

# Risk Communication in Disaster areas: A study on Hud Hud Cyclone and it's Coverage in Newspapers, Andhra Pradesh, India

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## Abstract

Hud hud originated from a low-pressure system that formed under the influence of an upper-air cyclonic circulation in the Andaman Sea on October 6. It slowly consolidated and was upgrading the storm into a deep depression. Later it converted to tropical storm winds, later reported that the deep depression made its first landfall over Long Island, Andaman, and had reached cyclonic storm intensity, naming it Hudhud. After entering the Bay of Bengal, Hudhud continued to intensify the following day and was upgraded to a severe cyclonic storm as a Category-1 tropical cyclone after it formed a microwave eye feature IMD upgraded Hudhud to a very severe cyclonic storm .Hudhud underwent rapid intensification and developed an eye at its center. In the following hours, the storm reached its peak intensity with a minimum central pressure of 950 mbar (28.05 in Hg) and three minute average wind speeds of 185 km/h (115 mph) and reached the category-3 cyclone level. There of media coverage of hud hud as a fundamental resource of risk communication should be observed for delivery of risk information. The present study observed the content analysis of hud hud cyclone related news items of the The Hindu,Times of India ,Deccan chronicle newspapers of INDIA .We collected the different types of risk related messages by means of quantitative content analysis based on the Extended Parallel Processing Model(EPPM) proposed by Witte(1980).We observed coverage of the hudhud cyclone in connection with component of threat, component of efficacy.

**Keywords:** *Hudhud cyclone, Risk communication, Extended Parallel Processing Model(EPPM), Indian Newspapers.*

## INTRODUCTION

### Risk Communication

As the primary means of communication between government agencies and the general population, the media play an important role in shaping how the public perceives a potential risk. Risk communicators should carefully consider media coverage of disaster to successfully communicate with the public in the future. Communication during time of risk is often termed risk communication . As Rohrmann defines it, risk communication refers to a social process to inform the public about hazards, seek behavioral changes, and

participate in making decisions concerning issues (Rohrmann,2004) . The purpose of risk communication is to inform, warn and provide protective action plans for the public to follow (Mileti & Fitzpatrick, 1991). Thus, the content of risk-related news stories should be carefully examined to ensure that the general public receives essential information concerning a risk.

Risk communication can also be any purposeful exchange of information about health or environmental risks between interested parties such as governments, and the public regarding

- (a) Levels of health or environmental risks
- (b) The significance or meaning of health or environmental risks or
- (c) Decisions, actions, or policies aimed at managing or controlling health or environmental risks (Covello, Slovic, & Von Winterfeldt, 1986).

It has been noted that definitions of risk communication evaluate the success of risk communication from the point of view of the senders of those messages, in terms of getting the message across. Risk communications is most often the process and the messages that occur prior to the occurrence of a hazard. Risk communications helps audiences understand their risk as well as what activities they can undertake to prepare for the hazard situation (pamela walaski, 2011). The image is of experts enlightening or persuading an uninformed and passive public (US National Research, 1989). Additionally, reviewing a number of definitions of risk communication, Plough and Krinsky (1987) conclude that risk communication has five key components, i.e.,

1. Intentionality
2. Content
3. Audience
4. Source, and
5. Flow

Which, different definitions of risk communication are narrow or broad depending on the latitude of interpretation of these elements.

#### Extended Parallel Processing Model

This study employs the Extended Parallel Process Model (EPPM) (Witte, 1980)

a. To probe critically the content of the selected risk information associated with HUDHUD cyclone hazards in Visakhapatnam

b. To assess the extent to which messages and information concerning the cyclones would prompt the public to not only understand the risks of the current cyclones, but also feel capable of responding to the present threat by seeking effective actions against this threat.

The empirical implications of the present study include helping the media to construct a successful risk communication discourse more effective. In so doing, this study addresses the following objective area:

- (1) What type of risk information was the public provided with?
- (2) Did the risk-related information, as well as the risk-communication, increase the public's awareness and understanding of the cyclones?
- (3) Did the newspapers mention the severity and threats of the cyclones, predicted damages, actions to take, and the expected outcomes of taking the recommended actions equally? and
- (4) Theoretically did the risk communication discourse lead to control threat or fear?

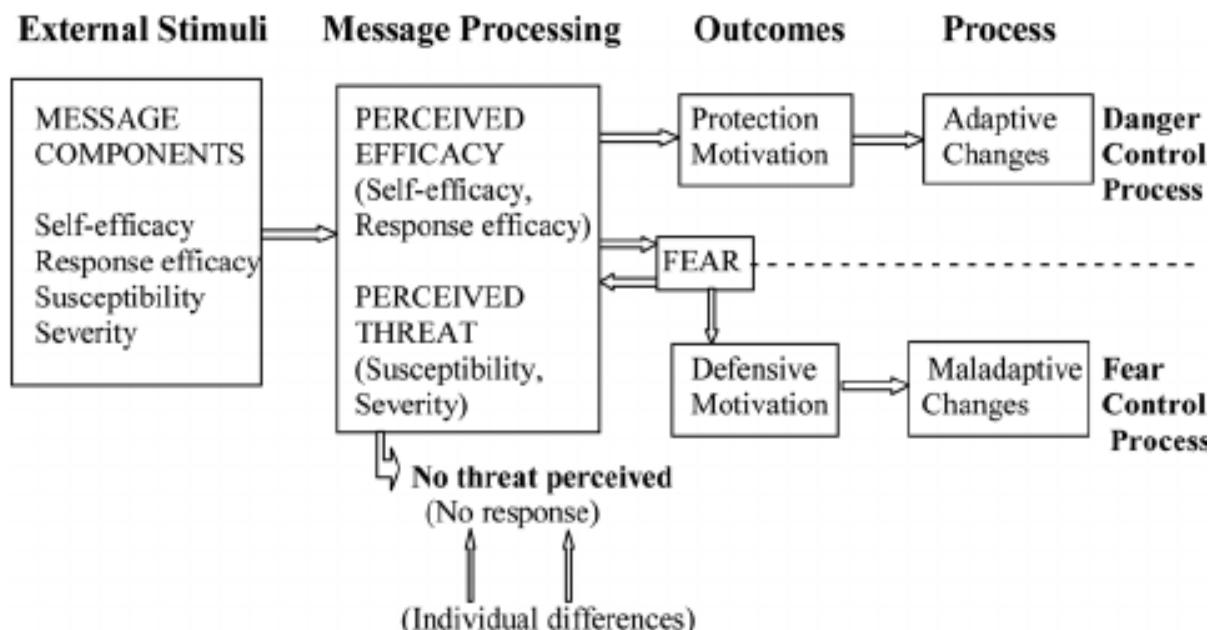
The EPPM is the best suitable model to address the objectives of the questions about the study.

In more detail, the EPPM, proposed by the White (1980), is a model that was developed from the perspective of an individual receiving a persuasive message concerning himself (Boyson et al., 2010). Therefore it is, the model primarily examines the content of the risk communication discourse with an aim to provide some insight on how the public may react to the message. In addition, Smith et al. (2008) indicate, the EPPM proposes that

persuasive messages should present a potential threat that recipients will feel is personally relevant, and then show a relatively simple response that avert the threat. Accordingly, the

present paper examines the data under investigation employing the EPPM. The following section presents EPPM in more detail.

**Fig.1 Extended Parallel Process Model (EPPM) (Witte, 1992)**



## METHODOLOGY and DATA

To observe the coverage of news pattern in Indian daily's, method of content analysis was used to study ,mainly extent of cover age given to specifically hudhud cyclones in terms of frequencies , distribution news items of the subject categories in the selected daily's .And the selected daily's are Times of India ,The Hindu, and Deccan Chronicle of English News papers were selected and the subject categories are HudHud ,Economy, Damages and preparedness .And the selected subject categories are developed as per collected news from the selected news daily's.The universe of the study comprised all the news items published during the period From October 10 th 2014 to October 22nd 2014 total 13 days from selected daily news papers has been taken as sample for this study and collected data and the time frame of the study includes from 10th October 2014 to 22nd October 2014

taken and in which a total of 39 editions selected during the period .The unit of analysis for this study was the news and news was operationally defined as an event or news that was filled by news papers from staff reporter/ correspondent or news agency copy including headline body text .sub-heads and illustrations published selected sample dillies news papers and they are Times of India ,The Hindu, Deccan Chronicle of English dailies of India .In the present study, a quantitative content analysis is observed to cover the different types of risk-related messages and examine its effectiveness in terms of the needs of the public. The analysis of the components concerning the risk related news, as well as the coding scheme, follow Witte's (EPPM) and the work of Choi and Lin (2008).

**Table 1: Distribution of total number of unit of analysis in Three selected dailies**

Indians News Papers	Unit of Analysis (News item)
<b>Times of India</b>	<b>155</b>
<b>The Hindu</b>	<b>177</b>
<b>Deccan Chronicle</b>	<b>136</b>
<b>Total</b>	<b>468</b>

**Table 2: Distribution of news items of subject category from selected daily's**

Themes	Times of India		The Hindu		Deccan Chronicle	
<b>Hudhud</b>	<b>25</b>	<b>16%</b>	<b>32</b>	<b>18%</b>	<b>28</b>	<b>20%</b>
<b>Economy</b>	<b>35</b>	<b>22%</b>	<b>46</b>	<b>25%</b>	<b>29</b>	<b>21%</b>
<b>Damages</b>	<b>52</b>	<b>33%</b>	<b>62</b>	<b>35%</b>	<b>51</b>	<b>30%</b>
<b>Preparedness</b>	<b>43</b>	<b>27%</b>	<b>37</b>	<b>20%</b>	<b>26</b>	<b>19%</b>
<b>Total</b>	<b>155</b>		<b>177</b>		<b>134</b>	

#### DATA ANALYSIS

As noted above, content analysis is conducted to examine the types of coverage as well as the components of risk Communication . Table 2 above presents a quantitative overview of the data according to the subject category under investigation in terms of the types of coverage. As seen from Table 2, the number of the articles published in The Hindu is considerably higher than Times of India, and Deccan Chronicle . That is, 'The Hindu' published more the number of articles (177),than Times of India (155) and Deccan Chronicle(146) distributed during the hudhud cyclone period. In a 13 days period, the Times of India published a total of 155 articles on the subject categories on cyclones, with an average of 11 to 12 articles per day. , The Hindu published 177 articles in the same period, with an average of 13 to 14 articles per day and finally The Deccan chronicle

published a total of 134 articles on the same period ,with an average of 10 to 11 articles per day . The themes of articles published within the period under investigation are detailed in Table 2 as well. In regards to the types of articles, in selected newspapers produced three types of news stories, namely hudhud news stories, Economy oriented stories, Damages and Preparedness . It is notable that the Times of India , The Hindu and Deccan chronicle primarily produced Hudhud news stories, 25 articles (16%) , 32 articles (18%) and 28 articles (20%)respectively.

In addition, 35 articles (22%) of the Times of India were published business or Economy oriented news , whereas The Hindu newspaper published 46 business or economy oriented articles (i.e., 25%), and in Deccan chronicle published 29 articles (21%) . The another theme i.e.,52 articles (33%) of the Times of India were published under Damages oriented news ; whereas The Hindu newspaper published 62 business or economy oriented articles (i.e., 35%), and in Deccan chronicle published 51 articles (30%) .And lastly published under preparedness 43 articles(27%),37articles (20%) and finally 26 articles (19%).

In the spirit of the EPPM, which is employed to scrutinize the effectiveness of the risk communication discourse on the 2014 Hudhud cyclones, the following analysis of these types of news stories is principally divided into two main components of fear appeals:

- (1) The components of threat
- (2) The components of efficacy.

It is worth reminding the reader that each component has two sub-components that are also examined separately in each newspaper,

- 1) The severity of the cyclones,
- 2) Discussed the predicted damages,
- 3) Suggest efficacious preventive actions, and
- 4) Adequately addressed expected outcomes of preventive actions. Table 3 below shows

the different types and the frequency of risk-related messages that were covered by the Times of India ,The Hindu and Deccan Chronicle concerning the 2014 Hudhud cyclone Visakhapatnam .

**Table 3: Components of Fear Appeal in the Data using EPPM**

Fear Appeals	Times of India		The Hindu		DeccanChronical	
<b>Components of Threat</b>						
<b>Severity hudhud</b>	58	33%	96	41%	47	31%
<b>Protected Outcomes</b>	65	37%	73	31%	54	36%
<b>Components of Efficacy</b>						
<b>Action To take</b>	46	26%	56	24%	47	31%
<b>Expected Outcomes</b>	3	1.7%	5	2%	2	1%
<b>Total</b>	172 (31%)		230 (41%)		150 (27%)	552

From Table 3 ,the components of fear appeals comprises only 31% i.e 172 news items coverage from Times of India,41% fear appeals i.e 230 news items coverage from The Hindu, and finally the fear appeals consists only 27% i.e 150 news items from selected newspaper Deccan chronicle .

It is also clear that the selected newspapers the most frequent type in the newspapers in the Hudhud period 'the severity of the hudhud' which constitutes 33%.i.e (58 news items) of the Times of India ,41% i.e (96 news items) of 'The Hindu' and 31% i.e (47 news items) of the 'Deccan chronicle'. And second of sub-component of Threat is 'predicted outcomes and damages' it consists of 37%.i.e (65 news item ) of the Times of India ,31%.i.e (73 news item),31%.i.e(73 news items)of 'The Hindu'

and finally 36% i.e (54 news items) are observed under investigation .

Another component of EPPM model was 'Efficacy'one of its subcategory are 'Action to take' it's comprises of 26% i.e (46 news items )of the 'Times of India',24%.i.e (56 news items) of 'The Hindu' and finally 31% i.e ( 47 news items ) are observed from selected daily news papers during the hudhud period .In one way ,the least frequent component is 'the expected outcomes of taking action ' which is very less 1% i.e (3 news items ) in the 'Times f India',2%.i.e( 5 news items) in the 'The Hindu' and finally 1%.i.e (2 news item) in the 'Deccan Chronicle' ,observed the coverage pattern in the selected news papers in the hudhud cyclone ,during the selected time period.

**Table 4: Coverage of Fear appeals in the selected News papers**

	Timesof ndia		The Hindu		Dec Chronicle	
<b>Components of Threat</b>	123	71%	169	73%	101	67%
<b>Components of Efficacy</b>	49	28%	61	26%	49	32%
<b>Total</b> 552	172 (31%)		230 (41%)		150 (27%)	

From the above Table 4 ,in the 'Times of India' ,the components of threat consists of 71% i.e coverage of 123 news items ,whereas the components of efficacy consists only 28% i.e coverage of only 49 news items .From the above data the components of efficacy is almost one third of the components of threat .On other hand in 'The Hindu', components of threat consists of 73% i.e coverage of 169 news items ,while the components of efficacy consists only 26% i.e it's coverage of only 61 news items. While the components of efficacy is almost one third of components of threat. Mean while in Deccan chronicle ,components of threat contains 67% i.e coverage of only 101 news items ,in other hand the components of efficacy comprises 32% ,coverage of only 49 news items .To be more precise ,the components of efficacy is half of the component of threat of the selected daily .

## CONCLUSION

Media coverage, especially during time of environmental risks, is a double-edged sword.The present study suggests that media is delivering key risk communication to the public. However, this study also found that newspapers rarely mention the expected outcomes of taking recommended actions. Without knowing the predicted outcome of a preventive action, it is unlikely that people will follow the recommendations. Risk communicators should provide journalists with more resources concerning the expected outcomes of preventive actions. By doing so, risk communicators and the media can reduce

uncertainty among the general public in the event of a natural disaster. From the above study the researcher provide the following recommendation and are the news papers during disasters publish more number of articles on disasters ,the media may construct fear appeals that compromise equally both components, i.e., components of threat and efficacy and reality of the position of the disaster ,the news papers during disasters mainly focus on the disasters that is related to the public. Hopefully, the findings of the present study provide insight that may help the newspapers to construct fear appeal more effectively.

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