



## Suicidal Attempt After the Earthquake: A Letter to the Editor

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### Dear Editor,

Children and adults may be at risk of suicide after an earthquake, especially if they are subjected to physical abuse or emotional neglect by the family (1). This study is a report of a systematic review and meta-analysis. Searches were conducted in databases, including PubMed, Scopus, web of science, Google Scholar, and Magiran, SID, using English and Persian valid keywords: (suicide), (earthquake), (natural disasters), (mental disorders), (attempt) and (AND) and (OR) operators from 2012 to May 2019. PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guideline was used for systematic review and meta-analysis and the quality of studies was assessed by STROBE checklist (2). After reviewing the inclusion and exclusion criteria and qualitative evaluation of the articles, finally, three studies with good quality entered the meta-analysis stage as shown in Table 1.

The total sample size was 4473. The binomial distribution was used to calculate the variance of each study and of the average weight was used to compound the prevalence in different studies. In order to evaluate the heterogeneity of the selected studies,  $I^2$  index was used. The heterogeneity of the studies was estimated at a low range ( $I^2 = 0.0\%$ ). The prevalence of suicide attempt aftermath the earthquake was 0.3% with 95% CIs (0.2 - 0.3). The prevalence of suicidal attempt aftermath the earthquake had a significantly increasing trend, according to the year of the study. Earthquakes lead to an increase in the number of psychiatric disorders, such as depression and PTSD (post traumatic stress disorder) (6). The suicide rate has

been reported 5.3/100,000 in Iran (7). Iran has experienced large-scale destructive earthquakes in recent years, including the Bam (2005) earthquake and Kermanshah (2017). According to the reported rate of suicide in Iran and the occurrence of large-scale earthquakes, special attention should be paid toward the likelihood of a suicide attempt after the earthquake. In the aftermath of an earthquake, assessment teams should identify individuals with suicidal ideations and a history of psychiatric disorders because they are at high risk of suicide than the others. Finally, this population should receive more mental support after they were identified.

### Footnotes

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**Table 1.** Characteristic of Articles Extracted for Meta-Analysis

First Author	Year of Study	Year of Earthquake	Sample Size	Mean Age	Male Number	Female Number	Suicidal Attempt,%
Guo (3)	2017	2008	1357	54.34	632	725	3.3
Tanaka (4)	2016	2008	2641	15	1182	1459	2.6
Carmassi (5)	2015	2009	475	Not reported	Not reported	Not reported	2.3

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