Emergency communication: A framework for planning and targeting messages

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Available at: https://works.bepress.com/patric_spence/36/
ABSTRACT

This article outlines a model of emergency communication for use in generating action in audience members. The model expands previous research by enlarging the framework of fear and self-efficacy. The model is first outlined explaining its theoretical dimensions and if followed by explanations of its validation. The next portion discusses its potential use for emergency practitioners. The article concludes with a description of how to use the model and where to obtain more information about the model.

Key words: crisis communication, risk communication, hazard, outrage, Peter Sandman

RISK, HAZARD, AND OUTRAGE

Several models exist outlining the need to call public attention to potential risks for emergencies.1,2 In this literature, crisis communication is typically categorized as precrisis communication, risk communication, or emergency preparedness. Most of these models revolve around the idea that information before and during an emergency should address both the nature of the threat and the degree of risk involved. Peter Sandman3,4 suggests that communication in such a circumstance should be made up of two facets: “scaring people” and “calming people down.” Stated differently, messages should both alert and reassure people.5 Sandman suggests that risk communication messages should contain two components, which he labels as hazard and outrage. These messages should ideally attempt to create a level of outrage that is appropriate given the level of hazard (a formula Sandman labels “Risk = Hazard + Outrage”).6

A helpful feature of the model is how it can be useful in aiding experts in defining and communicating risk in a manner that is more congruent with the public’s perception of risk. As noted by Sandman,6 the experts risk means expected annual mortality; however, the public views risk as much more than this. The public tends to focus on outrage, whereas the experts focus on hazard. Outrage factors are not distortions in the public’s perception of risk but are more intrinsic parts of what is meant by risk. Because experts fail to acknowledge outrage in their communication messages, these efforts become less useful to the public. Sandman’s model aids greatly in the construction of risk and crisis messages creating action, though affective responses in the public. Additionally, the model has several added benefits for outrage management, which focuses on communication when people are excessively frightened or angry about a small hazard and how communication can be used to calm them down.3

Hazard

Hazard is the technical seriousness of a risk.7 This includes the magnitude (the size of the potential threat and its potential damage to physical structures) and likelihood of the event occurring and its associated undesirable outcomes. Depending on the audience, several possibilities exist in communicating the likelihood, including a percentage, odds, or a more qualitative and detailed description. The hazard construct of the model examines both cognitive and affective responses to risks through examining elaboration by the message receiver, in contrast to other approaches that depend on fear alone as a motivator. Other audience-based approaches that focus solely on the role of fear are limited by wide variation, both across and within
subpopulations, of exactly what information will invoke fear. Furthermore, other models implicitly rest on the assumption that any manipulation of emotion to a negative or potentially harmful event can be qualified as fear. In addition to likelihood, magnitude, and fear, other components of hazard may include dread (the idea that the risk requires a respect or reverence helping people to live with and think about the risk reasonably), mortality (the number of deaths expected), and morbidity (the prevalence of the hazard). Risk messages therefore need to provide people with information explaining the dangers and likelihood of the event.

**Outrage**

Outrage is described as the cultural seriousness of the risk or how people react to the risk information received. This can include both specific actions taken and factors such as need for control, trust, and responsiveness. Messages need to address outrage to motivate individuals to choose the best response to the threat and therefore must typically include steps people need to take to avoid dangers or reassurance that no action is necessary. Although the assessment of risk may be fairly consistent across subpopulations, affective responses to that risk may vary greatly across different groups of people. Just as access to resources, trust in those providing risk information, and emotional reactions will vary across sex, race, age, socioeconomic status, and location, so will the extent and nature of outrage reactions among members of these groups. These differences stress the importance of sensitivity to audience characteristics and necessitate the development of risk communication messages that are specifically pretested and tailored to induce appropriate levels of outrage among varying groups that may be affected by the risk at hand.

Outrage responses may include both specific actions taken and emotional factors such as need for control, trust, and responsiveness. Emotional factors include worry, concern, anxiety, or alarm; these include the suspense caused by an awareness of danger and hostility. Such emotional factors have the potential to motivate or impede actions; therefore, clear directions must be given to facilitate appropriate outrage. Specific actions have the ability to create a sense of empowerment giving an individual the impression that she or he has a measure of control in the situation. Emergency messages should also include explicit conclusions when addressing outrage to promote adoption of the intended behaviors, as this information will lead to higher levels of comprehension and attitude change in receivers.

**Using the model**

Although most emergencies provide a warning period, some, such as certain natural disasters, are more obvious and easier to comprehend. The warning period may vary from minutes to days. In some cases, such as tornadoes or hurricanes, the risk is associated with a particular season. In the warning stages of a crisis, the public should be given a set of instructions on how to personally manage the crisis. The public will then understand the urgency of the threat (if the hazard is addressed correctly) and will be motivated to take the appropriate action (outrage).

The model of Risk = Hazard + Outrage was validated by Lachlan and Spence in the natural laboratory of Hurricane Katrina. The measurement model for assessing hazard and outrage has been further validated in both experimental and applied settings, and there exists a refined 16-item instrument that is adaptable to multiple audiences and crisis situations.

Emergency and crisis practitioners will find this framework useful, specifically in testing messages for audience dissemination. By assessing the extent of both hazard and outrage experienced by different subpopulations under different crisis circumstances, first responders may be able to develop expectations of subgroup needs in future emergencies and tailor messages appropriately.

For example, using fear appeals in the explanation of a hazard may be an appropriate way to motivate the public to desired action. Following this message up with further communication designed to reduce outrage will provide an outlet for appropriate actions. Many existing messages and risk/crisis communication plans contain these elements in some form. The authors would argue that hazard and outrage are
manifest elements and important components of the public’s perception of risk/crisis events.

The use of this model and accompanying instrumentation may inform the design of precrisis and postcrisis messages that are both theoretically informed and targeted appropriately. Although no two crises are identical, application of the model to a variety of crisis scenarios may help predict informational needs and audience responses in future crises. In particular, differences across subpopulations can be examined (such as race, age, sex, and socioeconomic status) in such a way as to allow first responders and emergency managers to design messages more effective for specific at-risk groups. If emergency messages can convince people of the seriousness of a threat, when also believing that they can take the actions necessary to protect themselves and others, then they will likely take appropriate behaviors. The continual and repeated use and refinement of the model can provide valuable information to first responders and emergency planners, information that may be critical in future emergency message construction and dissemination. An early version of the model, used after Hurricane Katrina, can be found in the 2007 special issue of the Journal of Applied Communication Research, with an expanded explanation of its use for audiences of differing ethnicities is coming out in 2009.21 The refined 16-question instrument can be obtained by contacting either of the authors.

In addition to developing and validating an early form of the instrumentation, Lachlan and Spence5 also offer a glimpse of how the model can be used to evaluate perceptions of hazard and outrage, how those perceptions may differ, and their relationship to effective remedial actions. For example, although the authors found no differences between men and women on either factor, they found stark differences across ethnicity, with African American respondents indicating lower levels of perceived hazard in the days leading up to Katrina but higher levels of outrage. This finding is congruent with many of the theoretical aspects of Sandman’s model. Lachlan and Spence argue that these differences in audience response can be used to interpolate the effectiveness of the associated emergency messages. More specifically, they argue that emergency messages leading up to Katrina failed to induce appropriate levels of risk hazard among a very vulnerable subpopulation, in addition to failures in outrage management. Such results suggest the need to target emergency messages at this (and other) groups who may be especially at risk.

CONCLUSION

Sandman et al.’s3,4 model of risk, hazard, and outrage has, until recently, relied on heuristics for support. Past message design and attributions of the effectiveness of the model have relied largely on the assumption of these factors. More recent research has expanded this framework by validating the existence and measurability of these factors as psychometric constructs. It further suggests that risk/crisis communication efforts can be improved through the assessment of these responses across different subpopulations and crises. Given what is already known about differences across subpopulations in terms of their consumption of and responses to emergency messages, it becomes critical for emergency planners to consider these factors and the necessity of multiple targeted messages. The Sandman model provides one mechanism for doing so; by considering potential hazard and outrage responses across different groups, emergency managers may be able to not only determine appropriate outlets, but also appropriate content for diverse audiences. Thus, the model shows great promise for motivation and dissemination for the emergency practitioner. Through improved communication, the threat, harm, and severity of an emergency can be minimized and lives, assists, and infrastructure can be saved.

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REFERENCES
