Review of: "An approach to the background, methods and challenges of research in disasters"

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Potential competing interests: No potential competing interests to declare.

The major merit of this paper is to call the attention on the role of an epidemiological (i.e. population-based) approach to both prevention of disasters and investigation of their consequences. Its publication will cause debate, which is welcome.

However, this text requires a major revision, as indicated below. Admittedly, my comments reflect the fact that my expertise is environmental cancer epidemiology and carcinogenesis.

Overall score 3 (subject to improve, on subsequent revisions).

General observations

- The historical evolution of disaster research is considered cursorily, on the basis of a few “bibliographical elements” selected with criteria which are not reported.
- Too little attention is given to man made disasters, including:
  - Disasters caused by pollution from industrial activities: no mention at all of programs for the identification and remediation of environmental disasters caused by industrial activities such as the Superfund in the United States and “Sentieri” in Italy.
  - Current worldwide disparities in the control of environmental pollution from industrial activities.
- Not enough emphasis on research regarding prevention of disasters.
- Are authors sure that research on the response to the disaster prevails on research on the impact of the disaster itself (see abstract)?
- Last lines of the conclusion are puzzling: which managers, heads of organizations and field staff are alluded to?
- I shall be most pleased to have a direct contact with the authors.

Specific points

Introduction

• The UN’s definition of disaster (including both sudden and slow onset disasters) is community centered and requires community’s inability to cope with disaster’s consequences. Outbreaks of occupational (eg aromatic amines induced

bladder cancer) and iatrogenic (eg thalidomide induced malformations) do not meet any of these two conditions (at least in least socioeconomically vulnerable countries). Is it intended that such episodes are excluded from the definition, in spite of the fact that they affected thousands of subjects worldwide?

Methods

These few lines are repetitious of the last sentence of the introduction. Which were the criteria for identifying the “events which have determined the significant moments in the historical evolution of disaster research”? (I am surprised by the lack of any mention to the 1952 London fog and the subsequent Clean Air Act: wasn’t it a milestone in the study of air pollution?)

Results

- (Paragraph starting”In the century …”) It seems that both OFDA and the Swiss Re Institute systematically collect information on disasters occurring worldwide. This is most interesting: could authors expand on their exhaustivity, information being collected , accessibility etc.
- (Paragraph starting ”At the end of the 1960s ….). The two episodes (famine in Biafra and cyclone Bhola in Bangladesh) occurred under conditions in which counting bodies and ensuring exhaustivity in the provision of relief were problematic. How did the application of epidemiological research methods (typically implying a population based approach) match with such conditions?
- Emphasis is given to the transition from descriptive to analytical epidemiological methods. The list of analytical methods in the last paragraph of this section is hardly more than the index of a modern text of epidemiology. Some examples would help and attention should be given to the fact that even descriptive studies (such as body counting) could be difficult to carry out in economically disadvantaged countries because of lack of resources, lack of skill and (above all) lack of political interest in the environment. These are the reasons - for example – for the paucity of knowledge on the impact of occupational and environmental exposures to asbestos in the major asbestos consumer countries.
- For chemical disasters, I am impressed by the omission of any mention the relevance of internal doses and their use in epidemiological studies.
- Mention is made of progresses after the appearance of the International Strategy for Disaster Reduction (2000) and the Sendai Framework for disaster reduction 2015-3030. Some indicators of such progresses would help. For instance, how exhaustive (and how useful) turned out to be the “Disaster Loss Data Collection” (Desinvestar Sendai)?
- I suggest to expand the first line of Table 1 to “Hazards identification, including recording episodes of violation for the protection of the environment”.