



Public Health Lesson from Shanghai New Year's Eve Stampede

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Dear Editor-in-Chief

On December 31, 2014, millions of people gathered in Chen Yi square, Shanghai (China's most populous city) in celebration of the New Year Eve, left at least 35 people dead and 42 injured in a stampede (1).

Actually, human mass gathering poses challenges for public health (2). Stampedes were identified as a risk for death that could occur when human mass-gathering (3). The Shanghai New Year's Eve stampede almost shared all the risk factors of fatal stampede identified by previous study, e.g. in developing country, high crowd densities, the rising fervor of a celebration, the handout of scarce resources, and inadequate security measures (4).

However, the prevention of the stampede has received little scientific attention and remains unclear. For example, there is no study addressed stampede issue from a public health perspective. Lab experimental study on the mass gathering contributed many models to explain the stampede such as, sudden transitions from laminar to stop-and-go and "turbulent" flows (5). However, without considering human's behavior e.g. panic behavior, limited the prediction capacity of the simulation models (6). The possible mechanism is the misunderstanding information, which could result in panic among the crowd population. In addition, most stampede study's data were based on news

reports, which might be inaccuracies for scientific study. Hence, epidemiological study on human stampedes is warranted. Given the unique nature of stampede events, it is imperative to prevent better stampede.

The lessons learnt from other counties still can be of value, although there is some different in the epidemiological features of human stampedes in other countries, e.g. religious factor (7). According to the previous study, which compared the survivors and non-survivors in a stampede and found on-site resuscitation and triage absent, can reduce the chance of identifying potential survivors at the scene (8). Hence, proper documentation and preparing of the proceedings of the event could reduce potential risk. Moreover, the authority should let the public know the potential risk of human mass-gathering and protect measurement in the stampede, improving monitoring crowd events and spontaneously transparency communication between the government and people, if stampede.

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