***Supplementary Material***

# Description

*Supplementary Tables*

* **Table S1**:  strings used to select the publications electronically
* **Table S2**: parameters and attributes that were used in this study

*Supplementary References*

* **References S1**: list of the 109 publications shortlisted for our scoping review according to the selection criteria described in the manuscript and Table S1

# Supplementary Tables

**Table S1**. Search strings used to select publications in three databases: Google Scholar, Scopus, and Web of Science. The filters applied were “find articles with the exact phrase” and “anywhere in the article”

|  |  |  |
| --- | --- | --- |
| **Google Scholar** | **Scopus** | **Web of Science** |
| Europe "seismic risk communication" | “seismic risk communication” | "seismic risk communication" OR "communicating seismic risk" OR "communicate seismic risk" OR "earthquake risk communication" OR "communicating earthquake risk" OR "communicate earthquake risk" |
| Europe "earthquake risk communication" | "EQ risk communication" | “seismic risk education” OR "educational seismology" |
| Europe "seismic risk education" | "in Europe" "seismic risk education" OR "earthquake risk education" OR "educational seismology" "seismic risk" | "education campaign\*" "seismic risk" |
| Europe seismic "risk education campaigns" | Seismic Risk Education | “earthquake risk education” |
| Europe earthquake " risk education campaigns" | educational seismology |  |
| educational seismology -US -California -Mexico -Asia -Japan | Europe " awareness campaign" OR " awareness campaigns" "seismic risk" |  |
|  | awareness seismic campaign |  |
|  | Seismic And Risk and Communication |  |
|  | seismic AND risk AND education |  |

**Table S2**: Parameters and attributes retrieved from the 109 selected publication grouped as follows: when (a), who (b), what (c), why (d), how (e1, e2)

(a)

|  |
| --- |
| **WHEN in the risk communication lifecycle: before, during, after the eventPrevention-preparedness/during the crisis/recovery** |
| Ordinary time/Long term preparedness, prevention, or adaptation | during crisis /initial stage/ warning communication | During crisis/maintenance/ Emergency and crisis communication  | After crisis/ recovery and rehabilitation communication  |
| 1 = yes 0 = no11 = doubt | 1 = yes0 = no11 = doubt | 1 = yes0 = no11 = doubt | 1 = yes0 = no11 = doubt |

(b)

|  |
| --- |
| **WHO** |
|  |  |  |  | **Engagement/co-production modes** |  |
| Sender/organiser/messenger | Receiver/target audience  | Receiver engagement in communication  | If yes  |
| 1=public agencies working in DRM; 2= NGOs; 3=public auth. working in edu. 4= students5= citizens/general public; 6=private company7= Research centres/university 10=other 11=doubt  | specify OTHER | 1=public ag. DRM; 2= NGOs; 3=public authorities working in education 4= citizens/general public; 5= students/pupils; 6= private companies;  10=other 11=doubt12=mixed13=multiple  | specify OTHER | 1=yes 0= no11=doubt | 1=co-design 2=co-development3=co-implementation4=co-assessment 10=other 11=doubt | specify OTHER | specify doubts |

(c)

|  |
| --- |
| **WHAT** |
| Communication models (Stewart and Hurt 2022) | Research focus (Balong-Way et al.2019) |
| 1 = one way2 = two ways3 = three ways10 = other 11 = doubt | specify OTHER | 1 = sender/messenger 2 = message attributes 3 = audiences  10 = other 11 = doubt 12 = mixed13 = multiple | specify OTHER |

(d)

|  |
| --- |
| **WHY** |
| Communication aims  (Bostrom et al. 2018) |
| 1 = sharing information 2 = changing beliefs 3 = changing behaviours  5 = raise awareness 10 = other 11 = doubt12 = mixed13 = multiple | specify OTHER (i.e., prevention, preparedness, find a strategy...) | specify mixed | specify multiple |

(e 1)

|  |
| --- |
| **HOW** |
| Risk communication tools  | Risk management tools used for communication purposes (Venutti et al. 2021)  | Channels | Methods  | Modes |  | Funded by |  | Risk communication evaluation included |
| 1=leaflets, documents; lesson plans2=videos; video scribing3= mock drills/simulation exercises; 4= serious games; serious videogames5= risk communication plan; 6= hands-on tools (e.g., plate tectonics model, seismometers, shake tables, edu-models)7= infographics 8=augmented reality10=other 11=doubt12=mixed13=multiple | specify OTHER | 1=hazard, risk, vulnerability, or exposure maps; 2=emergency plans; 3= warning/alert messages; 4= past event history; 5=risk reduction plans; 6=recovery plans; 10=other 11=doubt13=Multiple tools  | specify OTHER | 1=face to face; 2= social media; 3= website4=Tv, radio; 5= newspapers; 6=smartphone apps; 10=other13= multiple channels | specify other/specify multiple  | 1= interviews2= focus groups/outreach events3=surveys4=classroom activities  10=other 11=doubt12=mixed13=multiple channels | specify other/multiple | 1=in person2=remotely/virtual3=hybrid   10=other 11=doubt12= mixed methods | specify other | 1=public national agencies2=public international agencies3=private sector 5=not available  10=other 11=doubt13=multiple sources | spec. other | 1=yes; 0=no; 11= doubt |

(e2)

|  |
| --- |
| **THEORY (only what the authors declare)** |
|  | **if theory is mentioned** |
| Theory mentioned (NOAA 2016) | Deficit model  | Social amplification of risk | Risk information seeking and processing model  | Crisis and emergency communication model  | Mental model  | Causal model  | Behavioural oriented model  |   |
| y=1n=0doubt=11 out of scope/ review paper=3 | mentioned=1no=0doubt=11 | mentioned=1no=0doubt=11 | mentioned=1no=0doubt=11 | mentioned=1no=0doubt=11 | mentioned=1no=0doubt=11 | mentioned=1no=0doubt=11 | mentioned=1no=0doubt=11 | Other theory is directly mentioned or used: specify |

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