

Communicating Disasters to Residents of Selected Municipalities in the Province of Northern Samar, Philippines

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ABSTRACT

This descriptive-correlational study is an analysis on how the information or news about typhoons, storm surge, floods, landslides and other similar natural disasters reach the intended audience. Specifically, it looked into the source of the information, the media available in the community, and determined intelligibility of the terms used in communicating this information to the target audience. It was conducted in selected municipalities in the province of Northern Samar, Philippines particularly in Capul, Silvino Lubos, Mapanas and Catarman. Results revealed that a majority of the respondents from the four (4) municipalities were females who came from the age bracket 21-30 and were college graduates. A big number of them were not employed during the time of the study. Television was the most common media available in the four (4) municipalities subjected in the survey. Television news was the common strategy used in communicating messages about natural disasters. The medium was also found out to be the most common source of messages and news related to natural disasters and the most trusted source of information. A majority of the terms used in newscasts were unintelligible among the respondents. The respondents address, their educational attainment and work experience; handheld radio and public address system were found significant in understanding the words used in communicating disasters among the residents of the municipalities surveyed.

Keywords

communication, natural disaster, messages, media

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Introduction

Northern Samar is one of the provinces in the Philippines that is always hit by typhoons. The Provincial Disaster Risk Reduction Management Council (PDRPMC) has recorded an average of four disasters annually for the last five years. Being located within the Pacific region, Northern Samar is classified among the top ten high risk areas in the country on account of the numerous typhoons to which it is constantly exposed. The province is also exposed to devastating power of typhoons with flash floods unleashed to the communities especially in remote areas. In 2018, tropical depression "Usman" hit hard the province leaving some areas severely damaged.

In situations like this the questions that are always asked are: How do the people prepare for this? How were they informed about the coming disaster? This study attempted to analyze how the information or news about typhoons, storm surge, floods, landslides and other similar natural disasters reach the intended audience.

There were instances in the past wherein "tsunami warnings" sent through the mobile phones caused panic among the people. Without verifying the source, the people who were able to receive the message informed their neighbors such that it created a chain of messages and reactions. People living on the coastline areas evacuated to higher places until they realized that the information was not true.

A different scenario happened when super typhoon Melor (local name: Nona) struck and devastated Northern Samar on December 14, 2015. Nobody expected that such a strong typhoon would hit the province. It was like super typhoon Haiyan (local name: Yolanda) except that there was no storm surge, according to some. Text messages from the

Provincial Disaster Risk Reduction Management Council (PDRPMC) about the coming of the typhoon were received a day before it made a landfall in the province. People were not alarmed because according to the text message, the typhoon will have a maximum wind/gustiness of 150/180kph. It did not cause a threat because based on previous experiences this strength is tolerable. As a result, people did not have any preparation and nobody evacuated before the coming of the typhoon. It was until the typhoon had a landfall and started causing damages on properties that people started packing up things and putting them to safety, but it was already too late, the community was hit unprepared.

Preparedness focuses on reducing the negative outcomes of disasters. Its main characteristics is "disseminating messages aimed at encouraging people to make choices about protective behaviors and monitoring compliance with community plans"[1]. Communication is critical in this phase of emergency management like that of a typhoon [2], [3]. It is important for response, recovery and next stage preparedness for the people [4].

In times of natural disasters, the media plays a significant role in increasing awareness for the disasters [5]. At this critical moment, people rely on the mass media for updated information. People trust the information provided by media even though there is no further justification for the natural hazards [6]. Apparently, what average citizens come to know about the disaster are primarily learned from mass media and they turn to the media to find out more about the current crisis [7], [8].

Understanding how to communicate information regarding disasters is critical. Heath and Abel [9] noted that communication studies on risks and disasters often center upon how technical experts frame and present technical

information to concerned publics in a language they can understand. Language used in disseminating these kinds of messages are very important in conveying the information and the needed response from the target audience. In understanding disaster communication messages, the use of common vocabulary is necessary. Vocabulary plays an important part in how individuals understand mitigation and preparedness messages. It must consist of general terms that the majority of the population can comprehend. Gallo [10] asserted that communicating a message with unclear language can cause individuals not to take the recommended action. Accuracy and clarity are crucial in the construction of crisis messages, as inadequate communication was said to lead to confusion and public mistrust [11].

Success of disaster communication messages relies on two components. First, it must communicate the probabilities and consequences of known risks to affected audiences". This is a critical part of disaster communication. Communicators must present information to the public to instill an act of urgency in mitigation and preparedness phases. Second, "it should seek consensus among these audiences regarding a specific course of response and mitigation" [12].

Moreover, trust and credibility are important components in disaster communication. "The source of an organization's perceived trust and credibility comes from its ability to care, competent commitment to solve the risk, honesty, and expertise" [13]. Believable messages are credible and enhance trust [14]. According to McGuire [15], constructing a message involves selecting a source that has "the greatest potential for eliciting the output...needed to achieve the desired behaviors". It is widely accepted that communication effectiveness is based, in part, on who delivers the message, this is called credibility of the source. Credibility is regarded as an important characteristic to increase the persuasive power of a message source. The term refers to the possession of expertise and the quality of being believable [16]. It is closely related to the concepts 'reliability', 'honesty', and 'trustworthiness'. In one credibility studies, Hovland and Weiss [17] concluded "the effect of an untrustworthy communicator is to interfere with the acceptance of the material". Similarly, source credibility affects the probability of message acceptance. News sources, either local or national, must be credible and trusted in communicating this information. "Residents who demonstrated trust in media industry and emergency response personnel were more likely to gather information, be knowledgeable, and exhibit positive behavioral intentions regarding emergency response procedures" [18]. The more trust individuals have in these sources, the more likely they will be proactive in adhering to their message.

The research is an attempt to the study of disaster communication focusing on the news and how the source use the media in relaying accurate information for effective communication and immediate response from the intended audience. Specifically, it determined the source of the information, the communication media available in the community and if the terms used in the information given are intelligible to the people. Moreover, it tried to: determine the profile of the respondents; identify communication media available in the community; find out the strategies used in communicating messages about natural disasters;

determine the usual sources of these messages; determine the respondents' perception on the trustworthiness of the sources of information; and determine the intelligibility of the terms used in communicating forecasted natural disasters.

The fact that people rely heavily on the media for information regarding natural disasters, this study is important. The result is an additional data for students studying newscasting to consider and take into account that writing for the media is communication to a mass audience with different interests, education, culture, language, and experiences. Newscasting is communicating and getting the message through the intended vulnerable audience in times of disaster.

Methodology

This descriptive study was conducted in selected municipalities in the province of Northern Samar, Philippines particularly in Capul, Silvino Lubos, Mapanas and Catarman.

The sample population of the study was determined using the calculator for determining sample size for social science research available on the Internet. From the total population of 136,040 from the four selected municipalities, 384 were taken as samples. After taking the sample size, proportionate sampling was used in determining the number of respondents for each municipality, thus the number of respondents were: Capul, 40; Mapanas, 45; Silvino Lubos, 52; and Catarman, 247. The respondents were selected using random sampling technique. However, not all fielded questionnaires were retrieved, thus the total number of questionnaires consolidated were 348.

Descriptive statistics like frequency counts, percentages and mean were used to analyze the data. In the tests of relationships, regression analysis was used.

Results and Discussion

Profile of the Respondents

Sex. The study had a total of 348 respondents, and a majority of them are females with a total of 223 or 64.08% and the other 125 or 35.92% are males.

The respondents from Capul were 39, 13 or 33.3% of them are males and 26 or 66.7% are females. Those from Silvino Lubos were 51, and the number of male respondents were 18 or 35.3% and 33 or 64.7% female respondents. Forty-four of the respondents were from Mapanas, 13 or 29.5% of them are males and 31 or 70.5% are females. The majority of the respondents came from Catarman with a total of 214. Eighty-one (81) or 37.9% of them are males and 133 or 62.1 are females.

Age. A big number of the respondents came from the age bracket 21-30 with 117 or 33.62%, this is followed by those who belong to the age bracket 18-20 with 89 or 25.57%. Fifty-seven (57) or 16.38% belong to the age bracket 31-40, 45 or 12.93% belong to the age bracket 41-50, 26 or 7.47% belong to the age bracket 51-60, eight (8) or 2.31% belong to the age bracket 61-70 and only six (6) or 1.72% were aged 71-up.

Educational Attainment. A big number of the respondents were college graduates with 111 or 31.90%, this is followed by respondents who were high school level with 75 or 21.55%.

The respondents from Capul were dominated by college graduates with 18 or 46.2%. Those from Silvino Lubos, the majority are college level having a total number of 33 or 64.7. Seventeen (17) or 38.6% of the respondents from Mapanas were high school level. The college level respondents dominated those from Catarman with a total of 58 or 27.1%.

Present Employment. A big number of the respondents who were included in this study do not have work at present. They totaled 116 or 33.33%, this is followed by students with 98 or 28.16. The least are those that were non-government employees which totaled 12 or 3.45%.

The respondents from Capul were mostly teachers with a total of 14 or 35.9%. A majority of those from Silvino Lubos were students with a total of 30 or 58.8%. A big number of the respondents from Mapanas were also students with 15 or 34.1%. Almost half of the respondents from Catarman do not have work at present with totaled 88 or 41.1%.

Communication Media Available in the Municipalities

On the communication media available in the municipalities being surveyed, the data revealed that television ranked first among the communication media available in all four (4) municipalities included in the survey. This could be due to the fact the cable television is available in all municipalities in the province of Northern Samar. Radio ranked second in the overall ranking and also in Catarman, while it ranked third in Capul and Mapanas and fourth in Silvino Lubos. Aside from cable television, radio stations like DYSM and some FM stations are operating in Catarman. No radio stations are operating in the other towns but these places are reached by radio signals from Manila operating in higher frequencies. Ranked third was *bandilyo* or public announcement done by a person or an organization by going around the town and reading a news or any urgent and important announcement. *Bandilyo* however ranked second to television in Capul and Mapanas, third in Silvino Lubos and sixth in Catarman. Ranked fourth in the overall ranking was text messaging and also in the municipalities of Capul, Mapanas and Catarman. It ranked second in Silvino Lubos. Ranked fifth was facebook. It also ranked fifth in Capul and Mapanas, while fourth in Silvino Lubos and third in Catarman.

It is worth noting that the newspaper only ranked number seven next to messenger. In the province newspapers are available only in Catarman and this type of medium is not accessible to many or not everybody reads newspapers nowadays.

Strategies Used in Communicating Messages

The pre-identified strategies used in communicating messages were radio news, television news, news featured on newspapers, information posted on the internet, facebook, information sent through cellular phone by the MDRRMC, from the barangay, the Philippine Information

Agency (PIA), PAGASA, *bandilyo* or oral announcement, news told by the neighbors, friends, family members and those heard from conversations.

In the island of Capul, the most common strategy in communicating messages regarding disasters that people relied on is the news on television. It ranked first for messages on typhoon, earthquake, fire, storm surge, warnings for possible Tsunami, landslide, and flood. *Bandilyo* or oral announcement ranked second and radio ranked third.

In Silvino Lubos, television news also ranked first among the strategies used in communicating disasters. Radio news ranked second in disseminating information regarding earthquake, fire, and flood. It ranked fourth in disseminating news on typhoons and warnings for possible tsunami. The people of Silvino Lubos also relied on the Municipal Disaster Risk Reduction and Management Council (MDRRMC) which sends information regarding typhoons using the cellular phones. In fact, it ranked second among the strategies used.

Television news was also the number one strategy used in communicating information regarding disasters in the municipality of Mapanas. Radio news ranked second for earthquake and flood and ranked fourth for news regarding typhoon. The residents also trust their barangay officials. In fact, the information coming from the barangay as a strategy ranked second for information regarding earthquake, storm surge and warning of possible occurrence of tsunami.

In the municipality of Catarman, the common strategy was the news on television. It ranked first on information regarding earthquake, fire, storm surge, warning for possible occurrence of tsunami, landslide and flood. However, radio news was still considered number the one strategy used for communicating information regarding typhoon. Postings on facebook and the internet were also considered by the residents of Catarman. The internet ranked third for fire, landslide, flood and warning for possible occurrence of tsunami, while facebook ranked third for earthquake.

Sources of Messages Related to Natural Disasters

The study revealed that the most common source of messages concerning disasters was television. It ranked first all four municipalities subjected to the study. This could be due to the fact the majority of the households in the province are connected to cable television.

Radio ranked second in Catarman for messages on typhoon, earthquake, fire, storm surge, warnings concerning a possible tsunami, landslide and flood. In Capul, radio also ranked second for earthquake, warning of possible tsunami, landslide, flood. It shares on the second spot with facebook for information on fire, and also with oral announcement and the barangay for information on storm surge. Radio ranked third for information regarding typhoon. Also in Capul, PAGASA, oral announcement the barangay officials, and facebook were considered sources of information regarding landslide, tsunami warning, fire and even typhoon.

In Silvino Lubos, radio also ranked second and third for warning of possible tsunami. The Internet was also considered as a source of news for warnings of possible occurrence of tsunami.

In the municipality of Mapanas, radio ranked third for information regarding typhoon. The data revealed that next to television, people rely on the PAGASA for the information regarding earthquake, fire, storm surge and warning for possible tsunami. The MDRRMC, barangay officials and friends were also considered as reliable sources of messages regarding disasters.

Trustworthiness of the Sources of Information

The study revealed that television was considered as the most trusted medium of disseminating messages regarding disasters. The medium ranked first in the municipalities of Mapanas and Catarman while it ranked second in the municipalities of Capul and Silvino Lubos.

In the municipality of Capul, the Municipal Disaster Risk Reduction and Management Council (MDRRMC) was the most trusted source of information of disaster related events. In Silvino Lubos, PAGASA ranked first among the trusted sources of messages.

Radio ranked second among the trusted sources of messages in the municipalities of Mapanas and Catarman, while it ranked fourth and fifth in Silvino Lubos and Capul, respectively.

Intelligibility of Words Used in Newscast or on Communicating Natural Disasters

In determining intelligibility of the words used in newscasts or on communicating natural disasters, the respondents were asked if they understand the term or not by checking the “yes” or “no” options. Frequency and the percentage of the “yes” answers for each term were used in the interpretation. The scores were classified arbitrarily using the scores and the corresponding interpretation: 66.65 – 100% as “Intelligible”; 33.35 – 66.64% as “Quite intelligible”; and 0 – 33.34% as “Unintelligible”.

Result of the survey shows that in the municipality of Capul, a majority of the terms used in news were unintelligible. Out of 101 terms listed in the questionnaire, 57 or 56.44% were unintelligible, 42 or 41.58% were quite intelligible and only two (2) words or 1.98% were intelligible to the respondents. The words which were intelligible to the respondents of the study were “*bugso ng hangin*” and “flash floods”. These terms are two common terms used in newscasts during typhoons.

In Silvino Lubos, a majority of the terms were also unintelligible with a frequency of 56 or 55.45%, 37 or 36.63% were quite intelligible and only eight (8) words or 7.92% were intelligible. The terms which were intelligible to the respondents were “typhoon” with 88.2% of the respondents understand the term, “flash floods” with 78.4% of the respondents understand the term, “*galaw ng hangin*” and “landfall” with 74.5% each, “movement” with 72.5%, “*bugso ng hangin*”, “heavy rains” and “strong” with 68.6%. In Mapanas, 71 or 70.3% of the terms were unintelligible, while 29 or 28.71% were quite intelligible and only one (1) word or .99% was found to be intelligible to the respondents. Only the word “typhoon” was intelligible to the respondents with 79.5% of the respondents understood the term.

In Catarman, 58 or 57.43% of the words used in news were unintelligible to the respondents, 41 or 40.59% were quite intelligible and only two (2) words or 1.98% were found to be intelligible to the respondents. The words “typhoon” and “landfall” were the only words considered intelligible to the majority of the respondents with 70.6% and 69.2%, respectively.

Test of Relationships

As presented in Table 1 on the relationship between the profile of the respondents and the intelligibility of words used in communicating natural disasters, it shows that the respondents address, their educational attainment and work experience were found significant. On the other hand, sex and age were found to be not statistically significant. This clearly shows that understanding the words used in disseminating news or reports on natural disasters is dependent on where a person lives, his/her education and work experience. These three variables determine a person’s exposure to the things happening around him. Words used in newscasts which some are not common, become intelligible to ordinary persons because of his/her exposure to and with his/her neighbors, the formal learning in school, and of course the experience s/he has with work.

Table 1. Relationship between the profile of the respondents and the intelligibility of words used in communicating natural disasters

Variable	Beta	t	p-value	Interpretation
Sex	-.007	-.141	.888	Not significant
Age	.058	1.104	.270	Not significant
Address	.148	2.692	.007	Significant
Educational Attainment	.247	4.629	.000	Significant
Work Experience	.210	3.860	.000	Significant

Table 2 presents the relationship between the communication media available in the community and the intelligibility of words used in communicating natural disasters. It was revealed that among the identified communication media, only two (2) were found to be statistically significant, these are the handheld radio and the public address system. This means that in some municipalities in the province of Northern Samar, these two media are the ones that the residents can rely on in times of disasters. This further means that using these two media, the language used by the source is also in the language of the receivers of the message, hence understanding the news and the words used would be easy.

Table 2. Relationship between the communication media available in the community and the intelligibility of words used in communicating natural disasters

Variable	Beta	t	p-value	Interpretation
Radio	.017	.295	.768	Not Significant
Television	-.072	-1.321	.187	Not significant
Newspaper	.076	1.141	.255	Not significant
Facebook	.045	.590	.556	Not significant
Text Messages	.122	1.779	.076	Not significant
Messenger	-.045	-.618	.537	Not significant
Oral Announcement	.007	.117	.907	Not significant
Neighbors	.090	1.459	.145	Not significant
Handheld Radio	.178	2.253	.025	Significant
Public Address System	-.205	-2.650	.008	Significant
Conversations with neighbors	-.045	-.674	.501	Not significant

Conclusions

Based on the findings of the study, the following conclusions were drawn:

A majority of the respondents from the four (4) municipalities were females, they came from the age bracket 21-30 and college graduates and a big number of them were not employed during the time of the study.

Television was the most common media available in the four (4) municipalities subjected in the survey. This could be due to the fact that cable television is common in the province and almost all of the households in the 24 municipalities are connected to a local cable TV distributor. The common strategy used in communicating messages about natural disasters was through news relayed on television. Stories on natural disasters relayed through the television medium are believable to local audience. This is aside from the fact that news programs give updates from time to time.

Television was the most common source and the most trusted source of news related to natural disasters. The popularity of the medium in every household makes it an easy source of news and information.

A majority of the terms used in newscasts were unintelligible among the respondents. The terms used in newscasts are technical terms in Tagalog or English, which are not the mother tongue of the respondents, making these

terms not easy to understand especially to the ordinary members of the community.

In the intelligibility of words used in communicating disasters, the respondents address, their educational attainment and work experience were found significant, while only handheld radio and public address system were found significant among the available media in the rural areas subjected to the survey.

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