

The Influence of Knowledge and Practices Towards Emergency and Disaster Preparedness of Tagum City: Input in Developing Intervention Programs

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ABSTRACT

This descriptive quantitative study aimed to determine the level of knowledge, practices, and emergency and disaster preparedness of the community members in a selected locale of Tagum City and determine if there's a significant relationship between the dependent and independent variables. The Simple random sampling technique was used in selecting research participants, who were identified based on the set inclusion criteria. The results of this study revealed that the level of knowledge and practices in emergency and disaster crises of the community members as perceived by the community disaster responders are both moderately high. The perceived emergency and disaster preparedness level was also rated as moderately high. Moreover, the study found no significant relationship between the perceived level of emergency and disaster preparedness and the demographic profile of the respondents in terms of Age and Gender. At the same time, Educational Attainment showed significance to the perceived emergency and disaster preparedness level.

Consequently, there was a strong relationship between the perceived level of knowledge on emergency and disaster crisis; and emergency and disaster preparedness. There was a strong relationship between the perceived level of practices on emergency and disaster crisis; and emergency and disaster preparedness. Finally, the researcher recommends that there must be proper localized planning in the communities, regular updating of program and emergency responses, regular conduct of drills and training to the community responders to equip them with new and updated training about disaster and emergency response and establish a research-based plan to prepare both community and administrative bodies during the occurrence of natural and man-made disasters.

Keywords— Disaster and Emergency Preparedness, Knowledge, and Practices, Risk Reduction, Tagum City,

INTRODUCTION

Rationale

A major disaster is not always reported in the media – a disaster that results in death and destruction – a disaster that frequently wipes out years of development programming and sets the slow course of improvement in third-world countries further behind. In month October 2019, Southern Mindanao, Philippines, experienced a series of devastating earthquakes. A 6.3 magnitude quake struck on the 16th of October, followed by a 6.6 magnitude earthquake on the 29th and a 6.5 on the 31st. Between those three dates, aftershocks above 5.0 on the magnitude scale occurred [1].

According to the report from the National Disaster Risk Reduction and Management Council [NDRRMC] in 2019, the earthquake on the 16th of October 16 was 6.3 magnitude. It affected 3,068 people in Regions 11

and 12, leaving five dead and 89 injured on the 29th of October, and 31 experienced earthquakes with magnitudes of 6.6 and 6.5, respectively, that affected 326,816 people in Davao del Sur alone. Three people were reported missing; in Davao City, an additional 27 were injured, and another three fatalities were reported. As reported by [PHILVOCS] or the Philippine Institute of Volcanology and Seismology on the 15th of December of the same year, a 6.9 magnitude earthquake and a series of large aftershocks, nine of which had magnitudes equal or greater than 5.0 was recorded by the Advanced National Seismic System (2019) which affected 242,840 people, injured 210, and killed 12 people in Davao del Sur [2].

Disaster preparedness is achieved partially through readiness measures that expedite an emergency response, rehabilitation, and recovery and result in rapid, timely, and targeted assistance. Assessing the emergency and disaster preparedness level is very important for those involved in disaster management [3]. During an actual emergency, quick and effective action is required. This action often depends on having made and implemented preparedness plans. If appropriate action is not taken or the response is delayed, lives may be needlessly lost. This preparedness aims to identify assignments and specific activities covering organizational and technical issues to ensure that response systems function successfully in the event of a disaster.

However, according to the study conducted by Pal [4] to assess the present knowledge about disaster preparedness and mitigation among students, a total of 375 Chinese community members who volunteered to participate were included. A pre-tested and pre-designed, structured questionnaire was administered to assess the current level of disaster preparedness and mitigation. The percentage marks were analyzed and compared for statistically significant differences. The result shows that these students need more knowledge about disasters and emergency and disaster preparedness. This can be improved by exposing the members to orientation workshops, mock drills, and similar practical exercises, which could develop an interest in the topic.

Furthermore, a study was conducted in the Philippines to determine the level of risk reduction and disaster preparedness programs among the residents in the District of Buenavista, Bohol, Philippines[5]. The findings revealed that they had a good level of disaster preparedness. However, some problems were encountered, such as inadequate training materials and lack of training among the disaster risk reduction management teams. Despite these challenges, officials, parents, both teachers and students agreed that the communities were generally compliant. A need was seen to continue the conduct of disaster preparedness training and seminars as well as budget allocation to finance the publication and dissemination of program training materials for distribution to communities [5].

Emergency and disaster preparedness must be supported by public and private education campaigns, training of response teams, and rehearsals of emergency response scenarios[6]. The aim of public awareness and education programs is to promote an informed, alert and self-reliant community capable of playing its full part in support of and in cooperation with government officials and others responsible for disaster management activities. An essential part of a disaster preparedness plan is the education of those who may be threatened by a disaster [7]. Although television, radio, and printed media will never replace the impact of direct instruction, sensitively designed and projected messages can supplement the overall process.

In spite of these supporting claims, there has yet to be any major research that came across a study that dealt with the relationship between demographics and emergency and disaster readiness among the members of the community in the selected locale in Tagum City. Aside from that, Tagum City has recently intensified their disaster and emergency preparedness efforts. The researchers chose to conduct this study in Tagum City since it is one of the emerging cities in Region XI (Davao region). It serves as economic and cultural center, making its disaster and emergency preparedness critical for the well-being of the larger region.

The researchers are interested in raising concerns to the intended beneficiaries of this study and developing

recommendations and action plans to respond to the needs of the respondents that will greatly affect their awareness and preparedness of the City government in the occurrence of disasters.

Research Question

Generally, the study was conducted to determine the knowledge, practices, and emergency and disaster readiness among the members of the community in the selected locale in Tagum City. To be specific, it was sought to identify the following:

1. What is the profile of selected community members in terms of:

- Age;
- Sex; and
- Educational level?

2. What is the level of knowledge of members of the community on emergency and disaster crises?

3. What is the level of practices of members of the community on emergency and disaster crises?

4. What is the level of emergency and disaster preparedness of members of the community in terms of:

- Vulnerability assessment;
- Planning;
- Institutional Framework;
- Information system;
- Resource base;
- Warning system;
- Response mechanism;
- Public education and training; and
- Rehearsals?

5. Is there a significant difference in the emergency and disaster preparedness of the community members when analyzed in terms of Age, sex, and educational level?

6. Is there a significant relationship between knowledge and emergency and disaster preparedness of the community members?

7. Is there a significant relationship between practices and emergency and disaster preparedness of the community members?

8. What intervention program or enhancement, or risk reduction program can be recommended to improve the emergency and disaster preparedness of respondents or community members?

Hypothesis

The following null hypothesis was formulated and tested at a 0.05 level of significance. This will be the basis for establishing the relationship between this study's dependent and independent variables. These are as follows:

1. There is no significant difference in the emergency and disaster preparedness of community members when analyzed in terms of Age, sex, and educational level;
2. There is no significant relationship between knowledge and emergency and disaster preparedness of the community members;
3. There is no significant relationship between practices and emergency and disaster preparedness of members of the community members.

Theoretical Lens

This study is anchored on the Theory of Planned Behavior (TPB) proposed by Icek Ajzen in 1981[8]. This is a productive framework for investigating antecedents of behavior. A central factor in the TPB is the individual’s intention to perform a given behavior [9]. It can be directly associated with the domain of disaster risk reduction. The public readiness index (PRI) behavioral elements were used for defining and assessing Disaster Prevention Behavior (DPB). It is hypothesized that intentions to do DPB can be predicted from attitudes, subjective norms, and perceived behavioral control concerning the behavior; and that performing DPB can be predicted from intentions and perceptions of behavioral control.

The prediction of DPB, however, depends on the chronological stability of intentions and perceived behavioral control. If these variables change prior to observation of the behavior, they can no longer permit accurate prediction. In addition, precise behavioral prediction also depends on the actual perceived behavioral control. Only if perceptions of control are reasonably accurate will a measure of this variable improve the prediction of behavioral success.

Conceptual Framework

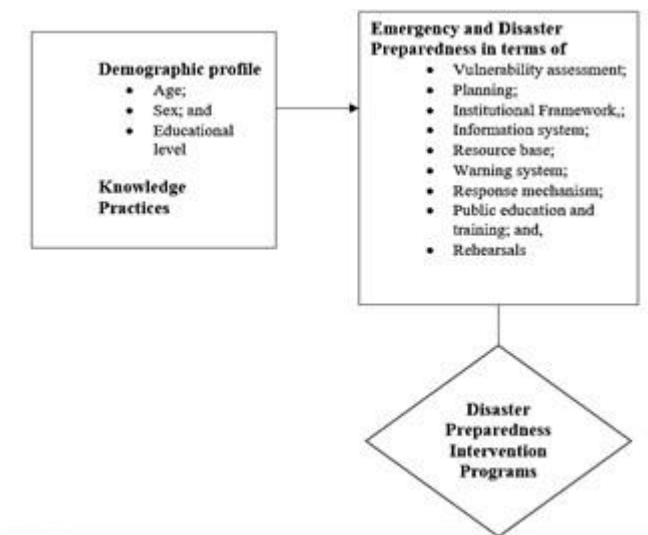


Figure 1. Conceptual Framework of the study

Figure 1 explains how the variables are integrated to establish the conceptual framework of the study, where the interplay of variables is illustrated. The independent variables are composed of the demographic profile of respondents in terms of Age, sex, educational level, and knowledge practices. On the other hand, the dependent variable is emergency and disaster preparedness (which refers to the measures taken to prepare for and reduce the effects of disasters) in terms of vulnerability assessment, planning, institutional framework, information system, resource base, warning system, response mechanism, public education and training, and rehearsals. The findings have served as the foundation of the proposed Disaster Preparedness Intervention Programs to the higher authorities.

METHODOLOGY

This study utilized a quantitative descriptive method. Quantitative descriptive research designs focus on numeric and unchanging data and detailed, convergent reasoning rather than divergent reasoning [10]. Also, quantitative design is the systematic empirical investigation of observable phenomena via statistical, mathematical, or computational techniques [11]. This study quantitatively measured the levels of

knowledge, practices, and emergency and disaster preparedness of the residents.

The data collection was conducted in the province of Davao del Norte, specifically Tagum City. The Simple random sampling technique was used in the selection of research participants. They were identified based on criteria. First, they must be residents of Tagum City and be barangay responders, must have thorough knowledge about disaster preparation, and must be 18 years old and above. In addition, there were 345 barangay responders in Tagum City. To get the sample population, the researcher used **Yamane's formula**.

There were 184 respondents in the study. The table below shows how respondents were distributed for urban and rural barangays.

Table 1. Distribution of Respondents

Barangay	Responders	Samples
Urban Barangays	150	80
Rural Barangays	195	104
Total	345	184

The respondents were clearly instructed and guided in answering the survey questionnaire in order to get more or less reliable raw data that could readily be used and made available for statistical treatment and discussion of findings. Finally, the **Mean** was used to determine the residents' levels of knowledge, skills, and emergency and disaster preparedness, while the **Pearson r coefficient** was employed to determine the significant difference in the levels of knowledge, skills, and emergency and disaster preparedness of the community members when analyzed according to demographic profile.

PRESENTATION, ANALYSIS, AND INTERPRETATION OF THE DATA

The data and information gathered from data collection are presented in this section. The presentation was based on the statement of the problem and the objectives of the study. Results and discussions include the socio-demographic profiles of randomly selected barangay responders, the perceived level of knowledge and practices of members of the community on emergency and disaster crises, the perceived level of emergency and disaster preparedness of members of the community, and the significant relationship between variables.

Socio-Demographic Profile

There were 184 barangay responders of Tagum City who participated in this study. Table 1.1 presents the socio-demographic profile of the respondents in terms of Age.

The result revealed 56.5 percent of the respondents were in prime working Age (25 to 54 years old) while 6 percent were classified as elderly or 65 years old and above. The age classification was based on the Philippines' Age Structure. Similarly, some studies, such as the study of Najafi, Ardalan, Akbarisari, Noorbala, & Elmi [12]

indicated that DPB increases with Age, while others showed that older people are less likely to engage in preparation.

Table 2. Socio-Demographic Profile of the Respondents in terms of Age

Age	Frequency (Number)	Percentage (%)
15-24 years old (early working age)	54	29.3
25-54 years old (prime working age)	104	56.5
55-64 years old (mature working Age)	15	8.2
65 years old and above (elderly)	11	6.0
Total	184	100.0

The socio-demographic profile of the respondents in terms of Gender is shown in Table 3. The majority (70.7 percent) of the respondents were women, while 29.3 percent were men. However, the study of Thomas et al. [13] strongly suggests that men engage in DPB more than women, while some studies reject this hypothesis.

Table 3. Socio-Demographic Profile of the Respondents in terms of Gender

Gender	Frequency (Number)	Percentage (%)
Male	54	29.3
Female	130	70.7
Total	184	100.0

Table 4 presents the socio-demographic profile of the respondents in terms of Highest Educational Attainment. Thirty-five percent of the respondents were college level, followed by 54 percent college graduates, while 4.3 percent were High School level.

Socioeconomic status has also been considered to be an indicator of preparedness levels in several studies. Russell, Goltz, and Bourque [14] found that survival preparedness and preparedness planning were associated with having a higher income, while preparedness planning was associated with having a higher education. Eisenman [15] found that having some college or trade school education was associated with increased odds of having emergency supplies.

Table 4 Socio-Demographic Profile of the Respondents in terms of Educational Attainment

Educational Attainment	Frequency (Number)	Percentage (%)
High School Level	8	4.3
High School Graduate	23	12.5
Senior High School	15	8.2
College Level	65	35.3
College Graduate	54	29.3
Vocational Graduate	19	10.3
Total	184	100.0

Perceived Level of Knowledge of the Community Members on Emergency and Disaster Crisis

Another objective of the study was to determine the level of knowledge of members of the community on emergency and disaster crises, as shown in Table 5. The results revealed that the respondents' level of perception of the knowledge of emergency and disaster crises was moderately high, with a weighted Mean of 5.82. Moreover, the respondents were highly knowledgeable about disaster preparedness, and they highly knew who should give first aid during a disaster.

Table 5. Level of Knowledge of Members of the Community on Emergency and Disaster Crisis

	Weighted Mean	Description
1. I have had Disaster Management (DM) Training before.	5.62	Moderately High
2. I am knowledgeable about a disaster.	5.94	Moderately High
3. I am knowledgeable about disaster plans.	5.59	Moderately High
4. I know where to find a plan.	5.44	Moderately High
5. I am knowledgeable about drills	5.94	Moderately High
6. I know my function during a drill.	5.83	Moderately High
7. I am knowledgeable about disaster preparedness.	6.13	High
8. know when to give first aid during a disaster event,	5.72	Moderately High
9. know who should give first aid during a disaster.	6.14	High
Average	5.82	Moderately High

Evidence-based scientific knowledge is needed to drive the development of standards and policy; however, the retrospective nature of emergencies and disasters makes level-one evidence next to impossible to obtain [16].

Additionally, multiple core competencies outlining the required knowledge and skills for community members have been developed by professional organizations. The transition to all-hazard preparedness has led to the development of coalitions to foster collaboration among public and private entities, a reserve corps of volunteers to call upon during staff shortages, and stockpiles of critical supplies throughout the nation [17]. A national poll conducted by SteelFisher et al. [18] reported that 55% of community members had received emergency/disaster preparedness training within the previous two years, while another survey found that 40% of providers reported no consistent annual training at their current place of employment [19].

Communities have unique barriers preventing adequate emergency/disaster preparedness. The majority of populations have lower incomes and lower levels of education and rely on agricultural and natural resource industries, all of which can restrict response capabilities and recovery due to limited economic resources [20]. Some areas are geographically isolated, have small or absent departments, and have less sophisticated forms of technology/communication systems for both intra- and inter-facility communication, which makes collaboration with outside resources challenging.

Perceived Level of Practices of Members of the Community on Emergency and Disaster Crisis

Table 6 presents the level of practices of the community on emergency and disaster crises as perceived by the respondents. The overall Mean is 5.83, which is described as moderately high. The result implied that community members participate in disaster preparedness activities, such as drills, planning, protocols, and other disaster management training.

Table 6. Level of Practices of Members of the Community on Emergency and Disaster Crisis

	Weighted Mean	Description
1. Disaster drills are done in this locale	5.89	Moderately High
2. The implementation of drills is frequent in this locale.	5.68	Moderately High
3. There is ongoing DM training in this locale.	5.67	Moderately High
4. There is implemented DM training in this locale.	5.86	Moderately High
5. The disaster plan is regularly updated by the authority.	6.01	High
6. There are implemented disaster plan updates.	6.18	High
7. I have faced a disaster already.	6.16	High
8. I have been a worker on the disaster management team.	4.87	Moderately High

9. I know the latest disaster this locale was involved in.	5.70	Moderately High
10. I believe that their practice for disaster preparedness is sufficient.	6.32	High
Average	5.83	Moderately High

Accordingly, the ability to retain education and then transfer skills and knowledge is imperative under the stressors encountered during an emergency/disaster event. Education seeks to prepare service providers to deliver optimal care to disaster victims in times of emergencies and disaster. Regardless of the instructional method, there is great value in repetition to combat the decay of knowledge over time [21]. However, validated objective measures of a community member’s translation of knowledge into a coordinated response during an event have not yet been developed. Although exceedingly subjective and difficult to assess consistently, a community member’s perception of their own ability is still the most common predictor of their own emergency/disaster preparedness.

In the occurrence of disasters, many recurring problems which impede response arise from the inadequate education and training of healthcare professionals, from not understanding disaster plans and protocols well, and from skill inadequacy and lack of experience [22]. In many countries, disaster education is rarely provided to members to the same degree as fundamental education; there are only a few models and drafts related to the process of understanding disaster education to guide staff. Understanding the importance of disaster enables one to take part in all stages of a disaster and to actively and effectively participate in disaster management plans made in all fields.

Perceived Level of Emergency and Disaster Preparedness

Table 7 presented the level of emergency and disaster preparedness as perceived by the respondents. The overall Mean was recorded as 5.83 or with a descriptive equivalent of moderately high. This implied that the respondents were moderately highly knowledgeable on the emergency and disaster preparedness of every barangay of Tagum City.

Moreover, the respondents were highly knowledgeable about the planning and the information system indicators, with a Mean of 6.02 and 6.12, respectively. At the same time, the other nine indicators were perceived as moderately high by the respondents.

Table 7. Level of Practices of Members of the Community on Emergency and Disaster Crisis

	Weighted Mean	Description
1. Vulnerability Assessment	5.30	Moderately High
2. Planning	6.02	High
3. Institutional framework	5.88	Moderately High
4. Information system	6.12	High
5. Resource Base	5.92	Moderately High
6. Warning Systems	5.90	Moderately High
7. Response mechanisms	5.89	Moderately High
8. Public Education and Training	5.81	Moderately High
9. Rehearsals	5.59	Moderately High
Average	5.83	Moderately High

Langan and James [23] stated that people of various disciplines and service organizations must receive proper disaster preparedness education. For instance, members are directly involved in disaster management; they need to be well prepared. Furthermore, Aitsi-Selmi, Egawa, Sasaki, Wannous, & Murray

[24] argued that having well-integrated systems of preparedness is only one element in reducing the impact of disasters upon affected individuals and communities. Disasters management is considered a challenging situation for members in a variety of settings.

To perform their role adequately, community members must have sufficient knowledge, organizational skills, and leadership abilities. Since disaster strikes without warning, all community members need to be familiar with disaster procedures and management.

Relationship between Demographic Profiles and the Level of Emergency and Disaster Preparedness

Another objective of the study was to investigate the significant relationship between emergency and disaster preparedness as perceived by the respondents; and their demographic profiles, such as Age, sex, barangay classification, and education level.

In analyzing Pearson correlation coefficient r , the p -value or defined as the probability value, must be lesser than the level of significance 0.05 to acquire enough evidence to reject the null hypothesis. Otherwise, accept the null hypothesis.

Table 8 shows the relationship between emergency and disaster preparedness as perceived by the respondents and their Ages. Using Pearson r , the correlation between two variables was determined. The overall Pearson r was 0.026 with a p -value of 0.731, greater than the level of significance of 0.05. There was enough evidence to accept the null hypothesis that there was no significant difference between the Age of the respondents and the indicators of emergency and disaster preparedness except for the vulnerability assessment indicator.

Relative to this, the study of Tkachuck, Schulenberg, & Lair [25] revealed that Age was not found to be a significant predictor of preparedness, while the total experience was found to be a significant predictor of both Actual and Perceived Preparedness.

Table 8. Significant Relationship between the Emergency and Disaster Preparedness as Perceived by the Respondents and their AGE

AGE	Correlation Coefficient (r)	Probability (2-tailed)
Vulnerability Assessment	.160*	0.030
Planning	-0.041 ^{ns}	0.581
Institutional framework	0.010 ^{ns}	0.890
Information system	0.002 ^{ns}	0.974
Resource Base	-0.006 ^{ns}	0.932
Warning Systems	0.038 ^{ns}	0.605
Response mechanisms	0.052 ^{ns}	0.483
Public Education and Training	-0.051 ^{ns}	0.494
Rehearsals	0.070 ^{ns}	0.343
Emergency and Disaster Preparedness	0.026 ^{ns}	0.731

*Significant at 1 percent alpha **Significant at 5 percent alpha ***Significant at 10 percent alpha nsNot Significant

Table 9 presented the relationship between emergency and disaster preparedness as perceived by the respondents and their Gender. The overall Pearson r was 0.027 with a p -value (0.720) greater than 0.05.

This further denoted no significant relationship between emergency and disaster preparedness when analyzed according to the Gender of the respondents.

Specifically, all indicators of emergency and disaster preparedness were not significant when analyzed according to the Gender of the respondents. According to Dalisay & De Guzman [26], understanding how gender relations do not oftentimes shape women’s and men’s lives is critical to disaster risk reduction (DRR). This is because not all women’s and men’s different roles, responsibilities, and access to resources influence how each will be affected by different hazards and how they will cope with and recover from disaster.

Table 9. Significant Relationship between the Emergency and Disaster Preparedness as Perceived by the Respondents and their GENDER

GENDER	Correlation Coefficient (r)	Probability (2-tailed)
Vulnerability Assessment	-0.033 ^{ns}	0.656
Planning	-0.027 ^{ns}	0.720
Institutional framework	0.022 ^{ns}	0.762
Information system	0.038 ^{ns}	0.608
Resource Base	0.055 ^{ns}	0.462
Warning Systems	0.017 ^{ns}	0.824
Response mechanisms	0.010 ^{ns}	0.891
Public Education and Training	0.067 ^{ns}	0.366
Rehearsals	0.050 ^{ns}	0.497
Emergency and Disaster Preparedness	0.027 ^{ns}	0.720

*Significant at 1 percent alpha **Significant at 5 percent alpha ***Significant at 10 percent alpha nsNot Significant

Table 10 presents the significant relationship between emergency and disaster preparedness as perceived by the respondents and their educational Attainment. The overall Pearson r was 0.282 with a p-value (0.000) lesser than 0.05 implying a significant relationship among variables.

Among the indicators, the p-values were all lesser than 0.05, which showed significant relationships. The educational Attainment of the respondents had a significant relationship with their perception of the level of emergency and disaster preparedness. Hoffmann & Muttarak [27] hypothesized that formal education could improve disaster preparedness by improving individual cognitive and learning skills as well as access to information. Education indirectly provides individuals and households with material, informational, and social resources, which can help reduce disaster vulnerability.

Table 10. Significant Relationship between the Emergency and Disaster Preparedness of the Community Members and their Educational Attainment

EDUCATIONAL ATTAINMENT	Correlation Coefficient (r)	Probability (2-tailed)
Vulnerability Assessment	.240**	0.001
Planning	.261**	0.000
Institutional framework	.285**	0.000

Information system	.259**	0.000
Resource Base	.245**	0.001
Warning Systems	.280**	0.000
Response mechanisms	.241**	0.001
Public Education and Training	.278**	0.000
Rehearsals	.283**	0.000
Emergency and Disaster Preparedness	.282**	0.000

*Significant at 1 percent alpha **Significant at 5 percent alpha ***Significant at 10 percent alpha ^{ns}Not Significant

Relationship Between Knowledge and Emergency and Disaster Preparedness of the Community Members

This section discussed another objective of the study, the relationship between the knowledge of emergency and disaster crisis; and the emergency and disaster preparedness as perceived by the respondents. The overall Pearson r was 0.867 with a p-value (0.000) lesser than 0.05. This was evidence that there was a significant relationship between variables. Moreover, all the indicators of emergency and disaster preparedness had a significant relationship to the perceived knowledge of emergency and disaster crises of the respondents.

At the time of response to disasters and emergencies, the priority is to help, support, and treat the victims; to save lives. Therefore, disaster relief and assistance are not only carried out by emergency responders, but every capable community member is responsible for immediate response during the occurrence of a disaster. Education and training are necessary for both emergency responders and community members to gain knowledge and develop the skills that make an effective response to disaster and emergency possible[28].

Table 11. Significant Relationship between the Knowledge and Emergency and Disaster Preparedness of the Community Members

KNOWLEDGE OF EMERGENCY AND DISASTER CRISIS	Correlation Coefficient (r)	Probability (2-tailed)
Vulnerability Assessment	.753**	0.000
Planning	.888**	0.000
Institutional framework	.837**	0.000
Information system	.817**	0.000
Resource Base	.812**	0.000
Warning Systems	.822**	0.000
Response mechanisms	.745**	0.000
Public Education and Training	.824**	0.000
Rehearsals	.801**	0.000
Emergency and Disaster Preparedness	.867**	0.000

*Significant at 1 percent alpha **Significant at 5 percent alpha ***Significant at 10 percent alpha ^{ns}Not Significant

Relationship between the Practices and Emergency and Disaster Preparedness of the Community Members

Another objective of the study was to test the relationship between the practices on emergency and disaster crises; and the emergency and disaster preparedness as perceived by the respondents. According to Table 7, the overall Pearson r was 0.856 with a p-value (0.000) lesser than 0.05. This further denoted a significant relationship between variables.

Consequently, the indicators of Emergency and Disaster Preparedness as perceived by the respondents were significantly different from the practices on emergency and disaster crises, with a high correlational relationship ranging from 0.748 to 0.848 and with p-values lesser than 0.05 level of significance.

Table 12. Significant Relationship between the Practices and Emergency and Disaster Preparedness of the Community Members

KNOWLEDGE OF EMERGENCY AND DISASTER CRISIS	Correlation Coefficient (r)	Probability (2-tailed)
Vulnerability Assessment	.753**	0.000
Planning	.888**	0.000
Institutional framework	.837**	0.000
Information system	.817**	0.000
Resource Base	.812**	0.000
Warning Systems	.822**	0.000
Response mechanisms	.745**	0.000
Public Education and Training	.824**	0.000
Rehearsals	.801**	0.000
Emergency and Disaster Preparedness	.867**	0.000

*Significant at 1 percent alpha **Significant at 5 percent alpha ***Significant at 10 percent alpha ^{ns}Not Significant

In disasters, many recurrent problems which impede response arise from the inadequate education and training of healthcare professionals, from not understanding disaster plans and protocols well, and from skill inadequacy and lack of experience [25]. In many countries, disaster education is rarely provided to members to the same degree as fundamental nursing education; there are few models and drafts related to the process of understanding disaster education to guide staff. Understanding the importance of disaster enables one to take part in all stages of a disaster and to actively and effectively participate in disaster management plans made in all fields, including in the health system [22].

SUMMARY, CONCLUSION, AND RECOMMENDATION

Summary

The study aimed to determine the knowledge, practices, and emergency and disaster readiness among the members of the community in the selected locale in Tagum City. Specifically, this study sought to describe the socio-demographic profile of the respondents. In addition, the study also wanted to describe the level of knowledge of members of the community on emergency and disaster crises and the level of practices on emergency and disaster crises.

Moreover, this study investigated the level of emergency and disaster preparedness of members of the community in terms of vulnerability assessment, planning, institutional framework, information system, resource base, warning system, response mechanism, public education and training, and rehearsals. Finally, this study determined the significant relationships between respondents' demographics and their level of emergency and disaster preparedness in the community; the significant relationships between the level of knowledge of the respondents and their level of emergency and disaster preparedness in the community; and the significant relationships between the level of practices as perceived by the respondents and their level of emergency and disaster preparedness in the community.

The study employed a quantitative descriptive research methodology utilizing a correlation technique with the aid of a researcher-made survey instrument which was validated by external experts. It was conducted in Tagum City, Davao del Norte. The respondents of the study are residents of the city and part of the community responders of the 23 barangays. There are 184 respondents who participated in this study.

The results of this study revealed that 56.5 percent of the respondents are of prime working Age (25 to 54 years old), and most are women at about 70 percent. In terms of the highest educational Attainment, 35 percent are college students, and 29 percent are college graduates. About 61 percent are living in urban areas of the city. Moreover, community responders perceived that their level of knowledge and their level of practice in emergency and disaster crises are both moderately high. The perceived level of emergency and disaster preparedness was also rated as moderately high.

Finally, the study found that there was no significant relationship between the perceived level of emergency and disaster preparedness and the demographic profile of the respondents in terms of Age, Gender, and residence. However, educational Attainment showed significance to the perceived level of emergency and disaster preparedness. Consequently, there was a strong relationship between the perceived level of knowledge on emergency and disaster crisis; and emergency and disaster preparedness. There was a strong relationship between the perceived level of practices on emergency and disaster crisis; and emergency and disaster preparedness.

Conclusion

By the results of the study, the researcher has come up with the following conclusions:

The perceived level of knowledge and practices on emergency and disaster crises; and their level of emergency and disaster preparedness had resulted to moderately high as most of Tagum City's community responders from the 23 barangays are in their prime working Age of between 25 years old to 54 years old and most of them are college students and college graduates.

Moreover, there is no significant relationship between the level of preparedness for emergency and disaster in terms of vulnerability assessment, planning, institutional framework, information system, resource base, warning system, response mechanism, public education and training, and rehearsals when analyzed according to Age, Gender and residence except when analyzed with Educational Attainment.

Finally, there is a significant relationship between the level of knowledge as perceived by the respondents on emergency and disaster crises and the level of preparedness on emergency and disaster in terms of vulnerability assessment, planning, institutional framework, information system, resource base, warning system, response mechanism, public education and training, and rehearsals. There is also a significant relationship between the level of practices as perceived by the respondents on emergency and disaster crises and the level of preparedness on emergency and disaster in terms of vulnerability assessment, planning, institutional framework, information system, resource base, warning system, response mechanism, public education and training, and rehearsals.

Recommendations

From the conclusions made from the results of the study, the following recommendations are then proposed:

The City of Tagum will now consider better succession in disaster and emergency preparedness. Improve the level of knowledge of the community responders during disaster and emergency crises and develop practices regarding emergency and disaster crises. This includes proper localized planning in the communities, regular updating of plans and emergency responses, regular conduct of drills and training to the responders, and increased training and orientation for new responders.

Moreover, training college students and college graduates can also help improve the city-wide succession in disaster and emergency preparedness since it will result in the recruitment of younger responders. The city government must make every barangay of Tagum City a disaster-resilient and prepared community.

Finally, a follow-up study will be proposed, especially in the areas of disaster and emergency preparedness of communities in the city, to validate the results and findings of this study.

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