

A Perilous Pilgrimage

The Case of Sabarimala

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Massive footfalls at pilgrim towns increase the risk of major accidents and disrupt the local ecology. The Kerala state government's plan to make the Sabarimala temple town a national pilgrim centre, that includes devising a mass gathering and safe pilgrimage policy for pilgrims thronging the hill shrine, could serve as a model for the development of other pilgrim centres.

The Kerala government submitted a 15-point report to the central government in 2014 demanding elevation of Sabarimala to a national pilgrim centre and also sought an assistance of Rs 1,250 crore to develop amenities for millions of pilgrim flocking to the hill shrine ([Special Correspondent 2014](#)). This was following the recommendations of the 18th Report of Public Accounts Committee of the Parliament (14th Lok Sabha) on "[Pilgrimage to Sabarimala—Human Problems and Ecology](#)," which called for development of Sabarimala without disturbing the region's ecology.

The central government, however, has been non-committal so far regarding the issue, but if this new status is granted in future, it would bring in funds and central assistance to develop infrastructure in the region to cater to the ever-swelling number of pilgrims. However, unless the pilgrim centre's development is carefully planned and based on exhaustive empirical and evidence-based perceptive analysis, it can disrupt the fragile ecosystem of the Western Ghats, since the shrine is located in the buffer zone of the Periyar Tiger Reserve.

The mass gathering at Sabarimala stands apart due to the sheer number of pilgrims who visit the shrine situated in an ecologically vulnerable area. The main pilgrim season is from November to January, during which the shrine is visited by three to five crore devotees, mainly from the four South Indian states. In addition to this annual three-month gathering, thousands of pilgrims also visit the temple on the first five days of every Malayalam calendar month, during which the temple remains open.

Mass gathering for religious and spiritual purposes has time and again been in focus due to high rates of mortality and injuries resulting from outbreak of diseases and stampedes. This has become a recurrent phenomenon at a number of religious congregations including yatras (journey), the Kumbh Mela, holy darshans (viewing a deity) and shrine-specific special occasions.

The Ram Janki temple stampede in 2010, which killed 63 people, highlighted the lack of high quality epidemiological data ([Burkle Jr and Hsu 2011](#)). On 13 October 2013, another such [tragedy took place at Ratangarh temple in Datia District of Madhya Pradesh in which about 115 people died](#) and many were injured ([Singh 2013](#)). The Sabarimala stampedes in 1999 and 2011 killed more than 150 people. The reasons for such tragedies are often attributed to rumours, minor accidents during the waiting period, poor crowd management, inefficient maintenance of law and order, indiscipline, lack of hygiene and inadequate sanitary facilities.

The Phenomenon of Mass Gathering

Undertaking systematic studies on the phenomenon of mass gathering would help in preventing mass fatalities in future. Human stampedes are a serious problem according to one of the rare analyses undertaken of around 40 stampedes occurring between 2001 and 2010 in India. It was found that higher number of deaths occurred in stampedes which took place at religious or political events ([Ngai et al 2013](#)). Accidents, stampedes and the resulting casualties have received considerable attention, resulting in interventions such as crowd management and scientific and online queuing system. Certain dimensions of the phenomenon of mass gathering remain unexplored in India. Attention has to be paid to devise a mass gathering and safe pilgrimage policy.

Mass gathering is normally defined as an “organized or unplanned event if the number of people attending is sufficient to strain the planning and response resources of the community, state or nation hosting the event” ([WHO 2008](#)). Mass gathering poses considerable challenges in terms of communicable and non-communicable disease surveillance, emergency preparedness, environmental health, vaccination, crowd management, etc ([Lancet Infectious Diseases 2010](#)).

Health services are normally tuned to meet routine requirements and provide services in a limited sphere. Such services are unusually strained during mass gatherings and

may require major strengthening of existing services and potentially the introduction of new or enhanced methods for managing disease and other public health emergencies. Standard Operating Procedures (SOP), and establishment of a public health response command and coordination structure within and between public health sectors (WHO 2008:18).

A review of literature shows an immense opportunity to initiate the process of knowledge generation in the area of mass gathering in India. Given the paucity of information in the area of mass gathering in general and mass gathering and health in particular, there is a need to generate a body of knowledge in the four domains of biomedical, environmental, infrastructural and psychosocial problems, with the fundamental aim of developing a mass gathering and safe pilgrimage policy.

Several reviews point out the influence of a number of variables such as weather, event type, event duration, age, crowd mood and density, attendance, and alcohol and drug use ([Milsten et al 2002](#); [Arbon et al 2013](#)). A systematic review of papers published between 2001 and 2011 shows that many of the papers documented experiences and presented expert opinions ([Arbon et al 2013](#)). Given the complexity of the situation and high mobility of the population which makes high level of evidence generation like controlled trials difficult, it is suggested that middle-level observational and analytical studies should be encouraged to enable informed decisions on public health strategies.

Among the complex challenges are the high rates of non-communicable diseases resulting from heat stress, exhaustion and crowd stress ([Steffen et al 2012](#)). In addition to acute cardiovascular events, there are probabilities of myocardial infarction, cardiac arrest, etc, occurring during events which involve long stretches of walking and climbing through hilly terrains such as in Sabarimala and some other pilgrimages in India. The mitigation measures are contextual, which depend on the event and the milieu. However, certain standard measures such as surveillance and emergency operations can be suggested.

From a public health point of view, communicable diseases can be considered as a major problem inherent in mass gatherings, especially when large numbers of people congregate in small areas for a short duration. This is typical of many religious events such as the Kumbh Mela, annual pilgrimage to Sabarimala and the Haj in Saudi Arabia. The Haj has been closely studied and monitored for outbreaks of infectious diseases and gastrointestinal diseases.

Health Issues Faced by Sabarimala Pilgrims

In the Indian context, and especially in the context of Sabarimala, some of the issues that need to be taken up are—gastrointestinal diseases due to high coliform loads, poor sanitation, concentrated bathing in streams, poor drinking water quality and food hygiene; respiratory diseases due to overcrowding and climatic conditions, vector-borne diseases, and zoonotic infections ([Abubakar et al 2012](#)).

Assessment of health risks therefore becomes top priority. One of the earliest studies on the Kumbh Mela is a study on aspects related to environmental sanitation (Bagchi and Banerjee 1967). Analysis of the 2001 Kumbh Mela with respect to health services shows the importance of commitment, purposefulness, motivation and good governance in providing these services and maintaining hygienic conditions ([Sharma 2009](#)). The areas suggested for

research in mass gathering are—reducing risks, including public health emergencies during events; restricting the occurrence of communicable and non-communicable diseases; fine-tuning and scaling up health services in order to address the problems, etc.

A pilot study undertaken in Sabarimala as part of a larger study on mass gathering by the authors helped in identifying some of the problems with respect to environment and health. Despite a committed and efficient district administration, the Sabarimala pilgrimage can become unmanageable and unsustainable in the coming years. The number of pilgrims to the annual religious congregation is increasing, and given the geospatial and ecological context of Sabarimala, which is part of the Western Ghats, any development in terms of infrastructure could be detrimental to the environment.

The pilot study shows multidimensional impacts of the pilgrimage. The health service system is strained and in the event of any emergency, mortality cannot be avoided. The state government has provided emergency services on various routes to the temple, but these are managed by persons who are undertrained. Pain management services and respiratory support are also available. It is found that most of the complaints are related to muscular pains and breathlessness. The state should consider deploying paramedics who are trained in indigenous system of medicine in these booths. Sitting spaces could be provided en route, especially for the older pilgrims. Oxygen cylinders and pain relieving creams are available but only on the main roads leading to the temple.

The pilgrims suffer from breathing problems, including suffocation, which get aggravated while they are waiting in the queue. The state government should consider deploying a few paramedics along with the police managing the queue. Air and sound pollution is maximum in the temple premises, and it should be monitored and controlled by scientific methods.

Mass Gathering and Safe Pilgrimage Policy

An effective mass gathering and safe pilgrimage policy (MGASPP) requires an evidence base from a multidimensional platform, a committed and flexible monitoring mechanism, and a body which is ready to take suggestions. In many cases, the “we know it all” syndrome precludes constructive and critical examination of the faults and shortcomings that are pointed out. There is also a general apathy among the authorities towards creation of scientific evidence and an empirical base, which are required for the safe and satisfactory conduct of pilgrimage. Any efforts towards creation of such evidence are faced with immense road blocks (The Haj is an exception primarily due to the multi-country participation and high degree of threats from infectious diseases and partly due to pressure from United Nations bodies such as the WHO).

The environmental, public health, infrastructural and psychosocial factors need to be examined and addressed by clear-cut intents and indents. Data needs to be collected in the above- mentioned areas and this can serve as a baseline. This baseline data could then be continuously monitored to record changes and trends. Separate independent task forces

with one or two members can be formed to look into the identified domains with respect to the pilgrimage.

A national status for the pilgrim centre can help in making the pilgrimage safe and healthy not just from the pilgrim's point of view but equally from the point of view of ecology and sustainable development. If that happens, the state will be able to develop a sound mass gathering and safe pilgrimage policy, and this can serve as a model for other pilgrimages in India as well.

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