

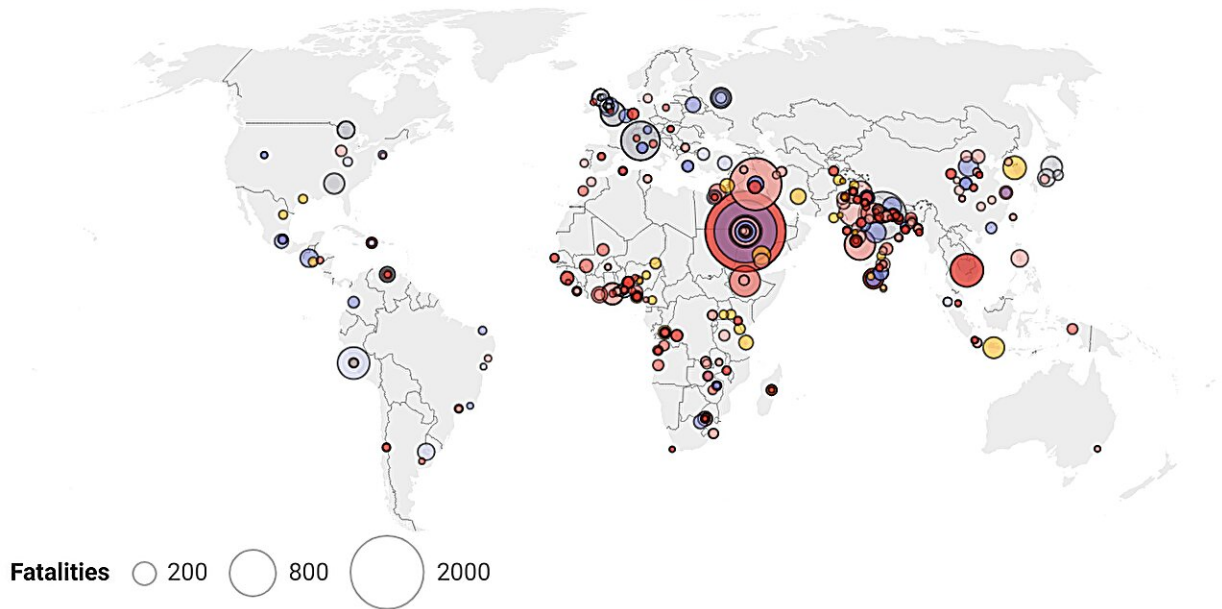
Deadly crowd crush at Indian religious gathering shows how dangerous leaving an event can be

July 3 2024, by Milad Haghani and Claudio Feliciani

Where do these fatal events occur?

Recent accidents mostly occurred in **India** and in **West Africa**. However, crowd accidents have occurred on all continents (excluding Antarctica)

1900-1960 1960-1980 1980-2000 2000-2010 2010-2020 2020-2024



Map: The Conversation • Source: C. Feliciani; A. Corbetta; M. Haghani; K. Nishinari • Created with Datawrapper

Credit: The Conversation

A catastrophe involving [large crowds](#) at a religious gathering in northern India [July 2](#) resulted in the deaths of more than 100 people, with many more injured.

The disaster, in the Hathras district southeast of the capital New Delhi, unfolded during a Satsang (spiritual discourse) by a popular preacher which drew thousands of devotees.

This is the latest in a [long list](#) of [crowd](#) disasters in India.

Although much of the [media coverage](#) has described this event as a crowd "stampede," this obscures failings in how the event was planned and run.

India has seen many such catastrophes

In recent history, India has witnessed several tragic [crowd-related catastrophes](#).

On January 1 2022, [a disaster](#) at the Mata Vaishno Devi shrine in Jammu and Kashmir resulted in 12 deaths and 15 injuries. The incident was triggered by an argument among pilgrims during New Year celebrations.

On December 28 2022, [a stampede](#) at a political rally in Andhra Pradesh state in India's south led to eight deaths as supporters surged towards the stage.

On November 25 2023, a crowd incident at [a university concert](#) in Kerala in India's south caused four deaths and numerous injuries.

In 1954, millions gathered for a religious pilgrimage [at the Prayag Kumbh Mela](#) in northern India, resulting in a crowd disaster that claimed around 800 lives. This incident remains the deadliest crowd disaster in

India's history.

[A global database](#) of deaths from crowd accidents shows more than 1,477 people have lost their lives since 2000 in over 50 disastrous mass gatherings in India (excluding the very recent incident).

India remains one of the biggest hotspots for deadly crowd accidents in the world, particularly over the past two decades.

Other major hotspots include Saudi Arabia, mainly due to incidents during the annual Hajj pilgrimage, and some parts of West Africa.

A sobering trend of crowd disasters

A look back at the [history of crowd accidents](#) reveals a noteworthy and sobering trend.

In the 1980s, most crowd accident deaths occurred at sporting events. However, nowadays, most happen at religious gatherings, particularly in low- and middle-income countries.

High-profile examples, such as the UK's [Hillsborough stadium disaster](#) in 1989, led to the development of crowd management guides, better practices, and heightened awareness in sport arenas, especially in Europe. These measures have made sporting events significantly safer for crowds. But there haven't been similar improvements for religious gatherings.

Today, for ticketed large events there's usually extensive risk assessment, planning and operational control. Organizers can monitor and spot the risk as it unfolds and take real-time actions. Planning includes [computer modeling](#) of the event in terms of crowd movement, estimating evacuation times, and monitoring how people enter and leave the

premises, among other factors.

However, these steps are not necessarily taken with religious mass gatherings.

Exits can be overwhelmed

[Media reports](#) indicate the venue where the recent tragedy took place was [three times over its capacity](#).

A crowd that gathers gradually over an extended period of time during such an event would want to exit the venue all at once at the end. This means exits are grossly insufficient.

This simple inadequacy of exit capacities relative to the size of the crowd appears to be one of the main causes of the recent tragedy in India.

In many cases, the sheer pressure of the crowd [at narrow exit points](#) can lead to suffocation, which was reported with this latest tragic event. Clearly, individuals with smaller body sizes and shorter heights are at higher risk. This is reflected in the large number of [women and children](#) reported as casualties.

It's not a crowd 'stampede'

The media has used the word "[stampede](#)" to describe such events. This is often a [blanket term](#) to describe crowd accidents, often regardless of the underlying cause. It catastrophizes events involving crowds, especially in relation to religious gatherings or when details of the incident are vague.

But using terms like this has implications. It essentially puts the blame on

the people involved in the incident and on the way they behaved. In fact, crowd behavior is often not the main cause of such incidents.

Perpetuating this narrative often allows organizers to be absolved of responsibility and demotivates authorities from investigating the root cause of the problem.

This leads to a vicious cycle of accidents occurring without any practical measures implemented to prevent the next one.

One member of India's parliament told [the New York Times](#):

"Every year, these kinds of incidents keep repeating themselves, and we learn nothing."

We need to learn from past events

Crowd accidents, particularly at religious mass gatherings in developing countries, are becoming a more common cause of premature [death](#) worldwide.

In recent weeks, more than [1,300 pilgrims died](#) during the Hajj. The recent incident in India soon followed.

While the number of deaths at the Hajj is higher, the mortality rate at the recent Indian gathering is significantly higher (we've calculated this at 0.065% for the Hajj versus 0.77% for the Indian incident).

This calls for rigorous regulation, proper risk assessment, planning, security provision and crowd monitoring.

Targeted, evidence-based [public education campaigns](#) can raise awareness and significantly reduce the likelihood and impact of such

events.

Just as we pursue zero deaths on the roads, crowd accident deaths should be recognized as a preventable cause that needs addressing, especially in developing countries.

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