***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 event Prevention-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 = no 11 = doubt | 1 = yes 0 = no 11 = doubt | 1 = yes 0 = no 11 = doubt | 1 = yes 0 = no 11 = 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= students 5= citizens/general public;  6=private company 7= 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=doubt 12=mixed 13=multiple | specify OTHER | 1=yes  0= no 11=doubt | 1=co-design  2=co-development 3=co-implementation 4=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 way 2 = two ways 3 = three ways  10 = other  11 = doubt | specify OTHER | 1 = sender/messenger  2 = message attributes  3 = audiences  10 = other  11 = doubt  12 = mixed 13 = 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 = doubt 12 = mixed 13 = 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 plans 2=videos; video scribing 3= mock drills/simulation exercises;  4= serious games; serious videogames 5= risk communication plan;  6= hands-on tools (e.g., plate tectonics model, seismometers, shake tables, edu-models) 7= infographics  8=augmented reality 10=other  11=doubt 12=mixed 13=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=doubt 13=Multiple tools | specify OTHER | 1=face to face;  2= social media;  3= website 4=Tv, radio;  5= newspapers;  6=smartphone apps;   10=other 13= multiple channels | | specify other/  specify multiple | 1= interviews 2= focus groups/outreach events 3=surveys 4=classroom activities    10=other  11=doubt 12=mixed 13=multiple channels | specify other/  multiple | 1=in person 2=remotely/  virtual 3=hybrid     10=other  11=doubt 12= mixed methods | specify other | | 1=public national agencies 2=public international agencies 3=private sector  5=not available    10=other  11=doubt 13=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=1 n=0 doubt=11  out of scope/ review paper=3 | mentioned=1 no=0 doubt=11 | mentioned=1 no=0 doubt=11 | mentioned=1 no=0 doubt=11 | mentioned=1 no=0 doubt=11 | mentioned=1 no=0 doubt=11 | mentioned=1 no=0 doubt=11 | mentioned=1 no=0 doubt=11 | Other theory is directly mentioned or used: specify |

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