



Risk representation in the assessment of mitigating disasters

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As far as the exposed population is concerned, a study of risk representation is important from two points of view:

Firstly, risk representation is a main component when evaluating the vulnerability of a population in the context of the stress-vulnerability model (David, 2006). The stressful events, like those regarding the natural risk, interact with a biological, psychological and social vulnerability state, being able to overwhelm the resources of the organism through constant solicitation. The cognitive factor plays an essential part in defining a stimulus as stressful or not, being in the same time a factor of psychological vulnerability.

Secondly, there is a certain homogeneity present in the risk representation (according to age, social status, types of habitat, urban morphology etc.), this being an important aspect concerning the risk communication and giving notices to the population, but also in the process of mapping the vulnerabilities through spatial generalization (Beck and Glatron, 2005).

The risk representation present in the living environment is interpreted, in this study, according to Moscovici's definition (1986, 2004), as a social-cognitive system that allows the conduction of behaviors and the selection of answers to the environmental stimuli.

The representations have a **cognitive constituent**, passing from the perception to con-

cept, an **emotional constituent**, with the role of diminishing the psychic discommodo of the individual confronted with unfamiliar events, and a **behavior constituent**, having the function of orientation.

This study is based on a psychosocial investigation, undertaken in the historical center of Bucharest with the help of a standardized questionnaire.

The field results were subjected to the processing of descriptive statistics, using the interpretation of absolute and relative frequencies. The *chi-square* significance test and the *Spearman correlation* were applied as to surprise the inferences and to validate the significant level of the statistical hypothesis.

In order to test the “size” of the perception of each and any type of risk investigated, a score referring to the “perceived danger degree” was given, in which parameters regarding the danger perceived by the population, the predictability of the event, the degree of control present during its development, the frequency of the event and the possibility to be prevented were added.

The relations between the tested variables (“perceived danger degree” and social-demographical indexes: age, gender, number of persons in the household, the social status provided by the profession, the income and the type of ownership over the residence, and education level indicators) were studied on the basis of the independent-samples t test and one-way ANOVA. The factorial analysis was used in order to identify the possible cognitive models regarding risk, by resuming the index variables to a couple of factors. The factorial analysis was also used to test how the variables associate in factors referring to social vulnerability. The correlative analysis were applied subsequently in order to identify the way in which the resulted factors relate to each other.

The degree of prototypicality of the earthquakes was tested on a casual 100 person sample, heterogeneous from the point of view of the demographic indexes, implemented in the same period of time and in the same area and based on a typical form referring to the 14 risks evaluated.

The importance of appreciating the control level when confronting dangerous situations turned out as a general pattern of relating to risk. Related to this pattern, one could identify the belief that events which can be controlled can also be automatically stopped in their evolution. An important aspect for controlling the risk events is the degree of their forecast.