Research on Urban Public Security Risk Management under the Background of Tobacco Control

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Objectives:Through the reflection on the city's response to the crisis in the process of tobacco control, a comprehensive and systematic public safety prevention and control system will be built to help cities cope with future risks and challenges.Methods:By using the methodological principle of the unity of subject and object and systematic research, this paper analyzes the problems from the three aspects of subject, object and means, and puts forward three important links of prevention, response and guarantee to construct a large urban public security system, and these three links support each other to form a closed loop of risk prevention and control of urban public security.Results: Under the background of tobacco control, it is feasible to a reliable whole-cycle management system for urban emergency response and accident rescue, a sound basic public safety guarantee system and a whole-society participation system.Conclusions: Due to the change of global climate conditions and the increase of the flow of people in the social environment, human beings will face a more complex living environment in the future and may encounter more extreme problems. It can be said that at present and even in the future, global urban public security risk management work is facing a grim situation. WHO research shows that smoking will increase the risk of new crown virus infection among smokers and their surrounding population.China is a big smoking country and is in the stage of rapid urbanization. Many citiesare densely populated. Once there is an epidemic infection, the cities will face a severe public security situation.Smoking will not only have an adverse impact on personal health, but also the fires in factories, homes and forests caused by smoking.Since the Chinese government's tobacco control in 2014, various accidents caused by smoking have caused great adverse effects.Smoking in public places has great hidden dangers of public safety, which leads us to think about the risk management of urban public safety.In the context of tobacco control, we should use scientific thinking and methods to construct a new pattern of urban public security risk management. Another important concept is to implement the risk management concept and the value of prevention first in the daily management of public affairs, so as to create a situation of risk sharing and coordinated response of the whole society.

The Chinese government issued the regulations on smoking control in public places in 2014, and then relevant regulations were issued all over the countrytocontrol smoking in public places. However, the effect of

smoking control is not ideal in small and medium-sized cities and rural areas. Smoking has caused many public safety accidents such as fires in factories, houses, gas stations, shopping malls, Internet cafes and cinemas. China is a big smoking country. A survey of 1826 people in the eastern Chinese city of Lianyungang shows that(Figure 1) a considerable number of the public are affected by second-hand smoke in public places. WHO research shows that smoking will increase the risk of new crown virus infection among smokers and their surrounding population. Densely populated cities are the main battlefield of tobacco control, so does the Prevention and control of novel corona virus pneumonia. Novel corona virus pneumonia epidemic has gradually entered the stage of normalization prevention and control. China's tobacco control has entered the seventh year, which all put forward many new requirements for city public safety governance.
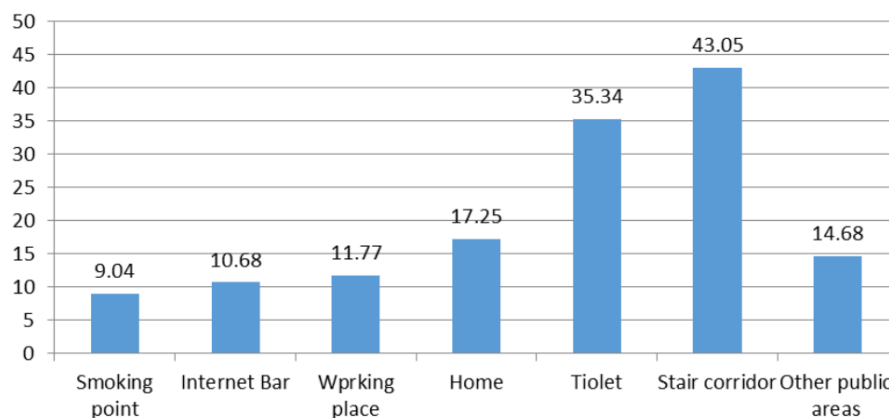

Figure 1 Exposure to Second-Hand Smoke in Public Places (%)

Risk and uncertainty are unavoidable issues for human beings[1].How can cities prepare for the uncertain risks in the future? From the perspective of the situation faced by urban public security,On the one hand, with the rapid aggregation of urban factors and the continuous expansion of population, function and scale, the more dense the population, the greater the impact of smoking in public places,On the other hand, the construction of our crisis management system cannot keep up. The complexity of the urban operation system, the openness of the social system and the high mobility of the elements lead to the multi-facet interweaving of urban security risks, and the frequent occurrence of public security incidents, which are increasingly presented with the characteristics of complexity, diffusion, urgency, high uncertainty and harmfulness. The inherent balance of the city is fragile. When dealing with novel corona virus pneumonia such a large-scale outbreak,the balance of cities can easily be upset. There are still many weak links in the modernization of urban public security risk management system and governance capacity, and both opportunities and challenges exist in urban public security risk management.

RISK PERCEPTION

Urban public security risk is usually a general term for all kinds of threats to life, property and psychology that people living in cities are experiencing or may encounter. Urban public security risk management means that the government and other social subjects provide the public with the supply of public security products and services by integrating resources and power, so as to eliminate the losses and injuries caused by public security incidents[2].Emergency management is to deal with the ongoing events, and the management of the possible events is a step forward, which is the management of risk. According to the development process, risk management can be roughly divided into three stages: risk identification, risk assessment and risk control(Figure 2).
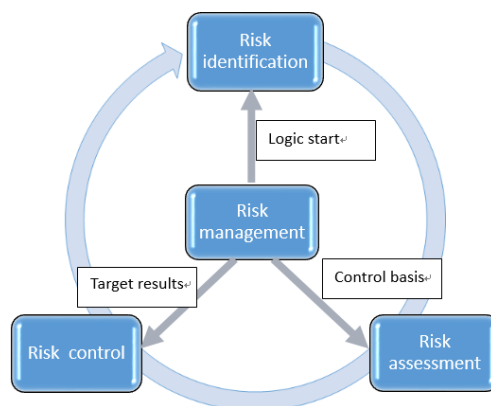
Figure 2 Risk Management Operation Diagram

Risk identification is to find out risk sources and potential causes of risk through data collection and field investigation before the occurrence of risk accidents[3].The first task of "nip it in the bud" is to identify the source of the disease. Risk identification is the basis of analyzing the development of urban public safety incidents and the logical starting point of risk assessment and control. Effective risk identification of urban public security can comprehensively and accurately identify risk sources of urban public security, and sort out the possible emergencies and possible consequences of the incidents. Risk assessment is a process that uses a transparent, reproducible and pre-established methodology to evaluate alternatives for managing health-related risks. We can in applying risk assessment methodologies to tobacco regulation.[4]Risk assessment of the city is to use the risk assessment index system of urban public security to measure the possible risks in the city, and to provide reference for scientific decision-making. The risk assessment method can be applied to tobacco regulation and research. Risk control means that the risk management subject takes various measures and methods to eliminate or reduce the possibility of the occurrence of risk events, or reduce the loss caused by the occurrence of risk events. Of course, one point of view is certain, that is,although tobacco control is carried out, it does not mean that the risk of urban public safety has been reduced or eliminated. Because of the complexity of risks, urban public safety risks cannot be completely eliminated.

PROBLEM ANALYSIS

Look with respect to governance main body,plural governance faces problems. The general public security problems in cities can be better dealt with by government management and social mobilization to a certain extent. Major public security events, especially those like Tobacco control, require more human, material and financial resources. It requires not only the coordination of multiple departments, but also the consultation, coordination and joint management between social organizations and citizens. As we know from the response to accidents caused by smoking, the effectiveness of the government response is closely related to public understanding and participation. From the perspective of epistemology,we should understand the response of public participation in the accidents caused by smoking from two aspects: one is that the public views the emergency from the perspective of the subject; second, the public views emergencies from the perspective of object. Different perspectives lead to huge differences in the public's willingness to participate and actual actions.Especially the old smokers, combined with the impact of smoking addiction, it is more difficult to take into account the damage of smoking in public places to others' health and public environment, as well as the possible impact of public accidents.At the time of the accident, ordinary Chinese people responded and participated actively, but they were not particularly optimistic about the actual effect of public participation in emergency rescue.A survey of 1826 people in Lianyungang City in eastern China shows that(Figure 3)only about 30% of the public think it plays a very big

or great role. But the Chinese public is not yet sufficiently engaged with the depth and breadth of social forces needed to respond to ordinary emergencies. The public spirit of active participation of urban citizens is insufficient, and the foundation of urban public security governance is not solid enough.
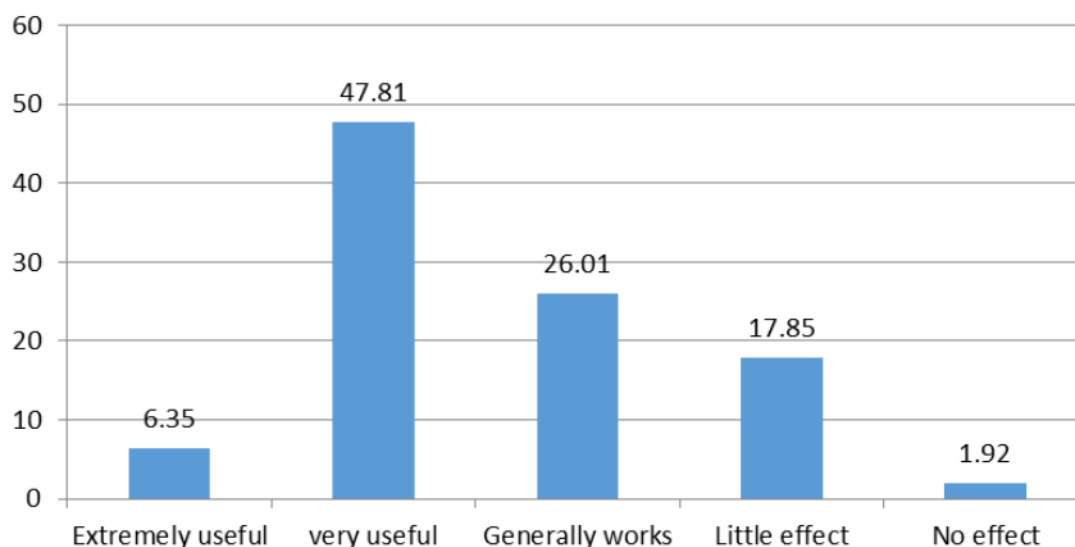

Figure 3 Public Evaluation on the Effect of Social Forces Participating in Emergency Rescue(%)

Look with respect to the management object, the increasing complexity leads to the difficulty of disposal. First of all, major urban public security events often have the characteristics of nonlinear mutation, that is, a small change in initial conditions may lead to a series of diffuse changes, and eventually lead to extremely mismatched initial condition level, far beyond the event itself of diffuse consequences[5].In the complex and unpredictable city operation, major public security events will present a development trend of multiple risks superimposed by human, technological, natural and social factors, which suddenly occur and quickly become the focus. Therefore, no matter what type of major public security incidents need strong professional response ability. In the process of urban development, emerging things continue to appear. For example, under China's developed logistics distribution system, due to its high cargo stacking frequency and large volume, a cigarette end can cause major economic losses and casualties. We must control the source and reduce its risk. This requires that in the risk identification stage, the responders must be scientific and linkage, analyze the interaction between factors, shorten the cognitive gap to the maximum extent, reduce the possibility of nonlinear mutation, so as to change the existing administrative management paradigm to a governance paradigm adapted to more complexity.Secondly, from the perspective of urban practice,the places where people, goods and dangerous chemicals gather or pile up are easy to cause cigarette end fires, involving many factors, wide influence and obvious superposition effect of disasters.Major public security incidents in cities often produce a whole disaster chain. If there is insufficient intervention in this chain, it will continue to extend, resulting in multiple and concurrent accidents, and further increasing the difficulty of disposal.

In terms of governance method, there is not enough systemic response. First of all,the emergency response system of the city is still in the stage of practice first and the system lags behind for the unusual emergencies like the emerging infectious diseases[6].In practice,risk management practices in some cities are fragmented. In China, although various cities have carried out public security risk assessment and prevention and control activities on some large-scale mass activities, major projects etc. on the whole, many response actions are of the nature of "one case, one discussion". Although some good practices have been achieved, they still fail to form a long-term mechanism. Secondly, advanced risk monitoring, assessment and

early warning technology is not used enough, and the normalization of risk management and the systematic mechanism construction are not perfect enough. The management of major public security risks in cities is not systematic and refined. Thirdly, from the perspective of urban practice, major public security events will generate strong social concern, and once the event breaks out, it will quickly become a hot topic of public opinion. Social public opinion has a great and far-reaching influence on the management of major public security risks. Accidents caused by smoking become more and more sensitive in the context of tobacco control, and are easy to become the focus. Events are highly related to the rapid spread of the network.The network connects the real and virtual space, which makes some public security incidents break out at multiple points. The online and offline linkage forms a new convenient, rapid and close interaction mode between the virtual and the real world, which increases the difficulty of handling. Major public security events directly test the crisis management system and governance ability of the city.Finally, in terms of material support, urban emergency support material systems are often unable to cope with events that require a level 1 or 2 response. On the one hand, Cities generally lack the resources to deal with large- and super-large-scale crises, on the other. On the other hand, for China, urban regional linkage is more limited to the level of single support for a certain event, and there is no normalization mechanism of regional linkage and sharing of emergency supplies.

RESULT RESPONSE

In order to solve the short board and weaknesses, to deal with possible future risks,we should pay more attention to tobacco control and do a good job in urban public safety risk management.Our philosophy is that without the safe operation of the city there is no security for development and no safety for the people who live in the city.

We need to build a comprehensive, all-around and systematic pattern of risk management for urban public security, establish a reliable whole-cycle management system for urban emergency response and accident rescue, a sound basic public safety guarantee system and a whole-society participation system, in order to comprehensively improve the level of urban safety security.

Constructing the whole cycle management system with emphasis on prevention

In essence, risk management is to realize the transformation of public security emergencies from passive and disorderly response to active and effective governance of "systematic governance, law-based governance, comprehensive governance and source governance"[7].Through the development of tobacco control in recent years, it is very important to use the system concept to manage public security risks. Whether front-end risk management and control are proactive and orderly largely determines the effectiveness of back-end emergency management, and the two are inseparable. Therefore, we need to speed up the construction of the "risk -- emergency" integration of the whole cycle management system. From the three dimensions of the responsibility system, the guarantee system and the accountability system, the front-end "early-warning plan" mechanism and the back-end "reaction-guarantee" mechanism of the risk response should be continuously improved. Starting with prevention, preparation, response and after-treatment, we should strive to build a new pattern of urban public safety management system.

First of all,we need to really change our thinking and give priority to prevention. All cities should be fully aware of the importance of prevention. Cities that made initial efforts to prevent the COVID-19 outbreak were much less stressed over the whole process. The concept of public security has changed from rapid response to risk prevention and from traditional disaster relief and disaster reduction to the direction of sustainable development featuring resilience enhancement, risk management and coordinated response. What is more important is the application of ideas that have been transformed. Only by adhering to the concept of "prevention is greater than cure" in work, and at the same time carrying out scientific risk identification and analysis, and making positive responses, can prevention produce effects. We should also adhere to the concept of innovative development. We should take innovation as an important

means to solve the problem of urban public security risks. To be specific, it is necessary to improve the scientific and technological innovation system and mechanism in the field of emergency management, and actively enhance the scientific, intelligent and refined level of the work in various fields of urban public security risk management, so as to realize the improvement of urban public security risk management system and capacity by enabling science and technology. Of course, we have to be good at using probability thinking. We need to use probability thinking to deal with public security risks.Compared with the huge group of smokers in China, there are not many public safety accidents caused by smoking, but once an accident occurs, it will produce strong economic losses or casualties.We cannot ignore its potential risks, and we must make every effort to prepare for preventing and resolving major public security risks.

Second, the city should formulate medium-and long-term action plans for risk assessment, carry out public security risk assessment including major public risks in a planned and continuous way, and form a long-term mechanism for risk assessment and planning of major public security in the city. For the major risks assessed, we should pay special attention to prevention and control the risks at the source. Controllable risks should be based on "prevention", and uncontrollable major risks should be based on "preparation". For huge risks that are difficult to completely eliminate, we should have full imagination and advance preparation.

Third,strengthen risk monitoring, early warning and forecasting。Tobacco control is to carry out source prevention, and the enlightenment to us is to improve the urban risk monitoring and early warning system. Strengthen the top-level design of urban risk monitoring and early warning system, Improve the emergency monitoring and early warning system that can distinguish departments, regions and disaster types, and use IOT sensing, intelligent identification and other technologies to promote the networked monitoring of major risks in key industries and enterprises such as hazardous chemicals, transportation, metal smelting and mining. We will improve the daily classified monitoring network for major disasters such as earthquake disasters, geological disasters, meteorological disasters, flood and drought disasters, marine disasters and forest fires, strengthen coordination and linkage, and improve the efficiency of comprehensive early warning.Improve the timeliness of early warning and forecast release. Improve the early warning information release system, unblock the release channels, and timely warn the units and groups that may be affected and affected by potential risks. Build a standard system for early warning information release, standardize and ensure the socialized dissemination of early warning information, Strengthen the construction of early warning information receiving and broadcasting means in densely populated key areas such as public transportation, shopping malls and supermarkets, tourist attractions and large-scale event venues, so as to expand the coverage of early warning information in the whole society as far as possible, so that the public can receive early warning information in the shortest time.

Fourth, build a platform for issuing early warning information about major urban public security risks. The industrial Internet, the Internet of Things, 5G and other advanced technologies are used to build safety monitoring and early warning networks for high-risk places in cities, such as hospitals, enterprises and facilities and equipment. The information management means combining early warning, on-site supervision and remote monitoring are innovated to improve the ability of risk early warning and pre-control[8].Build a unified platform for summarizing early-warning information, conduct scientific and technical analysis, research and judgment on the early-warning information reported, and make preparations in real time to deal with different types of risks. We also need to improve the early warning information release platform. This platform can not only provide early warning of emergencies for the public, but also meet the information needs of the public after the occurrence of the event. In this process, big data, block chain, artificial intelligence and other new technologies and new applications are fully utilized to gradually form data support for government decision-making, and form more precise and controllable risk management and intellectual support for dealing with urban public security risks. An efficient and orderly risk cycle management system for urban public security

has been gradually established.

Improving the system of public participation that emphasizes coordination

Tobacco control requires the cooperation of governments at higher and lower levels and various government departments, as well as the cooperation of all urban people. To deal with the risks of urban public securityis not only to safeguard the vital interests of urban people, but also to rely on the joint participation of all urban people to create a new pattern of collaborative governance. Therefore, the enlightenment to us is to build a new pattern of collaborative governance in order to build a governance pattern of urban public security risk.Collaborative governance refers to the effective coordination mechanism and orderly governance structure among multiple subjects to achieve an effective response to the same goal and jointly promote the realization of preset public interests. From the perspective of governance subjects, the city government plays a fundamental leading role in the public security risk governance system, which affects and restricts the construction and function play of the whole city's public security risk governance system from the strategic and operational levels. City governments should be collaborative governments. The realization of cooperative government is to achieve the "upper and lower inside and outside" four aspects of good communication and cooperation[9].The government actively carries out internal collaboration and seeks external collaboration, which affects the effectiveness of urban public security risk management. The improvement of the whole society's joint participation system is the key to achieve good internal and external coordination, and is also the requirement of collaborative governance of urban public security.

Internal coordination in crisis response is mainly the coordination and cooperation between government departments to build the public security risk information communication and collaborative linkage mechanism. The city should improve the cross-department information notification system and supporting rules, realize the normal operation of the cross-department public security risk communication mechanism, implement its requirements into the daily risk monitoring work of all departments, and establish a relatively fixed public security risk information sharing channel. The improvement of the coordination and linkage efficiency between departments depends on the clear division of labor and responsibility of the event response. Therefore, the drill of the emergency plan is particularly important. Cities conduct emergency drills to check the preparedness of emergency teams, materials, equipment and technologies needed to deal with emergencies, and make timely adjustments and supplements when they find inadequacies. Through the emergency drills, the organizing units, participating units and participants of the drill can be more familiar with the emergency plan and cooperate with each other, so as to improve the emergency response ability.

Table 1
List of Fire Forces on Lianyungang City(2021.06)

Team name	Number of teams(branches)	Number of vehicles(Vehicles)	Number of personnel(individual)
Government full-time fire brigade	12	50	246
Township Fire Brigade	38	45	228
Enterprise full-time fire brigade	10	40	344

External coordination in crisis response refers to the coordination between the government and external social organizations, enterprises and individual citizens. The response to major urban public security incidents requires the deployment of more people and financial resources to achieve orderly governance, so it is especially necessary to pay attention to external coordination. For cities, first of all, It is very important to guide the public to participate legally and reasonably, stimulate the vitality of community residents and all kinds of enterprises willing to provide social

services, establish a benign cooperation mechanism, and let them play an irreplaceable role in improving citizens' risk cognition and identification ability, Self and mutual rescue capability and other aspects.Strengthen public publicity and education on emergency knowledge. Improve the popularization rate of emergency knowledge, enhance citizens' awareness of emergency disaster prevention, and improve citizens' safety education system. We will promote the construction of urban disaster prevention and mitigation training centers, innovate the forms of popular science activities, enrich the contents of popular science activities, and widely popularize the common sense and skills of disaster prevention, mitigation and disaster relief. For China, the social organizations providing emergency services are still in the initial stage of development, and it is also necessary to standardize the management of social organizations and clarify the role, positioning, rights and responsibilities of social forces in emergency management. China needs to encourage social forces to participate in emergency management in various ways, explore the establishment of a long-term and fine service-oriented and efficient cooperation model between the government, enterprises and social service organizations.Secondly; we should attach importance to the role of various voluntary groups. Strengthen communication with the volunteer team and improve the scientific, information and standardized level of urban emergency volunteer service. For example, in China's work to tobacco control, a large number of urban community workers, social organizations, volunteers and the general public participated in the urban tobacco control, forming a coordinated force for epidemic prevention and control.In the investigation and research of Lianyungang City, Lianyungang City has formed 60 full-time fire-fighting teams of government, township and enterprises (Table1), and initially formed a coordinated full-time fire-fighting coordination system.In addition, play the role of market participation. Industry associations, professional technical service institutions and insurance institutions are encouraged to participate in risk assessment, troubleshooting and treatment of hidden dangers, management consultation, testing and inspection, emergency drills, education and training, etc.

Encourage qualified enterprises to establish safety emergency service consulting companies to provide safety services for other enterprises. Encourage chambers of Commerce, charitable organizations, volunteer groups and other social organizations to actively participate in safety emergency work and form an all-round and all-round social service system. Give play to the positive role of insurance and other market mechanisms in risk prevention, loss compensation, recovery and reconstruction, and explore the establishment of a multi-channel and multi-level catastrophe risk sharing mechanism. Promote work safety liability insurance and enrich life insurance for emergency rescue personnel.Finally, a good pattern of "combination of administrative regulation mechanism and community autonomy mechanism, complementation of administrative function and autonomy function, integration of administrative resources and social resources, interaction between government power and social power" is formed [10].

Optimizing the whole material support system focusing on preparation

Some Internet cafes in small and medium-sized cities are located in dense residential areas. The smoking situation in Internet cafes is serious, and the laying of electrical lines is random. Some wires are wrapped around the beam. Some use adhesive tape to stick the exposed wires and interfaces and connect them at will. Some do not have more than two emergency exits. Some emergency escape windows and fire evacuation doors are locked. There are serious fire hazards, but no fire-fighting equipment is installed. Smoking should be strictly prohibited in high-rise buildings. In case of fire, the urban emergency operation space is often insufficient. The enlightenment to us is that we must make emergency preparations, especially material support.Early stage of COVID-19 outbreak, hospitals in hard-hit areas generally lacked specialized medical equipment such as protective clothing and ventilators. Population-wide is based on awareness, will and adequate supplies. The lack of masks and other supplies has led to urban interception. The lack of medical supplies such as masks has led to urban detentions.Such novel corona virus pneumonia and factory fires caused by smoking may happen by accident, but we must make them as inevitable as possible. The key to emergency management is

to prepare well for emergencies, which should run through the whole process of responding to emergencies[11].We must adhere to the principles of centralized management, unified dispatching, provide services at ordinary times, and emergency response in time of disaster, combination of production and storage, cost-effective way to construct the urban emergency material support system, especially attach importance to material reserve and emergency preparedness.

First of all, the major public security risks that the city may encounter should be set up, and the worst scenario should be considered as far as possible. Different cities have different natural and social environments, and the major public security risks that may be encountered have both common and individual characteristics. We can break down major risks to cities by type and grade.

Second, do a mission analysis of these scenarios to determine what kind of response capabilities and material support we need. For example, a list of materials should be formulated for the possible occurrence of major infectious diseases in the future. In every major public crisis, there is a "peak demand" for specific emergency supplies. When designing for mission capability, consider maximum "peak demand". For example, the health and sanitation materials used to deal with public health crises often have a quality guarantee period. In addition to the consideration of costs and benefits, it is difficult for the materials to be 100% stored well. However, there should be production capacity preparation, which should be able to quickly transform into the actual emergency capacity when the crisis comes, so as to meet the requirements of the whole material security system. The response of COVID-19 tells us that manufacturing advantage is not the same as supply capacity. In order to improve the ability of emergency material support, we need to highlight the capacity reserve. There are many types of major public security risks which are very complex in cities. From the perspective of scientific overall planning and economic efficiency, production reserve capacity is more suitable for the reality of urban economic and social development than mere material reserve.

CONCLUSIONS

Due to the change of global climate conditions and the increase of the flow of people in the social environment, human beings will face a more complex living environment in the future and may encounter more extreme problems. It can be said that at present and even in the future, global urban public security risk management work is facing a grim situation. We do not know when the "grey swan" and "black rhino" events will come, but we do know that they will come, we are more sure that if we are not prepared, the human race will not be able to bear the consequences. City is the main field to deal with the public crisis. Under the city of novel corona virus pneumonia, we should continue to do well in tobacco control work, and enforce the regulations on smoking control in public places in various cities.The main body of crisis management needs to deal with the crisis calmly and effectively with scientific thinking and methods. Another important concept is to implement the risk management concept and the value of prevention first in the daily management of public affairs, so as to create a situation of risk sharing and coordinated response of the whole society.

Conflicts of Interest Disclosure Statement

The authors declare this research is not funded by any organization related to tobacco production.

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