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Seismic Risk Perception compared with seismic Risk Factors

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The communication of natural hazards and their consequences is one of the more relevant ethical issues faced by scientists. In the last years, social studies have provided evidence that risk communication is strongly influenced by the risk perception of people.
In order to develop effective information and risk communication strategies, the perception of risks and the influencing factors should be known. A theory that offers an integrative approach to understanding and explaining risk perception is still missing. To explain risk perception, it is necessary to consider several perspectives: social, psychological and cultural perspectives and their interactions.
This paper presents the results of the CATI survey on seismic risk perception in Italy, conducted by INGV researchers on funding by the DPC. We built a questionnaire to assess seismic risk perception, with a particular attention to compare hazard, vulnerability and exposure perception with the real data of the same factors. The Seismic Risk Perception Questionnaire (SRP-Q) is designed by semantic differential method, using opposite terms on a Likert scale to seven points. The questionnaire allows to obtain the scores of five risk indicators: Hazard, Exposure, Vulnerability, People and Community, Earthquake Phenomenon.
The questionnaire was administered by telephone interview (C.A.T.I.) on a statistical sample at national level of over 4,000 people, in the period January –February 2015.
Results show that risk perception seems be underestimated for all indicators considered. In particular scores of seismic Vulnerability factor are extremely low compared with house information data of the respondents. Other data collected by the questionnaire regard Earthquake information level, Sources of information, Earthquake occurrence with respect to other natural hazards, participation at risk reduction activities and level of involvement.
Research on risk perception aims to aid risk analysis and policy-making by providing a basis for understanding and anticipating public responses to hazards and improving the communication of risk information among people, technical experts, and decision-makers.
Those dealing with seismic risk need to understand what people think about and how they respond to this risk. Without such understanding, well-intended policies may be ineffective. (Slovic, 1987). For these reasons we believe that comparing the perception factors with the "real factors" of seismic risk, is a crucial point to understand the relationship between scientific knowledge and public understanding. Without a comparison with reality, research on risk perception is just an intellectual exercise.