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Zhaohui Su PhD¹ , Ali Cheshmehzangi PhD^{2,3}, Barry L. Bentley PhD^{3,4,5} ,
Dean McDonnell PhD⁶, Junaid Ahmad PhD⁷ , Sabina Šegalo PhD⁸,
Claudimar P. da Veiga PhD⁹ and Yu-Tao Xiang MD, PhD¹⁰

Commentary

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Corresponding authors:

Zhaohui Su, Claudimar P. da Veiga and

Yu-Tao Xiang;

Emails: suzhaohuiszh@yeah.net; claudimar.veiga@fdc.org.br; ytxiang@um.edu.mo

¹School of Public Health, Institute for Human Rights, Southeast University, Nanjing, China; ²School of Architecture, Design and Planning, The University of Queensland, Brisbane, 4072, Australia; ³Harvard Medical School, Boston, Massachusetts, USA; ⁴Cardiff School of Technologies, Cardiff Metropolitan University, Cardiff, United Kingdom; ⁵Collaboration for the Advancement of Sustainable Medical Innovation, University College London, London, UK; ⁶Department of Humanities, South East Technological University, Carlow, Ireland; ⁷School of Public Affairs, Zhejiang University, Hangzhou 310027, China; ⁸Faculty of Health Studies, University of Sarajevo, Sarajevo, Bosnia, and Herzegovina; ⁹FDC Business School, Fundação Dom Cabral, Nova Lima, MG, Brazil and ¹⁰Unit of Psychiatry, Department of Public Health and Medicinal Administration, University of Macau, Macao, China

Abstract

Avoidable disasters are both saddening and baffling. In 2022, 159 people, mostly in their 20s, and 30s were crushed to death in Itaewon's narrow alleyway amid South Korea's first pandemic-restrictions-free Halloween celebration. What is particularly sobering about this tragedy is that although many people called police hotlines as crowds became cramped and static, their calls went unheeded for hours. Rather than order independent investigations into the catastrophe (as of January 2024), the President of South Korea at the time focused on superficial issues such as asking the public to refer to the disaster as an “accident” (which it was not, it was an avoidable disaster) and the casualties as “the dead” (who are casualties indeed, instead of victims of a preventable tragedy). In this paper, we examine how officials' complacency about public health and safety dangers, ineffective disaster prevention, and preparedness systems, as well as the government's chronic lack of prioritization of public health and safety may have contributed to the disaster. Furthermore, we discuss the importance of creating integrated public health and safety protection systems to prevent similar tragedies from happening.

The Deadly Halloween Crowd Crush Post-COVID

Approximately 159 people (most in their 20s and 30s) were crushed to death in South Korea's Halloween festivities in October 2022.¹ Substantially more were injured. While several factors may have contributed to the incident, some are more pronounced than others. One of the main contributors to the disaster was the sheer size of the crowd (over 10 000 people) gathered in the narrow alleyway (some areas are only 4m wide) in the Itaewon district. The unusually large crowd could have been partly caused by the country's new COVID-19 policy: South Korea had just lifted its pandemic restrictions. However, having large crowds of people is a common societal phenomenon that was expected in advance. A case in point is that the officials were aware of the potential surge of incoming revelers, to the extent that they issued warnings ahead of the Halloween celebration. These realities then raise the question: If the officials pre-emptively predicted the size of the crowd, why did the crush happen in the first place? What went wrong?

Factors That Shaped the Crowd Crush

Our analyses show that officials' complacency about public health and safety dangers, ineffective disaster prevention and preparedness systems, and the government's chronic lack of prioritization of public health and safety might have played a substantial role. With respect to complacency, although they issued warnings that the size of the revelers would be unusually large, as evidenced by not only the occurrence but also the scale, and scope, as well as severity of the disaster, the officials took no effective pre-emptive measures to ensure people's health and safety. A closer look at the disaster shows that, while the event was both the largest and least restricted post-COVID Halloween celebration, authorities, and local businesses deployed minimal crowd control and management mechanisms.² In the narrow 4-metre alleyway where most casualties occurred, while people were crammed into one another to the point they could barely breathe or move, police officers were all but absent.² Furthermore, when static crowds began to form, many revelers called police hotlines for help, and although the nearest police station and fire department were about 100.6 meters (330 feet) and 201 meters away (660 feet) respectively, with

hundreds of police officers nearby for other duties,³ the calls were unattended to, or merely dismissed. Due to a lack of evidence, it is first difficult to know if and how the outcome may have differed if officials developed and deployed crowd management and contingency plans pre-emptively, or if police acted promptly to respond to the crisis when the first calls for help from the revelers were made. It is clear, though, that officials' complacency played a pivotal role in shaping the trajectory of the Itaewon disaster. Arguably, a timely police directive of "Standing Still" was well-received, followed by orderly evacuation of the jammed crowd; this might have been all that was needed to prevent the disaster from spiraling into deadly territories.

Second, ineffective disaster prevention and preparedness systems may also have shaped the disaster. While the officials claimed that they issued warnings about the potentially, unusually large crowd ahead of the celebration, the fact that many locals, and foreigners still came to such a crowded area, speaks to the officials' poor disaster prevention, and ineffective disaster management capabilities. This lack of effective disaster prevention and preparedness abilities of the officials may have its roots in the third factor: the government's chronic lack of prioritization of public health and safety in public affairs. It is important to note that the South Korean government has a well-documented, substandard (if not dismal), public safety management record,⁴ and this might be best reflected by the collapse of the Sampoong Department Store in 1995 that killed about 502 people, the sinking of the Sewol ferry in 2014 that killed at least 304 passengers (mostly high school students), and the 2022 flooding disaster that killed at least 11 people living in "parasite" style basements ("Banjiha," substandard housing units that are often tiny in size, windowless, and semi- or completely-underground, with a lack of essentials such as functioning sewage systems that make them considerably susceptible to flooding, as depicted in the Oscar-winning film "Parasite"), just to name a few. These wide-ranging disasters share some sobering characteristics: while they are all deadly, they are largely preventable as almost all of them were shaped by the overbearing presence of the officials' lack of prioritization of public health and safety over profits and politics, worsened by faulty implementation of laws, and regulations available at the time.

In other words, the continued occurrence of deadly yet available disasters not only underscores the government's chronic and systemic failures in the protection of public health and safety, but also officials' across-the-board lack of prioritization of people's well-being, and welfare in public administration and management. How the government tried to spend time and resources to spin and underplay the disaster—instead of addressing systemic issues—also reveals the depth of officials' ingrained disregard and disrespect for human lives in general. Remarkably, one of the excuses officials made to shun responsibility for the 2022 Halloween crush is that the government was not the organizer of the event. Furthermore, rather than focusing on improving public health and safety protection mechanisms, the President of South Korea at the time, focused on matters such as asking the public to refer to the disaster as an "accident" (it was an avoidable disaster) and the casualties as "the dead" (instead of victims of a preventable tragedy) instead.

In addition, even though the crush killed 159 people and injured more, rather than limited punishments for about a dozen local police officers, and officials, no high-ranking administrators resigned for their grave delinquencies and negligence of their duties, and no substantial changes (such as establishing more rigorous and people-centered laws or regulations) were put in place

to prevent similar disasters from happening. By January 2024, many grieving families were still mourning and hoping that a formal inquiry into the matter would take place. In other words, at the time this paper was written, a thorough and independent investigation into the tragedy has yet to take place. It is important to note that the Itaewon disaster did spur some improvements in the country's public safety protection capability. For instance, Seoul (the capital city in which Itaewon is located), has started to install artificial intelligence (AI) powered surveillance cameras in Itaewon and other entertainment areas that could help detect overcrowding.

Lingering Threats

Although AI measures are applaudable, it is equally important to stress that advanced technologies or other tools are only as good as the people who oversee them. In other words, without systematic accountability and oversight mechanisms to ensure officials are utilizing, maintaining, and leveraging tools like AI-powered surveillance cameras well, these tools may prove to be merely decorative and a waste of public resources. Moreover, only Seoul (as opposed to all the other cities in the country that have high-risk areas that are prone to draw large crowds) has been notably proactively in establishing public health and safety guardrails such as high-tech surveillance cameras after the disaster. This also speaks volumes. Without effective countermeasures, disasters like the Halloween crush can happen anywhere, especially in narrow spaces that South Korea has no shortage of. It is then worth asking why crowd control and management mechanisms, many of which can be highly effective,^{5,6} are not considered in risky areas across the country? Furthermore, what long-term solutions—from high-tech surveillance systems to "low-tech" policy changes—has the government developed to ensure similar tragedies would not happen in the future? Moreover, and perhaps most importantly, considering the tragedy, what inspections and actions have societies worldwide taken to ensure their high-risk areas are well-equipped with guardrails, despite how expensive or resource-dependent they might be, to protect people's health and safety?

The Need for an Integrated Public Health and Safety Protection System

One way to prioritize the health and well-being of the public in times of crises like COVID-19 is via integrated safety protection systems, as opposed to disconnected, fragmented responses, or makeshifts. Drawing on previous research as well as insights from the current analysis,^{7–15} a safety protection system is defined as a symbiotic public health shield that integrates talents and resources in an interconnected and complementary manner to maximize the potential of individuals, frontline responders, and public or private organizations, as well as policy-making apparatuses and capabilities, and effective technological tools or techniques to protect public health and safety. In addition to maximizing all available resources in times of emergencies, an added advantage of integrating different sectors of society centers on its ability to leverage checks and balances for organizational transparency, responsibility, and accountability, as well as efficiency to ensure that even though certainties might be in flux in disasters, public trust does not waver. Overall, a rigorous public safety protection system should not only include high-tech tools and techniques, but also essential ingredients such as effective education on health and safety protection and awareness for the public, responsible and accountable first responders and public officials, rigorous public safety protection

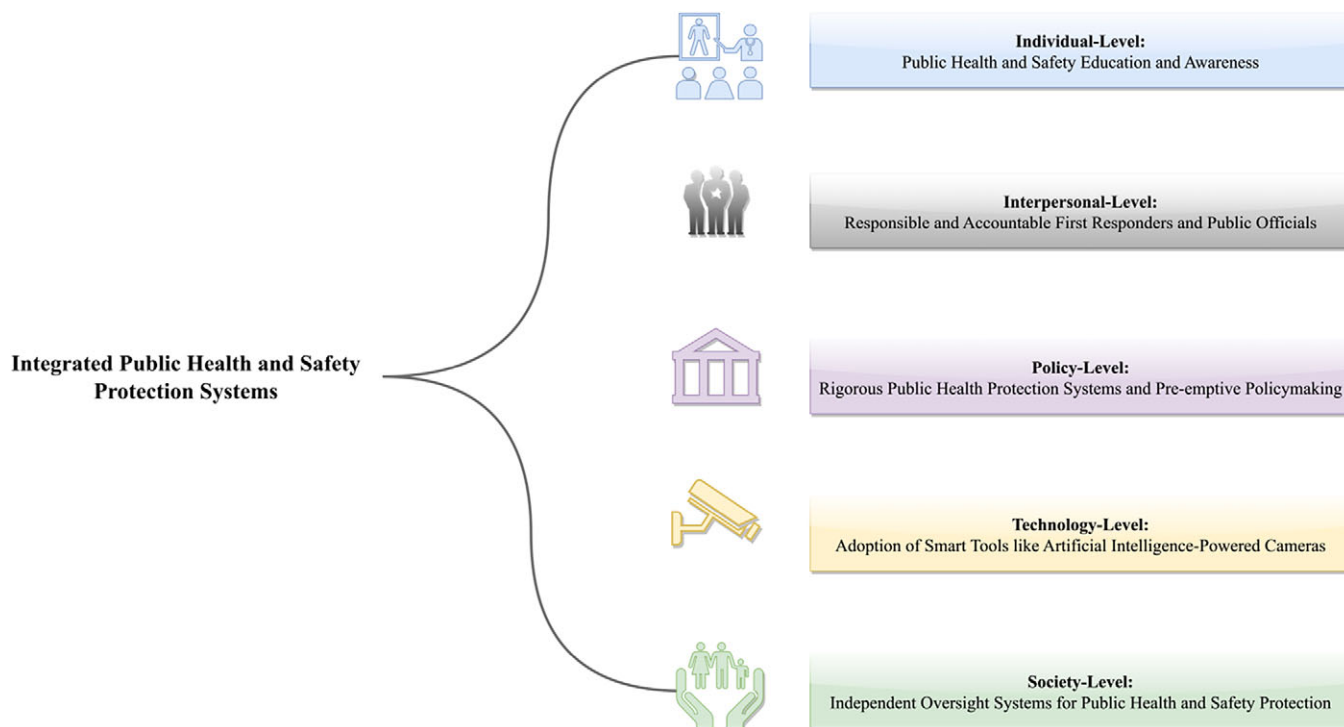


Figure 1. Visualisation of the proposed Integrated Public Health and Safety Protection Systems.

systems, pre-emptive policymaking, as well as independent oversight systems for public health and safety protection (see Figure 1).^{7–15}

These elements together could form interconnected and reinforcing Integrated Public Health and Safety Protection Systems that have the potential to ensure comprehensive protection for the people even in times of fast-paced and somewhat-unexpected crises. COVID-19 has been a time of great revelations. The complex dynamics underlying human behavior and public health management mean that it is difficult to know whether the 2022 Halloween crowd crush could have been prevented, if the proposed Integrated Public Health and Safety Protection System were in place at the time. What is clear, though, is that even if only a fraction of the system had functioned to ensure the public was well-informed about the dangers to the extent that they decide to take their celebration online or later, as opposed to immediately in person, the effort would be more than worthwhile.

In addition to the lessons mentioned above, the Itaewon crush also bears critical messages for public health officials. One of the reasons that over 100 000 people flocked to the Itaewon area for the Halloween celebration might be related to COVID-19 countermeasures. The South Korean government had lifted all the country's pandemic countermeasures prior to the celebration, effectively making the 2022 Halloween one of its first restrictions-free holiday celebrations post-COVID. In light of the tragedy, perhaps public health officials could investigate whether there is yet another case to be made for gradual and paced (as opposed to abrupt and rushed) changes in public policies like the lifting of COVID-19 safety measures.¹⁶ Also, as many public health officials may already be well aware of, people often hold strong emotions, and opinions against stringent policies like COVID-19 masking, stay-at-home, and lockdown measures.¹⁷ It is then perhaps also worth examining whether the lifting of policies of the pandemic's scale should be

accompanied by extensive and effective communications about what to expect post-restrictions.^{9,10}

Limitations

While this analysis provides important insights, it is not without limitations. First, the insights were based on currently known facts about the crowd crush, which means that they are subject to further validation upon the emergence of new evidence. For instance, if and when an independent inquiry into the crush becomes a reality, there might be previously unavailable insights unearthed to further enrich our understanding of the tragedy, and in turn, justify additional investigations. Second, the proposed Integrated Public Health and Safety Protection System is theoretical in nature. To fully realize its potential, empirical studies are needed to evaluate and improve it to ensure the model can make more meaningful contributions to research and practice. Third, due to the pandemic's complex nature, it is possible that unique and substantial COVID-related influences are in play to the extent that insights of this analysis on the crush may not be applicable to similar research contexts like Disease X. One way to address this issue is by examining the model's utility and function in future global health contexts in comparative or longitudinal studies.

Conclusion

Disasters can be predicted and prevented. It is our hope that the lessons we identified from the Itaewon crush could inspire scholars and public officials worldwide to be more vigilant, initiative-taking and prepared in developing or perfecting their public safety protection systems against looming unknowns and uncertainties that could turn deadly very quickly. Life, at its core, is a once-in-

a-lifetime event. In a time when advocates for improving birth rates are becoming ever-vocal and fast-paced, the call for action to treasure the already-born should be even louder and faster. Human lives, in and out of themselves, are precious like that.

Data availability statement. Data are available upon reasonable request.

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