

COVID-19 outbreaks in places of worship worldwide: a systematic review

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Background:

Since the beginning of the CoViD-19 pandemic, scientific community raised concerns about mass gatherings: religious ones in particular could become the perfect soil for the Sars-CoV-2 transmission due to the environmental conditions (e.g. not-ventilated worship hall, no distance between attendees, physical contact). Thus, this systematic review aimed to explore CoViD-19 outbreaks in places of worship worldwide.

Methods:

A systematic search of three electronic databases (PubMed, Scopus and Embase) was performed, including years 2020 and 2021 until March, 29th. Criteria of inclusion were articles published in English, French, Italian, Spanish or Portuguese, dealing with CoViD-19 outbreaks reported in churches, mosques, synagogues and other places of worship, regardless of region or religion. Pilgrimages were excluded.

Preliminary Results:

Out of 7655 articles found, 36 were included, for more than 50 outbreaks reported. The number of persons involved in each cluster varied from units to several thousands, while the

geographic distribution displayed reports mainly concerned about East and Southeast Asia (65%), Europe (15%) and North America (15%), referring to gatherings carried out in the first semester of 2020, in particular in February and March. The most involved religions were the main monotheistic ones (i.e. Christianity, Islam and Judaism), although the eastern religions played an important role too.

Conclusions:

In reason of religious gatherings, places of worship had had an important role in the virus transmission, becoming the first cause of contagion in several countries especially during the first wave of the pandemic, because of the absence of social distancing, masks use, danger awareness and, in some cases, poor hygiene conditions or CoViD-19 denial. Although there was a different risk associated with different religions, this systematic review highlighted how important is to evaluate worship-related outbreaks as a major public health concern.

Key messages:

- 50+ worship-related clusters with a variable range of persons involved were reported principally from Asia, Europe and North America. The main monotheistic religions were more implicated.
- Places of worship became the first cause of contagion in several countries especially during the first wave of the pandemic: these outbreaks should be considered as public health concerns.