

Communication Barriers: Effects on Natural Disaster Preparedness

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Abstract

This study aimed to analyze the communication barriers like language differences, cultural differences and low safety literacy that affect natural disaster preparedness in order to determine the individual's capability of taking action and overcoming from tremendous natural phenomena. Since effective communication is vital to the wellbeing and protection of an individual, it requires understanding. Without it, effectual communication can't be possible; as effectual communication is missing, the condition of providing protection and care ends—or everything becomes meaningless, worthless, and hazards to everyone's wellbeing. Therefore the individual's ability, to speak and comprehend English language, plays essential role in this study. This is a descriptive research design utilizing survey questionnaire. Descriptive statistics using frequency distribution, percentage, mean, standard deviation, averaging and descriptive ratings based on 5-point scale were utilized. On the extent of communication barriers' effects on natural disaster preparedness, language differences and cultural differences were both perceived as great extent, while moderate extent was the descriptive rating for low safety literacy and others (personal related factors), respectively. This portion points out that when language or cultural interferences are recognized, we often bother whether a person comprehends oral or written communication. Nevertheless, if those involved in communication use the same language and experience the same culture, understanding is expected. However, there are groups of people who are functionally illiterate: the absence of reading and writing, they just know the safety instructions by themselves. In the light of the foregoing finding and conclusion, the following were recommended: The individual must enhance his/her capacity to communicate as it served as the most important vehicle to keep abreast of the information required in his/her work assignment. Because many employees have significant family responsibilities, it is important that management considers workers' situations and advise them to keep always their life safe, work manageably and conform to natural disaster preparedness. Because communication is more than a cognitive process, research suggests that education must highlight its significant role of improving the capacity of individuals and communities to reduce the risk of natural disasters. As a result, activities such as anticipating, educating and informing will be given priority. The Higher Education administration must strengthen community engagement services through seminar/training/workshop dealing with communication deficiency and other activities which can foster positive and supportive communication enhancement in the community.

Keywords:

1. *Communication barriers*
 2. *Level of experienced effects*
 3. *Natural disaster preparedness*
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Chapter 1

1. Introduction

Awareness on natural calamities is significant for homes, industries and neighborhoods, but several stays unprepared. Current natural disaster preparedness serves to emphasize the demand for everyone’s conscientiousness, neighborhood’s harmonization and steadiness of procedures to make sure the capability of taking action and overcoming from tremendous natural phenomena [1].

Indeed, making plans for natural calamities can lessen the dangers to the wellbeing of the people and the surroundings. In this case, everyone can be proactive in proposing possible solutions to safeguard the welfare of the family members and themselves. Neighborhoods, institutions and industries can set up systematic procedure to alleviate threats and probable effects of storm-related leaks or clear out.

That is why considering the perils that these phenomena might produce will expedite the hard work on recapturing and avoiding tribulations from becoming worse. Much more if individuals, homeowners, workers, and others can learn more about what to do and what not to do in protecting the health of the family members and themselves [2].

Certainly, effective communication is vital to the wellbeing and protection of an individual. Obstacles to this interaction comprise of disparities in language, cultural variations and poor safety knowhow. Effective communication is comprehended by both partakers; it is usually a two-way process connecting the persons involved in the exchange of ideas, and allows both to simplify the projected idea. Without understanding, effectual communication is not possible; as effectual communication is missing, the condition of providing protection and care ends—or everything becomes meaningless, worthless, and hazards to everyone’s wellbeing [3].

Since society is growing in terms of varied languages from different nationalities, giving valuable protection needs to solve these difficulties in obtaining understanding. Therefore the individual’s ability, to speak and comprehend English language, played essential role in this study to reveal the true picture of its effects on natural disaster preparedness and to help in finding out whether it can contribute to the effectiveness in today’s educational system [4].

1.1 Statement of the Problem

This was conducted to:

1. What is the profile of the respondents in terms of:
 - 1.1 Age;
 - 1.2 Gender;
 - 1.3 Nationality;
 - 1.4 Civil status; and
 - 1.5 Educational qualification?
2. What are the respondents’ experienced effects on natural disaster preparedness due to communication barriers?
 - 2.1 Language differences;
 - 2.2 Cultural differences; and
 - 2.3 Low safety literacy?
3. What are the problems encountered due to lack of natural disaster preparedness caused by communication barriers?
4. What are the respondents’ perceptions on the effects of the communication barriers on natural disaster preparedness in their respective:

- 4.1 Household;
 - 4.2 Workplace; and
 - 4.3 Community?
5. What are the possible solutions to ensure preparedness during natural disaster occurrence despite communication barriers?

1.2 Significance of the Study

This study aimed at providing an opportunity to Higher Education administration to strengthen community engagement services through seminar/training/workshop dealing with communication deficiency and other activities which can foster positive and supportive communication enhancement in the community.

It highlighted the significant role of education in improving the capacity of individuals and communities to reduce the risk of natural disasters. As a result, activities such as anticipating, educating and informing will be given priority.

It imparted awareness to everyone on the importance of using his/her initiative to keep abreast with necessary information relevant to his/her daily undertakings.

It provided insights that will contribute in the improvement of various mediations, assist in reducing vulnerability to natural disasters' occurrence and stimulate forward-looking concepts for the future.

It aspired to serve as groundwork for future researches to develop a more conclusive study regarding communication barriers' impact on natural disaster preparedness not only to the locale of the study but also in other groups of companies with similar problems.

1.3 Scope and Limitation

This research was limited only to the level of communication barriers' effects on natural disaster preparedness as perceived by the employees of a certain private company in Bahrain. This group of people could give better insights with respect to the personal related factors, the extent of experienced effects on natural disaster preparedness due to communication barriers, problems encountered associated with lack of natural disaster preparedness on respondents' normal life, perceived effects of communication barriers on natural disaster preparedness in their respective household, workplace and community involvement and the remediation applied on problems encountered during natural disaster occurrence despite communication barriers. In attaining these, questionnaire was utilized and supported or further explained by interview.

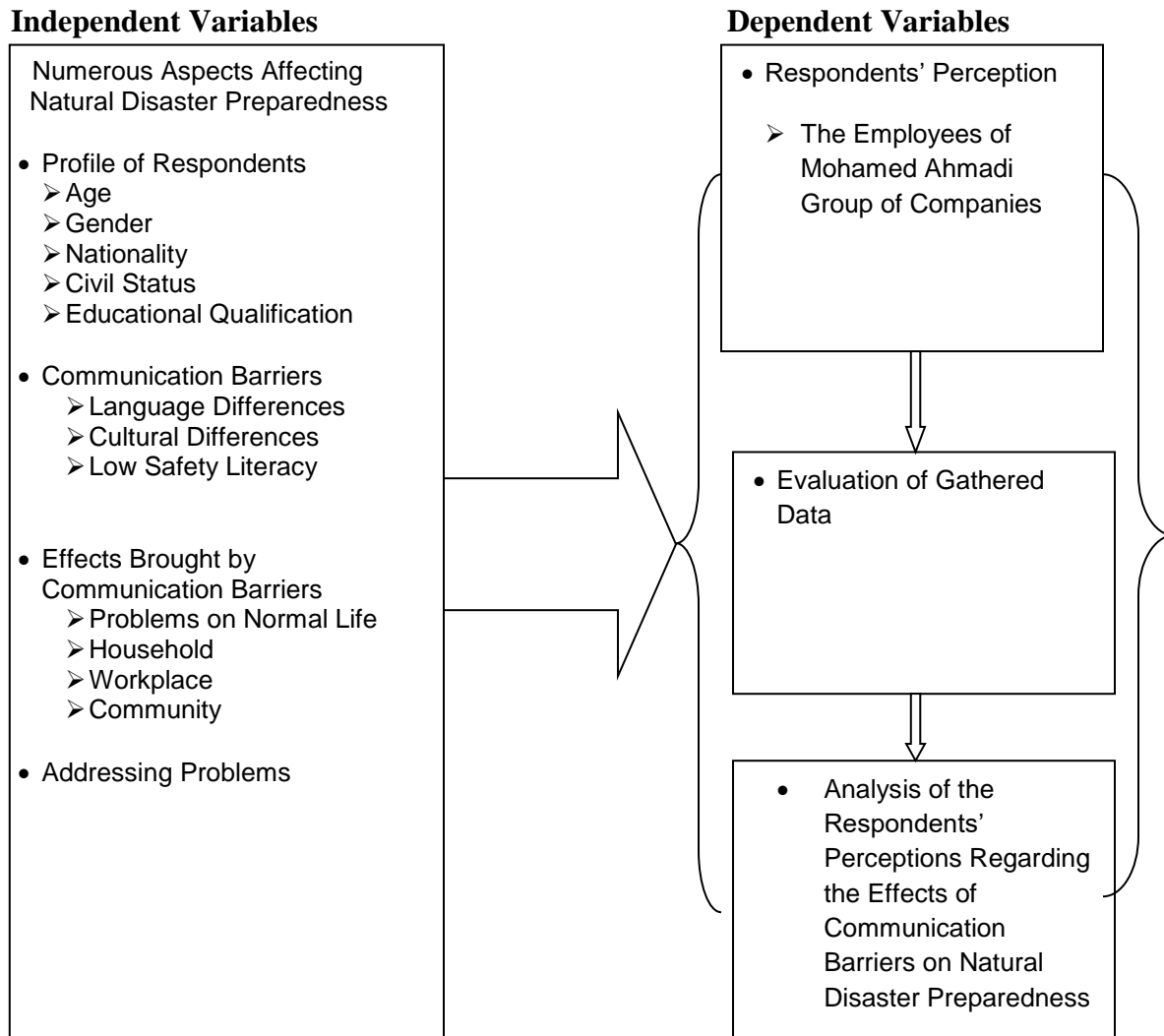
The employees of the private company, the subject of the study, are expatriates; it is expected that English is being used in dealing with other people from all walks of life and in taking part with the various situations that they might come across. How did the respondents overcome the challenges despite communication barriers was one of the concerns of this study.

1.4 Conceptual Framework/Theoretical Framework

The schema of the conceptual framework of the study is shown below. It helps the researcher in answering the problems of the study. The concepts presented in the schema describe the sequence in which definite components are the instigating effects of one's preparedness during the natural disaster occurrence.

The first block focuses on numerous aspects affecting natural disaster preparedness which were subject for examination. The second block takes account on the procedure that was employed by the researcher to the data. These are the evaluation of the gathered information and the analysis of the respondents' perception regarding the effects of communication barriers on natural disaster preparedness.

Figure 1. Paradigm of the Study



Chapter 2

2. Literature Review

There are many barriers to communication and these may occur at any stage in the communication process. Barriers may lead to your message becoming distorted and you therefore risk wasting both time and/or money by causing confusion and misunderstanding. Effective communication involves overcoming these barriers and conveying a clear and concise message [5].

Community coordination requires communication and planning of precautions to take when faced with a severe threat of natural disaster. The effectiveness of the community natural disaster

response efforts affects future public preparedness. It is suggested that pre-season planning and open communication have significant impact on community responses. But the repeated threat scenario indicates that emergency managers fail to keep residents informed of the seriousness of natural phenomena [6].

When an individual with limited English proficiency works abroad and he/she is communicated by someone who is capable only in speaking English, 3 aspects unite to form barriers on effective communication. Difference in language is the most obvious barrier to communication as two people speaking two different languages cannot communicate with each other [7].

These are often connected with the diversity of language—another obstacle to effective communication. Any types of culture influence comprehension on verbal construction and global perception. Accepting people's way of life is incomparable to studying a language because even those who speak the same language may not experience the same traditions. Likewise, only few of the natives who stay in the place since birth and utilize the same native tongue can automatically reveal the attributes of a shared culture. In this case, a threat on misjudging the outcome of cultural variations or typecasting person's way of life is expected. However, all the cited situations hinder the value of exchanging messages of the people concerned [3].

Ineffective communication occurs due to low safety literacy. This may be related to language and cultural interferences in communication, however; it is also a problem even to the English speakers who are accustomed to an American way of life. These people principally neglect the importance of recognizing safety measures. When language or cultural interferences are recognized, we often bother whether a person comprehends oral or written communication. Nevertheless, if those involved in communication use the same language and experience the same culture, understanding is expected. However, there are groups of people who are functionally illiterate: the absence of reading and writing, they just know the safety instructions by themselves [3].

Chapter 3

3. Research Methodology

3.1 Research Design

The descriptive method was utilized. The strength of descriptive study lies in describing the status of phenomena as well as identifying relationship between and among the variables since it is not simply a routine fact finding activity [8].

The search aimed at providing much-needed information with respect to the respondents' personal related factors, the extent of experienced effects on natural disaster preparedness due to communication barriers, problems encountered associated with lack of natural disaster preparedness on respondents' normal life, perceived effects of communication barriers on natural disaster preparedness in their respective household, workplace and community involvement and the remediation applied on problems encountered during natural disaster occurrence despite communication barriers. In attaining these, questionnaire was utilized and supported or further explained by interview.

3.2 Sample and Location

The population of the study consisted of employees from certain private company in Bahrain. These employees are expatriates; it is expected that English is being used in dealing with other people from all walks of life and in taking part with the various situations that they might come

across. How did the respondents overcome the challenges despite communication barriers was one of the concerns of this study.

A total of forty-seven (47) employees were included; a one hundred percent (100%) respondents' involvement from the two purposely/conveniently selected institutions but covered the thirty percent (30%) of the companies' total number of employees who are working in academic institutions.

3.3 Research Instrument

Questionnaire was the researcher's modified instrument used for the purpose of this study which was further explained through interview. A set of questionnaires was given to the respondents to determine their personal related factors, the extent of experienced effects on natural disaster preparedness due to communication barriers, problems encountered associated with lack of natural disaster preparedness on respondents' normal life, perceived effects of communication barriers on natural disaster preparedness in their respective household, workplace and community involvement and the remediation applied on problems encountered during natural disaster occurrence despite communication barriers.

3.4 Data Analysis

The data gathered were classified and presented in tables. Descriptive statistics such as frequency, percentage distribution, Mean, Standard Deviation and Rank were utilized. Descriptive ratings of data were based on computed 5-point Likert scale item. The data processing mentioned earlier was considered as the best way to express the information desired for analysis and interpretation. Additional relevant facts obtained from interviews were integrated in the analysis and interpretation.

Chapter 4

4. Results and Discussion

Table 1 shows the mean, standard deviation and description taken from the forty-seven (47) respondents (with 3 and 1 as minimum ratings and 5 as maximum) pointed out the perception about the extent of communication barriers' effects on natural disaster preparedness. The findings revealed that cultural differences obtained a set of data values closer to the mean. However, language differences attained a lesser dispersion of a set of values from the mean while low safety measures and others (personal related factors) both garnered a greater dispersion of a set of data values from the mean. The results proved that; the smaller the computed standard deviation, the lesser the quantified amount of variation of a set of data values or the closer that set of data values to the mean; while the larger the computed standard deviation, the greater the measured dispersion of a set of data values. Combining the four indicators revealed an overall standard deviation of .826.

The results of respondents' ratings on the extent of communication barriers effects on natural disaster preparedness are presented in their computed mean. Obviously, language differences 4.38 and cultural differences 3.68 were both perceived as great extent. On the other hand, moderate extent was the descriptive rating derived from 3.28 for low safety literacy and others (personal related factors), respectively. The overall result taken from the four indicators obtained a mean of 3.66 interpreted as great extent.

Table 1: Extent of Communication Barriers’ Effects on Natural Disaster Preparedness as Perceived by the Respondents

Indicator	N	Mini mum	Maxi mum	Mean	Std. Deviation	Description
Language Differences	47	3	5	4.38	.709	Great Extent
Cultural Differences	47	3	5	3.68	.695	Great Extent
Low Safety Literacy	47	1	5	3.28	.949	Moderate Extent
Others	47	1	5	3.28	.949	Moderate Extent
Overall				3.66	.826	Great Extent

This study included language differences, cultural differences, low safety literacy and others (personal related factors) to determine as to what extent are the experienced effects on natural disaster preparedness due to communication barriers.

Table 2 presents the problems encountered associated with lack of natural disaster preparedness brought by communication barriers as perceived by the respondents. The level of each problem was rated based on the given 5-point scale such as: all of the time, often, sometimes, rarely and never. The analysis of the data was known through the mean score obtained from the employees’ responses on the encountered problems. The outcomes were presented according to each acquired rank in chronological order. Some problems (4, 6, 7, 8 and 11) were frequently and rarely (1, 2, 5, 9 and 10) experienced, while problem no. 3 was sometimes met due to lack of natural disaster preparedness brought by communication barriers.

Table 2: Range of the Problems Met Associated with Lack of Natural Disaster Preparedness Brought by Communication Barriers

Indicator	Mean	Rank	Description
Problem 1	2.02	9th	Rarely
Problem 2	1.81	11th	Rarely
Problem 3	2.98	6th	Sometimes
Problem 4	4.06	4th	Often
Problem 5	1.91	10th	Rarely
Problem 6	4.45	1st	Often
Problem 7	4.21	3rd	Often
Problem 8	4.28	2nd	Often
Problem 9	2.17	7th	Rarely
Problem 10	2.11	8th	Rarely
Problem 11	4.04	5th	Often

Table 3 shows the mean, standard deviation and description taken from the forty-seven (47) respondents on their perception about the extent of communication barriers’ effects on natural disaster preparedness in respective household, workplace and community.

The results proved that; the smaller the computed standard deviation, the lesser the quantified amount of variation of a set of data values or the closer that set of data values to the mean; while the larger the computed standard deviation, the greater the measured dispersion of a set of data values. Combining the six indicators revealed an overall standard deviation of .570.

Table 3: Extent of Communication Barriers' Effects on Natural Disaster Preparedness in Respective Household, Workplace and Community

Household	N	Mini mum	Maxi mum	Mean	Std. Deviation	Description
Problem 1	47	2	4	3.38	.610	Moderately Serious
Problem 2	47	2	4	3.21	.587	Moderately Serious
Problem 3	47	2	4	3.13	.575	Moderately Serious
Problem 4	47	2	4	2.57	.542	Moderately Serious
Problem 5	47	1	2	1.30	.462	Not a Problem
Problem 6	47	1	3	2.02	.642	Less Serious
Overall				2.60	.570	Moderately Serious
Workplace	N	Mini mum	Maxi mum	Mean	Std. Deviation	Description
Problem 1	47	2	5	3.40	.648	Moderately Serious
Problem 2	47	3	5	4.47	.620	Serious
Problem 3	47	3	5	4.15	.722	Serious
Problem 4	47	2	3	2.47	.504	Less Serious
Problem 5	47	3	5	3.53	.718	Serious
Problem 6	47	1	3	1.55	.619	Less Serious
Overall				3.26	.639	Moderately Serious
Community	N	Mini mum	Maxi mum	Mean	Std. Deviation	Description
Problem 1	47	1	2	1.40	.496	Not a Problem
Problem 2	47	1	3	2.26	.530	Less Serious
Problem 3	47	2	4	3.02	.675	Moderately Serious
Problem 4	47	1	4	2.19	.900	Less Serious
Problem 5	47	1	2	1.40	.496	Not a Problem
Problem 6	47	1	3	2.26	.675	Less Serious
Overall				2.09	.629	Less Serious

The outcomes of respondents' ratings on the extent of communication barriers effects on natural disaster preparedness in respective household are shown in their computed mean. The overall result taken from the six indicators obtained a mean of 2.60 interpreted as moderately serious.

This segment aims to clarify that immediate action on natural occurrences and revival stages are difficult to expect from the underprivileged families because they are more susceptible in natural damages. This is because their households' level of flexibility to natural occurrences cannot withstand the effect of the aforesaid natural phenomena.

On the other hand, garnered data relating to workplace proved that; the smaller the computed standard deviation, the lesser the quantified amount of variation of a set of data values or the closer that set of data values to the mean; while the larger the computed standard deviation, the greater the measured dispersion of a set of data values. Combining the six indicators revealed an

overall standard deviation of .639. The respondents' answers on the extent of communication barriers effects on natural disaster preparedness in respective workplace are shown in their computed mean. The overall result taken from the six indicators obtained a mean of 3.26 interpreted as moderately serious. This part aims to explain that even a workplace can't escape from the impact of natural calamity occurrence. Oftentimes people prefer to stay at home when natural calamity is forecasted because it is safer to stay rather than to go outside even to your workplace.

On the gathered data vis-à-vis community proved that; the smaller the computed standard deviation, the lesser the quantified amount of variation of a set of data values or the closer that set of data values to the mean; while the larger the computed standard deviation, the greater the measured dispersion of a set of data values. Combining the six indicators specified an overall standard deviation of .629. The employers' responses on the extent of communication barriers effects on natural disaster preparedness in respective community are depicted in their computed mean. The overall result taken from the six indicators acquired a mean of 2.09 interpreted as less serious. Even if some circumstances are less serious and not a problem at all, this section endeavors to give details on natural disasters that are characterized by naturally occurring events whose consequences are often aggravated by man's negligence.

Table 4 shows the mean, standard deviation and description taken from the forty-seven (47) respondents (with 4, 3, 2 and 1 as minimum ratings and 5, 4, 3 and 2 as maximum) on their perception about the effectiveness of remediation applied on problems encountered despite communication barriers.

Table 4: Effectiveness of Remediation Applied on Problems Encountered Despite Communication Barriers

Indicator	N	Mini mum	Maxi mum	Mean	Std. Deviation	Description
Remediation 1	47	4	5	4.49	.505	Moderately Effective
Remediation 2	47	2	4	3.15	.751	Effective
Remediation 3	47	1	2	1.43	.500	Not at All
Remediation 4	47	3	5	4.19	.798	Moderately Effective
Remediation 5	47	1	5	2.62	1.033	Effective
Remediation 6	47	3	5	4.40	.648	Moderately Effective
Remediation 7	47	1	3	2.04	.690	Less Effective
Remediation 8	47	1	3	1.55	.619	Less Effective
Remediation 9	47	4	5	4.74	.441	Very Much Effective
Remediation 10	47	1	3	2.40	.648	Less Effective
Overall				3.10	.663	Effective

The results proved that; the smaller the computed standard deviation, the lesser the quantified amount of variation of a set of data values or the closer that set of data values to the mean; while the larger the computed standard deviation, the greater the measured dispersion of a set of data values. Combining the ten indicators revealed an overall standard deviation of .663.

The outcomes of respondents' ratings on the effectiveness of remediation applied on problems encountered despite communication barriers are shown in their computed mean. The overall

result taken from the ten indicators obtained a mean of 3.10 interpreted as effective. This section aims to emphasize that affected individuals also try to address the problems in order to reduce suffering and later on recover from it.

Chapter 5

Findings, Conclusions and Recommendations

5.1 Findings

The findings of the study are summarized as follows:

- 5.1.1 Obviously, language differences 4.38 and cultural differences 3.68 were both perceived as great extent. On the other hand, moderate extent was the descriptive rating derived from 3.28 for low safety literacy and others (personal related factors), respectively. The overall result taken from the four indicators obtained a mean of 3.66 interpreted as great extent.
- 5.1.2 The analysis of the data was known through the mean score obtained from the employees' responses on the encountered problems. The outcomes were presented according to each acquired rank in chronological order. The following were: fail to look into some preventions to minimize or get away from the effects of the problems (4.45; 1st), fail to tell the real situations so no one can help me (4.28; 2nd), fail to communicate the management of Mohamed Ahmadi Group of Companies, the Ministry of Interior and the National Disaster Management Authority for my request of assistance and support (4.21; 3rd), fail to respond on public awareness program posted by the management of Mohamed Ahmadi Group of Companies (4.06; 4th), others (personal inadequacy) (4.04; 5th), fail to prepare the basic things needed (2.98; 6th), normal life is interrupted (2.17; 7th), life is in trauma (2.11; 8th), becoming helpless (2.02; 9th), always in panic (1.91; 10th) and putting life in danger (1.81; 11th).
- 5.1.3 The household's computed mean taken from the six indicators obtained 2.60 interpreted as moderately serious, and the workplace's overall result taken from the six indicators obtained a mean of 3.26 interpreted as moderately serious. While community's computed mean from the six indicators acquired a mean of 2.09 interpreted as less serious.
- 5.1.4 The outcomes of respondents' ratings on the effectiveness of remediation applied on problems encountered despite communication barriers are shown in their computed mean. The overall result taken from the ten indicators obtained a mean of 3.10 interpreted as effective.

5.2 Conclusions

In view of the findings presented, the following conclusions are drawn:

- 5.2.1 When language or cultural interferences are recognized, we often bother whether a person comprehends oral or written communication. Nevertheless, if those involved in communication use the same language and experience the same culture, understanding is expected. However, there are groups of people who are functionally illiterate: the absence of reading and writing, they just know the safety instructions by themselves.
- 5.2.2 Some problems (4, 6, 7, 8 and 11) were frequently and rarely (1, 2, 5, 9 and 10) experienced, while problem no. 3 was sometimes met due to lack of natural disaster preparedness brought by communication barriers. The most basic issues of these natural phenomena are their impact in the households, workplace and community.
- 5.2.3 This segment aims to clarify that immediate action on natural occurrences and revival stages are difficult to expect from the underprivileged families because they are more

susceptible in natural damages. This is because their level of flexibility to natural occurrences cannot withstand the effect of the aforesaid natural phenomena.

This part aims to explain that even a workplace can't escape from the impact of natural calamity occurrence. Oftentimes people prefer to stay at home when natural calamity is forecasted because it is safer to stay rather than to go outside even to your workplace. Take a risk means endangers your life.

Even if some circumstances are less serious and not a problem at all, this section endeavors to give details on natural disasters that are characterized by naturally occurring events whose consequences are often aggravated by man's negligence. They result in tragic disturbances in social and environmental sphere or the community as a whole.

- 5.2.4 This section aims to emphasize that affected individuals also try to address the problems in order to reduce suffering and later on recovery from it. The most common approach to provide assistance is through program on natural disaster preparedness. This is the focal point where all ideas and resources are translated into action.

5.3 Recommendations

On the basis of the findings and conclusions, the following recommendations are offered for consideration:

- 5.3.1 It is recommended to substantiate the capability of the respondents in order to provide feedback on its strengths and weaknesses because sometimes the individuals can be knowledgeable on safety measures due to his/her educational background despite language and cultural differences.
- 5.3.2 It is important to identify the relevant interventions that could be applied to be more apt at all times leading to higher self-esteem that could encourage better work performance.
- 5.3.3 Because communication is more than a cognitive process, research suggests that education must highlight its significant role of improving the capacity of individuals and communities to reduce the risk of natural disasters. As a result, activities such as anticipating, educating and informing will be given priority. It will impart awareness to everyone on the importance of using his/her initiative to keep abreast with necessary information relevant to his/her daily undertakings.
- 5.3.4 The Higher Education administration must strengthen community engagement services through seminar/training/workshop dealing with communication deficiency and other activities which can foster positive and supportive communication enhancement in the community.

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