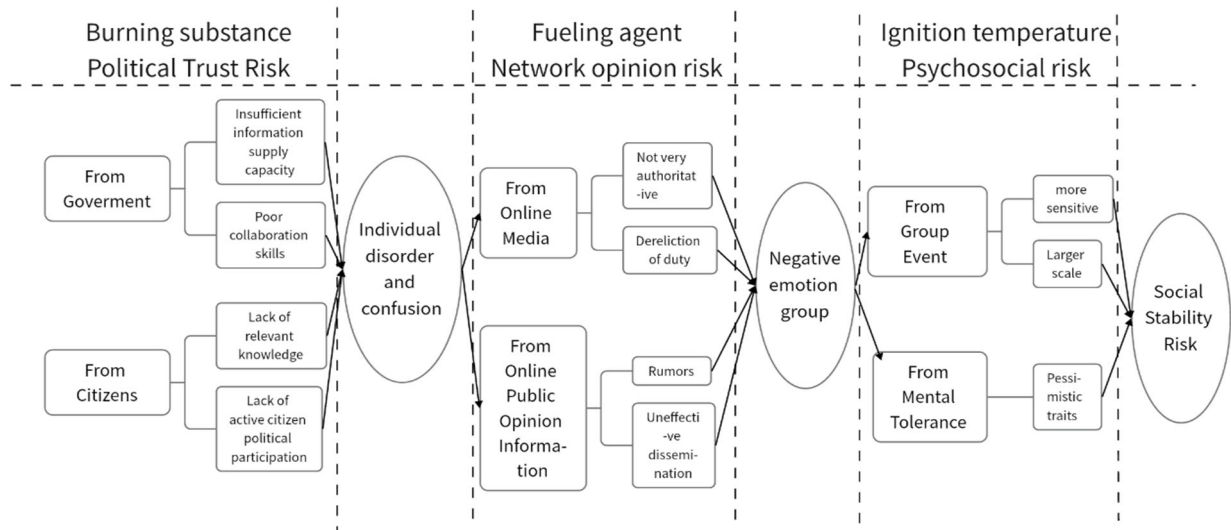


Figure 1. Mechanistic model for the evolution of social stability risk of public health emergencies

4. Policy Recommendations

According to the analysis of the evolution mechanism of social stability risk of public health emergencies, this paper intends to put forward relevant suggestions from three perspectives: political trust risk, network opinion risk and social psychological risk.

4.1. Improve the credibility of the government and scientifically reduce the risk of political trust

As the burning material of social stability risk of public health emergencies, political trust risk is the basic factor of social stability risk, and the more the number of burning material, the larger the burning scale. Can start from the following aspects of science to reduce the risk of political trust, to achieve the source of risk management. First, improve the information disclosure system. The government should face the public information needs, and actively seek the public's requirements and suggestions on government information disclosure, to ensure that the information is open and transparent in a timely manner, and effectively resolve the public's questions; second, give full play to the subjectivity of the people in charge. Public health emergencies are challenges and opportunities, and local governments should take risk management under emergencies as an opportunity to improve and transform government decision-making mechanisms, broaden the channels for people's participation in national governance, give the public more opportunities to express their views and express their opinions, pool their wisdom and respond to risks scientifically and effectively; third, optimize the emergency governance collaboration mechanism. Seek the assistance of professional institutions and civil organizations outside government departments,

bring into play the professional advantages of forces outside the government, achieve a reasonable division of labor, and optimize the risk prevention and control mechanism. At the same time, a cross-level, cross-regional and cross-departmental emergency mutual aid system can be established to assist units, regions and departments with insufficient governance capacity and resources to respond to public health emergencies; fourth, a system of scientific popularization of public health emergencies should be established. Relevant departments should incorporate the scientific popularization of relevant knowledge into the national education and propaganda system to raise the national awareness level of public health emergencies and enhance their own prevention and emotional diversion capabilities.

4.2. Dissipating negative network public opinion and effectively suppressing network public opinion risk

Under the premise of having combustible substances, the risk of network public opinion as an accelerant intensifies the expansion and development of social stability risk of public health emergencies. To this end, measures can be taken to suppress the risk of network public opinion from the following points. First, network media people should improve their professionalism. Network media staff should strengthen their professional knowledge and enhance their sense of social responsibility, and in the process of event reporting, they should ensure both the objectivity and truthfulness of information sources so that the public can accurately and comprehensively perceive the risks, and also ensure that the dissemination of views and values is in line with the main theme and adhere to the correct guidance of public opinion; second, strengthen the supervision of network media. The

government can use technologies such as big data to monitor the content of media output in all aspects and dissipate harmful online information in a timely manner. In addition, it should establish a sound system of laws and regulations so that the governance of online public opinion can be based on the law, and online media that violate core values and professional ethics should be held accountable according to the law and made public in a timely manner as a warning; thirdly, it should effectively manage rumors. Within 24 hours of rumor generation is the golden period for disinformation, and the government should make full use of this time to screen out rumors from a large number of online public opinions with the help of big data technology, classify rumors in a hierarchical manner according to the degree of harm, and adopt different response measures and punishment programs for rumors of different levels and categories; fourth, enhance the dissemination effect of melodramatic public opinions. The online media can set enlightening issues in line with the main theme around sudden public health events, integrate diverse and youthful elements, and scientifically guide the public to participate in the discussion of the issues, thus helping the public to receive correct information of public opinion in the discussion and weakening the influence of negative public opinion.

4.3. Resolving negative public emotions and precisely reducing social psychological risks

In the development process of public health emergencies social psychological risk is the direct trigger of social stability risk, effective control of social stability risk, the most direct measure is to reduce social psychological risk, for which the author believes that measures can be taken in the following areas. First, strengthen public psychological intervention. The use of information technology means to scientifically study and judge the public psychological situation under public health emergencies, accurately grasp the public's mental health needs under public health emergencies, in response to the public's real-time situation and needs, the organization of professional psychological personnel to provide online and offline psychological assistance to alleviate the public panic, depression and other emotions; Second, the establishment of a sound psychological service mechanism. The psychosocial service mechanism will be written into the relevant laws and regulations, so that the work units have laws to follow when performing psychological interventions, improve the efficiency of psychological treatment, and thus guarantee the healthy psychological condition of residents under crisis events; third, improve the early warning mechanism for mass events. Relevant departments should establish a set of sound early warning mechanism from early warning information collection, early warning information analysis and research, crisis identification and detection, crisis alarm to response plan pre-design, so as to effectively reduce the degree of harm of mass events, enhance the government's emergency response capability and people's sense of security, and increase people's confidence in coping with risks.

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