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Approaching the Crowd Crush : in Case of Itaewon Disaster, 2022 in Korea

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Abstract: Little attention and interests have been focused on crowd safety research despite the occurrence of several crowd crushing accidents in Korea until the Itaewon disaster occurred on October 29, 2022. Disasters in the form of crowd crushing have not been defined, so they need to be redefined for conceptualization and practical application. Adequate terminologies were proposed in this study compared to the various definition of the same conceptual classification, although the discussion and application process are needed for new guideline. Crowd crush is less frequent in Korea, but globally, they have been established as one of the major disasters that continue to occur in both developed and underdeveloped countries. It is difficult to respond quickly when crowd crush occurs and it can cause large-scale casualties, but there is no definite solution. So a multifaceted approach to prevention, preparedness, and response is required, and it is necessary to find new solutions continuously while taking a comprehensive approach based on transdisciplinary understanding of each field.

Keywords: Crowd crush; Mass gathering; Itaewon; Disaster; Crowd safety

1. Introduction

On the night of 29 October 2022, a crowd crush occurred during Halloween festivities in the Itaewon area of Seoul, Korea. At least 158 people were killed and at least 196 others were injured. The victims were mostly young adults. The crowd crush is the deadliest disaster in South Korea since the sinking of MV Sewol in 2014 and the largest mass casualty event in Seoul since the Sampoong Department Store collapse in 1995. It is the deadliest crowd crush in the country, surpassing a 1959 incident at Busan Municipal Stadium in which 67 people were crushed to death. In this study, the author tried to learn a lesson by investigating the worldwide crowd crush disaster and analyzing the differences and results.

2. Materials and Methods

First, the crowd crush disasters to date were investigated and summarized through literature and Internet searches. Second, based on this, the prevention and management of crowd crush disaster, emergency medical response in case of patient occurrence, and necessary research/development contents were derived through a survey of experts.

3. Results

As a result of the investigation, crowd crush disasters have been experienced in various ways from developed countries to developing countries since the 1800s, when specific records were transmitted. In general, the crowd density was high because the crowds were concentrated in a certain place, and the crowds continued to move and then the

crowd collapsed above a certain limit. The biggest casualty occurred during a pilgrimage to Mecca in Saudi Arabia in 2015, but the theme of the event, such as concerts, sporting events, and funerals, was varied. Experts said that the manager's efforts not to increase the crowd density more than a certain limit, and efforts to maintain order and prevent contingencies were important. They said that it is important to comply with the principles of disaster medicine such as rapid distributed transport, but it is difficult to access the patient in the crowd crush state, so the management of the crowd may be more important. They said that in the future, it is necessary to establish a realistic crowd management guideline and a real-time crowd density monitoring system using CCTV or drones.

Table 1. Crowd crush events in Korea

Event	Date	Location	Type of Event
Citizen's Consolation Feast	1959. 07. 17	Busan Stadium	Entertainment
holiday homecoming	1960. 01. 26	Seoul Station	Transport
National Sports Festival	1965. 10. 05	Gwangju Stadium	Sports
holiday homecoming	1974. 09. 29	Yongsan Station in Seoul	Transport
moming inquiry	1980. 02. 11	Busan Yongho Elementary School	others
New Kids on the Block Performance	1992. 02. 18	Seoul Olympic Park Gymnastics Stadium	Entertainment
professional baseball game	1993. 08. 17	Seoul Jamsil Baseball Stadium	Sports
MBC broadcast performance	1996. 12. 16	Daegu Duryu Park Wobang Tower Land Lawn Square	Entertainment
K-pop music performance	1999. 01. 23	Sejong Center for the Arts on Seoul	Entertainment
New Year Bell Ringing Event	2000. 12. 31	Bosingak in Seoul	others
Unification Church South-North Reunification Convention	2000. 03. 09	Daegu Gymnasium	Religion
Fan club meeting	2001. 01. 05	Click B Office Front in Seoul	Entertainment
MBC Broadcasting Music Concert	2005. 08. 22	Jungdong Sports Park in Gwangyang	Entertainment
MBC Broadcasting Music Concert	2005. 10. 03	Sangju Civic Stadium	Entertainment
Seoul Lotte World Free Opening Event	2006. 03. 26	Lotte World in Seoul	others
Itaewon Halloween Event	2022. 10. 29	Itaewon area in Seoul	others

4. Limitations

The data is distributed among various related organizations in Korea, such as fire, police, Ministry of Health and Welfare and its affiliated organizations, and medical institutions, but it is difficult to obtain sensitive data because key members of these organizations are facing prosecution and government investigations, and some are undergoing legal trials. Therefore, it is difficult to verify and link the data of each relevant organization and draw conclusions from the compiled data. Therefore, it is a limitation of this study that it can only be supplemented by official parliamentary hearings and expert investigations on the issue of the Itaewon disaster.

5. Conclusions

Crowd crush disasters can occur in any type of crowd gathering events where the crowd density increases, and prevention through crowd management and real-time crowd density monitoring should be implemented.

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