



ELSEVIER



Available online at www.sciencedirect.com

ScienceDirect

Procedia - Social and Behavioral Sciences 155 (2014) 178 – 183

Procedia
Social and Behavioral Sciences

The International Conference on Communication and Media 2014 (i-COME'14), 18-20 October 2014, Langkawi, MALAYSIA

Source Credibility, Risk Communication and Well-being: A Conceptual Framework

Nurlela Zakaria^{a*}, Che Su Mustaffa^a

^a*School of Multimedia Technology and Communication, Universiti Utara Malaysia, 06010 Sintok, Kedah, Malaysia*

Abstract

This paper intends to establish a conceptual framework and discuss theoretical issues related to understanding relationships between source credibility, risk communication and well-being in disaster management context. The key aim of the framework is to highlight the relationship between the variables in predicting well-being in Malaysian contexts. Few literature on source credibility, risk communication and well-being that constitute the building blocks of this model were discussed as the starting point for general framework. This concept paper discusses the relationships between variables and proposed an integrated model of the conceptual framework between the variables to fill in the gap identified from previous studies to establish a new context of disaster management.

© 2014 The Authors. Published by Elsevier Ltd. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/3.0/>).

Peer-review under responsibility of School of Multimedia Technology & Communication, Universiti Utara Malaysia.

Keywords: Source credibility; risk communication; well-being; disaster management

1. Introduction

Strategic disaster management cycle involves four steps: prepared before disaster, preparation of the arrival, when disaster emergency response and disaster recovery (Tingsanchali, 2012). Disaster management includes the implementation of flood forecasting, early warning, decision making, experts in preventing catastrophic problems (Billa, Mansor & Mahmud, 2004). Billa, Shattri, Mahmud, and Ghazali (2006) explained that the disaster management strategy has two important stages. The first stage is preparation and prevention before disaster; the

* Corresponding author. Tel: +6019-4047815
E-mail address: nurlelazakaria@gmail.com

second level is the provision of relief, and the third stage involves rehabilitation and reconstruction of the damage (Figure 1). The first level of disaster management actions will help people avoid death and injury when disasters occur, they will experience an unstable emotional disorders such as fear, anxiety, frustration, depression and loss of hope during the flood (Mayhorn & McLaughlin, 2014). Disaster management in turn, could reduce the burden of its own to restart the disaster has destroyed the lives of human life from the physical and psychological aspects of flood victims (Nasir, Zainah & Khairuddin, 2012).

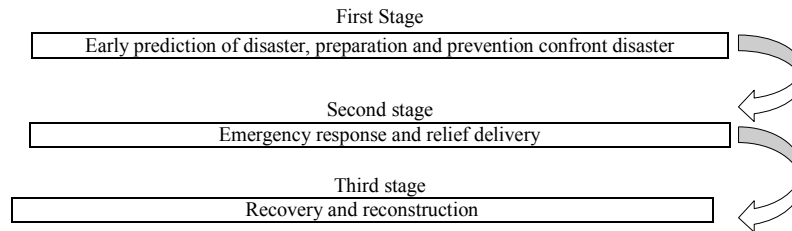


Fig.1. Stage of disaster management

In Malaysia, disaster management has some significant level of disaster preparedness and prevention, assistance and emergency response and disaster recovery (Shaluf & Ahmadun, 2006). Natural disasters are frequent landslides, lightning, floods and tsunamis caused by heavy rainfall and the geographical position of Malaysia in Southeast Asia and the tropics lead to monsoon rains throughout the year (Shaluf & Ahmadun, 2006). Disaster defined by Majlis Keselamatan Negara (MKN) under Arahan 20 (2011) "... an occurrence of a sudden, are complex and result in loss of life, damage to property or the environment and affect the activities of the local community."

The discussion above focused on the strategic disaster management at overseas and Malaysia. The next section will discuss in a literature review on disaster preparedness information management involving the source credibility and risk communication.

1.1. Source credibility

The credibility of the source has been studied in various disciplines. The credibility of the source has been studied in marketing (Eisend 2004), crisis management (Arpan, 2002), advertising (Clow, James & Stanley, 2008), and health information (Bates, Romina, Ahmed & Hopson, 2006).

The credibility of the sources has also been used in advertising to measure the influence of source credibility in advertising on consumer attitudes in the service industry. Clow, James and Stanley (2008) used the dimensions of expertise, trustworthiness, attractiveness, similarity and liking to measure source credibility. Bates et al., (2006) has been testing the credibility of the source to measure the quality of health information on the website by using the dimensions of reliability of information; informed consent; legibility of the information; and completeness of the information. Research by Arpan (2002) was performed in a multinational crisis management of various ethnic backgrounds. The researcher suggests that source credibility should consider ethnic differences in the organization. She claimed that ethnic has an effect on the effectiveness of communication due to ethnic differences to the spokesperson, the stakeholders and the receiver.

Previous studies also found that the credibility of the source has significant impact on the recipients of the message. The role of source credibility in marketing communication is effective to influence and persuade consumers (Eisend 2004). Clow, James and Stanley (2008) has proposed that source credibility has an impact on consumer attitudes toward the advertised brand based on their expertise, attractiveness and likability.

The issue of the credibility of resources in disaster is more interesting because there is a problem in the management of information about warning message before a disaster between source and receiver which is a person living in areas at risk. The problem of information overload has created doubts about the quality of information (Bates et al., 2006). Source credibility is an important aspect in disaster because people need to learn to evaluate information received by listening, understanding, trust, verify and respond to a warning message and the campaign environment (Blanchard-Boehm & Cook, 2004). Thomson and Ito (2012) also found that victims will seek information from other victims through social networking sites. The informant should be smart enough to persuade

residents to receive flood disaster preparedness messages delivered to flood measures taken immediately.

1.2. Risk communication

Communication was done in all phases of disaster management preparedness involves early warning (Paton, 2007; Fauziah, Normah, Samsudin, Fuziah, Abdul Latif & Jamaluddin, 2009; Mayhorn & McLaughin, 2014), during a disaster (Fauziah et al., 2009) and after a disaster (Blanchard-Boehm & Cook, 2004).

Rod, Botan and Holen (2012) defines risk communication is the process of conveying information transfer instructions prior to the natural disaster that has not been known to occur to comply with evacuation orders when the information is obtained from reliable sources and experts. Disaster risk management in accordance with the MKN (2011), is a process that "... a systematic way to analyze and manage the causal factors of disaster, including reducing vulnerability to hazards and destruction of property, land management practices and environmental sustainability, and improve individual preparedness community and agencies for disaster. "

Risk communication serves to start the command and protective action moments before, during and after natural disasters (Rod, Botan & Holen, 2012). Before the disaster is the prevention, risk communication is very important role in delivering the initial information needed by the flood victims to act effectively in the face of disasters (Paton, 2007; Fauziah et al., 2009). Preparation to reduce the risk of flooding disaster before crucial implemented and practiced by society (MKN, 2011). Awareness of disaster risk population to reduce the risk of disaster usually already practices in disaster-prone countries (Fauziah et al, 2009). However, the response to a disaster warning is different according to the demographic factors such as gender, age, socioeconomic status, education, and income (Mayhorn & McLaughin, 2014).

When disaster strikes, the victims will act quickly in emergency situations based on information received warnings to prevent loss of life, human suffering and loss of property. Awareness of disaster risk population to reduce the risk of disaster is usually practiced in a disaster-prone country (Fauziah et al., 2009). Impact of disasters can be reduced if people get information about impending disasters such as information security, disaster and the amount of damage to the affected area (Kurita, Nakamura & Kodama, 2006). The people who are in disaster-prone areas will take the lessons learned from past experience with the floods that will motivate them to seek more information on the risk of future disasters (Blanchard-Boehm & Cook, 2004).

Risk communication at the beginning of the disaster is difficult because it requires information effectively, cost effective, safe, authentic, current, and can be trusted by the people to take action immediately setup (Fauziah et al, 2009). An important element in communicating information about disaster risk is the actual location of the impending disaster risks and measures to be taken to prevent deaths and injuries due to disasters (Mayhorn & McLaughin, 2014).

The results can be summarized that the discussion related to risk communication research has long been studied in other areas and disaster management. However, risk communication in the context of this study focuses on the management of information prior to the floods. Flooding in accordance with the frequency selected for the case in Malaysia. Risk communication is the delivery of information related preliminary or early flood warning containing the steps to be taken before the flood disaster. Characteristics of risk communication must have the correct information and delivered in a short time, so that the victims can act quickly in order to avoid the impact of the floods. The next section will discuss on the importance well-being and information management before the disaster occurs.

2. Well-being

Well-being is divided into three components, namely psychological, social and physical. Components of psychological well-being is the ability to control the stress in life and maintain a positive attitude in the individual as the joy and self-satisfaction. Social well-being is also positive social relationships and mutually supportive. Physical wellbeing is about physical activities such as training volume, sleep habits, and alcohol intake (Robertson & Cooper, 2011). In Malaysian context, well-being is divided into economic prosperity and social well-being. Reports of Kesejahteraan Hidup Rakyat Malaysia (2013) have defined well-being as diverse and enjoyed the benefit derived

directly or indirectly contributing to the life satisfaction of individuals, families and communities.

People who live in areas at risk must have a physical and psychological preparation shared by the people who have the knowledge and skills to address the impact of this disaster (Nasir, Zainah & Khairuddin, 2012). Disaster will cause damage to development, transportation, infrastructure and property such as homes, vehicles and roads, river walls and bridges (Billa et al., 2006; Chan & Parker 1996; Jamaluddin, 1985). Disasters also severe economic impact on the victim, especially in areas with poor infrastructure (Reynolds & Seeger, 2012). Chan and Parker (1996) found victims ranging from the poor will suffer more than the rich people because access to resources is limited knowledge of the dangers. Arpan (2002) found that ethnic differences bring about effective communication during a crisis not of informants, stakeholders and recipients of the information.

Therefore, the source of information is the one factor that can ensure the health and well-being of the victims will be good (Zuhaida & Maznisham, 2009). Construction of disaster warning systems and effective disaster management system to reduce the damaging effects of natural disasters (Shaluf & Ahmadun, 2006). This has been proven through studies Kurita et al., (2006) who found that victims do not have the information to cope with the disaster, causing a variety of damage and destruction. However, respondents felt the damaging effects of disasters can be reduced if they have information about the disaster.

3. Proposed conceptual framework for the relationship between the variables

Disaster management involving source credibility factors, risk communication and well-being has yet to be studied in the context of the recent floods in Malaysia. Based on the above discussion, the framework to study relationships between variables proposed as shown in the figure 2. Figure 2 summarized credibility of the source and risk communication have a very important role in ensuring well-being of people living in flood-prone areas.

This conceptual framework suggests independent variables and dependent variables for future research. Independent variables representing the management of information before a flood disaster strikes the credibility of the source and risk communication which will be done by the spokesperson ranging from official and unofficial sources. Official sources related flood warnings spread by the police, the department of defense and flood forecasting agencies, local authorities, flood wardens or media widely (Parker & Handmer, 1998). The dependent variable is the well-being of the people was living in flood disaster-prone areas in psychological, social and physical.

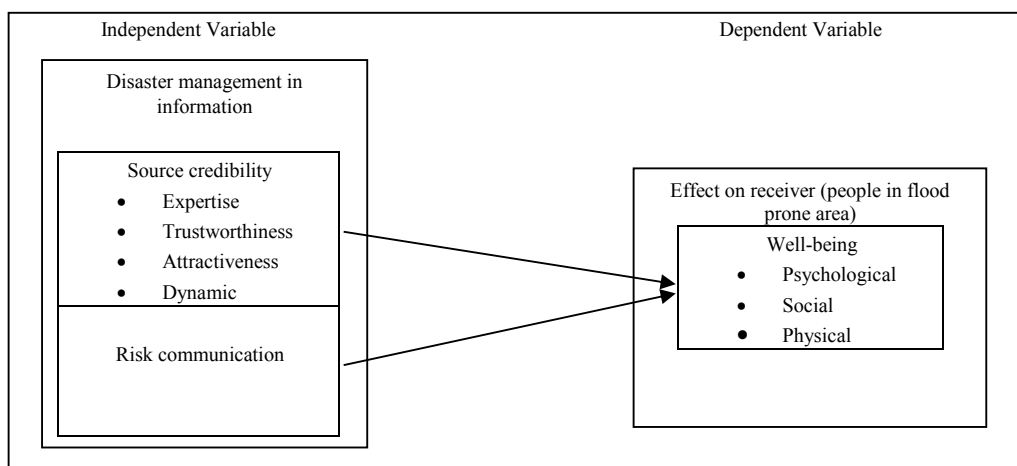


Fig. 2. A conceptual framework describes the relationship between the variables

4. Conclusion

This paper is intended to explain the relationship between flood disaster management in terms of dissemination of information is important because of the disaster will affect the people in terms of psychological, social and

physical. The impact of flood disasters can be reduced when people live in areas at risk of having an effective warning messages. Warning messages convey information that would harm it and the actions being taken to deal with the emergency and evacuation orders (Fothergill & Peek, 2004). Next, the conceptual framework is developed based on previous studies related to disaster management for future research to fill gaps and to contribute to the study of the effectiveness of disseminating information of early warning by the spokesperson to the people in flood disaster-prone areas.

Hence, this conceptual paper also suggests to fill the gap in flood disaster in Malaysia. Flood disaster in Malaysia is the phenomenon of the monsoons occurs twice in a year with the East monsoons occur from November to March and the South Monsoon winds also occur from May to September (Billa, Mansor & Mahmud, 2004). Chan and Parker (1996) mentioned that the floods in Malaysia occurred when East monsoon winds that often produce heavy rain over a long period around the Titiwangsa range. Muhammad Barzani, Salmijah, Mazlin, Mohd. Ekhwan, Sahibin and Chong (2010) considers flood disaster will happen again in the future. According to information released by the Majlis Keselamatan Negara (2011), Johor, Kedah, Melaka, Negeri Sembilan, Pahang, Terengganu and Kelantan are the areas at risk of flooding during the monsoon season that happens at the end of the years.

This study if successfully implements will be able to help spokesperson to understand effective communication of flood warning to persuade residents during the flood management plan. It also contributes to a better understanding of the interaction of people in flood prone areas with most reliable source of flood warning before confront with flood disaster. The relationship between people in flood prone areas and flood warning will help them to be more prepared and prevent the serious impact of the flood disaster.

Acknowledgement

The authors wish to thank the Ministry of Education, Malaysia for funding this study under the Long-term Research Grant Scheme (LRGS/b-u/2012/UUM/Teknologi Komunikasi dan Infomasi).

References

- Arpan, L. M. (2002). When in Rome? The effects of spokesperson ethnicity on audience evaluation of crisis communication. *Journal of Business Communication*, 39(3), 314-339.
- Bates, B. R., Romina, S., Ahmed, R. & Hopson, D. (2006). The Effect of source credibility on consumers' perception of the quality of health information on the Internet. *Medical Informations and the Internet in Medicine*, 31(1), 45-52.
- Billa, L., Mansor, S., & Mahmud, A.R. (2004). Spatial information technology in flood early warning systems: An overview of theory, application and latest developments in Malaysia. *Disaster Prevention and Management*, 13(5), 356-363.
- Billa, L., Shattri, M., Mahmud, A. R., & Ghazali, A. H. (2006). Comprehensive planning and the role of SDSS in flood disaster management in Malaysia. *Disaster Prevention and Management*, 15(2), 233-240.
- Blanchard-Boehm, R. D., & Cook, M. K. (2004). Risk communication and public education in Edmonton, Alberta, Canada on the 10th anniversary of the 'Black Friday' Tornado. *International Research in Geographical and Environmental Education*, 13(1), 38-53.
- Chan, N., W. & Parker, D., J., (1996). Response to dynamic flood hazard factors in Peninsular Malaysia. *The Geographical Journal*, 162(3), 313-325.
- Clow, K. E, James, K. E. & Stanley, S. (2008). Does source credibility affect how credit card are marketed to college students. *The Marketing Management Journal*, 18(2), 168-178.
- Eisend, M. (2004). Is it still worth to be credible? A meta-analysis of temporal patterns of source credibility effects in marketing. *Advances in Consumer Research*, 31, 352-357.
- Fauziah, A., Normah, M., Samsudin, AR., Fuziah Kartini, HR., Abdul Latif, A., & Jamaluddin, A. (2009). Confronting environmental risk via communication. *The Innovation Journal: The Public Sector Innovation Journal*, 16(3), 2-13.
- Fothergill, A. & Peek, L. A. (2004). Poverty and disasters in the United States: A review of recent sociological findings. *Natural Hazards*, 32, 89-110.
- Jamaluddin, M. J. (1985). Flash flood problems and human responses to the flash flood hazard in Kuala Lumpur, Peninsular Malaysian. *Akademika*, 26, 45-62.
- Kesejahteraan Rakyat Malaysia (2013). Retrieved from <http://www.epu.gov.my/documents/10124/6d62adaa-931a-4892-94e8-66e94e1dc43e>
- Kurita, T., Nakamura, A., Kodama, M., & Colombage, S. R. (2006). Tsunami public awareness and the disaster management system of Sri Lanka. *Disaster Prevention and Management*, 15(1), 92-110.
- Majlis Keselamatan Negara (2011). Laporan Kesiapsiagaan Bencana Semasa Monsun Timur Laut. Malaysia. www.mkn.gov.my.
- Mayhorn, C. B., & McLaughlin, A. C. (2014). Warning the world of extreme events: A global perspective on risk communication for natural and technological disaster. *Safety Science*, 61, 43-50.
- Muhammad Barzani, G., Salmijah, S., Mazlin, M., Mohd. Ekhwan, T., Sahibin, A. R., and Chong, H. B. (2010). Analisis banjir Disember 2006: tumpuan di kawasan bandar Segamat, Johor. *Sains Malaysiana*, 39(3), 353-361.
- Nasir, R., Zainah, A. Z., & Khairudin, R. (2012). Psychological effects on victims of the Johor flood 2006/2007. *Asian Social Science*, 8(8).
- Parker, D. J., & Handmer, J. W. (1998). The role of unofficial flood warning systems. *Journal of Contingencies and Crisis Management*, 6(1),

45-60.

- Paton, D. (2007). Preparing for natural hazards: the role of community trust. *Disaster Prevention and Management*, 16(3), 370-379.
- Reynolds, B., & Seeger, M. W. (2012). *Crisis and emergency risk communication*. United State: Department of Human and Health Services, Center for Disease Control and Prevention.
- Robertson, I. (2011). *Well-being: Productivity and happiness at work*. Palgrave Macmillan.
- Rod, S. K., Botan, C., & Holen, A. (2012). Risk communication and the willingness to follow evacuation instructions in a natural disaster. *Health, Risk & Society*, 14(1), 87-99.
- Shaluf, I. M. & Ahmadun, F. I. -R. (2006). Disaster types in Malaysia: an overview. *Disaster Prevention and Management*, 15(2), 286-298.
- Thomson, R., & Ito, N. (2012). Social responsibility and sharing behaviors online: the Twitter-sphere's response to the Fukushima disaster. *International Journal of Cyber Society and Education*, 5(1), 55-74.
- Tingsanchali, T. (2012). Urban flood disaster management. *Procedia engineering*, 32, 25-37.
- Zuhaida, A. J. & Maznisham, M. S. (2009). Isu dan cabaran yang dihadapi oleh pasukan perubatan dan kesihatan semasa bencana banjir di daerah Muar dan Keluang Johor. Unpublished article.