



DISASTER MENTAL HEALTH PREPAREDNESS AMONG RESIDENTS OF FLOOD-PRONE BARANGAYS IN SAN JOSE OCCIDENTAL MINDORO, PHILIPPINES

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DOI: 10.47760/cognizance.2022.v02i05.003

ABSTRACT: This study was conducted to examine the disaster mental health preparedness of people living in rural areas which are identified to be prone to floods specifically during the monsoon months of June to December. The study employed the descriptive-correlational method. A total of 100 respondents representing five (5) communities were the participants in this study. Using the Psychological Preparedness for Disaster Threat Scale (PPDTS) as the main instrument in gathering the data, the respondents were also asked to complete the demographic survey such as age, sex, and socioeconomic status. The major findings of the study include the following: that most of the respondents represent the young generation, are female, and belong to the mass-based socioeconomic status. The statistical calculations showed that the respondents are not mentally well-prepared in facing disasters specifically floods and typhoons. It was also revealed that demographic factors such as age, socioeconomic status, and length significantly impact the disaster mental health preparedness of people who are living in flood-prone areas. Also, both age and socioeconomic status affect the mental health readiness of the respondents. It is recommended that psychological readiness be one of the components of the existing plans and programs for disaster mitigation.

Keywords: psychological readiness, disaster mitigation, typhoons

INTRODUCTION

Disasters are stressful events not only for individuals who suffer both from personal loss but also for the community at large (Khankeh, et al., 2011). Earthquakes, hurricanes, cyclones, tsunamis, and floods have shaped and modified human behavior, changing the way people live with, and respond to, the environment (Woolf, Schneider, and Hazelwood, 2013). These emergency situations can bring about physiological and psychological responses which can be detrimental to the individual.

When a disaster strikes, psychological readiness can help the victims to think reasonably and sensibly, which in turn may reduce the dangers of severe damage and casualty. Thus, individuals and communities should prepare psychologically for facing a disaster. Individuals are not fully conscious of disasters that can happen anytime and the psychological effects on human health, however, natural disaster mental health preparedness is frequently overlooked due to the more immediate and basic physical requirements in handling disaster situations.

Disaster mental health preparedness is a substantial reduction scheme to safeguard the people from unfavorable psychological effects brought about by unexpected natural disasters. This strategy aims to help individuals avoid imminent disaster threats, and to put tactics, resources, and systems in place to guarantee that the victims receive adequate support and assistance (Coppola, 2015).

Psychological stances play an essential part in disaster research, particularly with regard to disaster response in the management of trauma to the victims of natural disasters and also for providing counseling and therapy services. Research conducted by Khankeh (2013) noted the crucial basic needs that should be of primary consideration to deliver all-embracing recovery facilities. One of the basic requirements includes the inclusion of continuous mental health care in the community. Natural disaster initiatives also need to include psychosocial retrieval, which is a crucial component of rebuilding individuals' and communities' well-being and mental health (Burke, 2014). This is a holistic approach in planning a disaster management program.

The Philippines is one of the most disaster-prone—especially to typhoons—countries in the world. It is especially prone to hydrometeorological events such as typhoons and floods, which accounted for over 80% of the natural disasters in the country during the last half-century. Its long coastlines with a high concentration of people and economic activity and heavy dependence on agriculture and natural resources contribute to its high risk. Typhoons, which occur on average about 20 times per year, are the most common natural hazard that Filipinos face. The annual monsoon season causes severe flooding in many places though floods also

occur due to human activity such as deforestation and encroachment of low-lying areas. The occurrence of these disasters has grown rapidly (Jha, et al., 2018).

Just recently, the typhoons “Tisoy” and “Ursula” devastated the country while a few weeks ago, the major eruption of Taal Volcano led to massive destruction of the livelihood of the people. In the face of difficult situations like these, the victims can experience psychological distress that can affect their normal functioning. Exposure to disasters can lead to long-term health effects and risks, such as substance abuse, insomnia, phobias, amnesia, and anxiety (including Generalised Anxiety Disorder). Other health effects include post-traumatic stress disorder (PTSD), hyperarousal, acute stress disorder (ASD), depression and at times suicide, and other mental illnesses (Cassidy, 2013; Hussain, Weisaeth, and Heir, 2011a; Hussain, Weisaeth, and Heir, 2011b; Keskinen-Rosenqvist, et al, 2011; Liu, et al, 2016; Neria, Nandi, and Galea, 2008; Nomura, et al, 2016).

Objectives of the Study

1. To determine the profile of the respondents in terms of:
 - 1.1 age;
 - 1.2 sex; and
 - 1.3 socioeconomic status
2. To determine the disaster mental health preparedness of the respondents
3. To test if there is a significant relationship between the profile variables and the disaster mental health preparedness of the respondents
4. To determine which of the profile variables significantly affects the disaster mental health preparedness of the respondents

Methodology

Site of the Study

This study was conducted in five selected barangays that are identified by the Municipal Disaster and Risk-Reduction Management Office as flood-prone barangays. These are the barangays of Mangarin, San Agustin, Bubog, Pag-asa and Labangan Poblacion. The questionnaire was answered online using google forms. Respondents were randomly selected.

Data Gathering Instrument

The primary instrument used in gathering the relevant data was the Psychological Preparedness for Disaster Threat Scale (PPDTS). This is a standardized tool in assessing mental health preparedness which had been tested for validity and reliability.

Statistical Treatment of Data

For the statistical analysis of data, descriptive statistics was used. To find out the relationship between the profile variables and the level of disaster mental preparedness, Pearson r was employed. And to examine which of the profile variables significantly affects disaster mental preparedness, multiple regressions was used.

Results and Findings

Respondents Profile

The data in Table 1 revealed that most of the respondents fall under the 21-30 age category (38%), followed by the age range of 31-40 (25%), and those who are aged 11-20 followed (20%). 51-60 with a percentage of 41-50%, the respondents coming from 51-60 age range has 2% and the least of the respondents represents the senior citizen's group with only 1%. It can also be noted that more females participated in the study with 59% while the male population comprised 41% of the sample size. In terms of socioeconomic status, most of the respondents come from the mass base with a percentage of 78%, mid elite with 21%, and 1% coming from the elite.

Table 1. Demographic profile of respondents.

Variables	N=100	Frequency	Percentage
<u>Age</u>			
11-20		20	20
21-30		38	38
31-40		25	25
41-50		14	14
51-60		2	2
61-70		1	1
Total		100	100

<u>Sex</u>		
Male	41	41
Female	59	59
Total	100	100
<u>Socioeconomic Status</u>		
Mass-based	78	78
Mass Elite	21	21
Elite	1	1

Table 2 indicates the mental health preparedness of the respondents. It can be noted that the respondents rarely have psychological preparations as revealed in their self-rating in the following indicators such as assessing the likelihood of a typhoon (m=2.21); confidence of knowing what to do and what actions to take in a severe weather condition (m=2.32); knowing the difference between a typhoon warning and typhoon watch situation (m=2.01); feeling reasonably confident on his/her own ability to deal with stressful situations that they may find themselves in (m=2.32); being able to cope with their anxiety and fear during severe storm situations (m=1.89); being able to manage their feelings pretty well in difficult and challenging situations (m=2.42); the necessity of talking to oneself in challenging situations (m=2.11); being able to stay calm and cool in difficult situations (m=2.00); knowledge of strategies to calm themselves in severe storm situations (m=2.45); being able to tell easily if those around them are in distress (m=2.03); and preparing mentally for situations that might be difficult or stressful (m=2.41)

It can also be noted that the respondents rated themselves high in the following indicators: regularly monitoring news bulletins and Weather Bureau advisory during storm season (m=4.06); knowledge of the emergency contact information (m=4.02); knowledge of the household preparedness measures which are needed to stay safe in a severe storm situation (m=4.20); familiarity with the weather signs of an approaching storm (m=4.22); knowing what to look for in their homes and workplace if an emergency weather situation should develop (m=4.27); and knowledge about the impact that very severe storms can have in their homes (4.27). Other indicators were rated “sometimes” by the respondents such as being able to locate the storm preparedness material in typhoon warning situations easily (m=3.23); knowing how to adequately prepare their homes for the forthcoming typhoon; being familiar with the typhoon preparedness materials available to them (m=3.48); being familiar with the disaster warning system messages used for extreme weather events (m=2.98); if found themselves in a severe storm or cyclone situation they would know how to manage their own response to the situation

(m=3.06); knowing which strategies they could use to calm others in a severe storm or cyclone warning situation (m=3.33); being able to identify their feelings pretty well in challenging situations (m=3.21); and during severe storms or cyclones, they would notice if they are feeling anxious or stressed (m=3.48). The overall mean of 2.98 falls under the “sometimes” interpretation which means that the respondents are not well-prepared mentally during crisis situations.

These data show that the respondents have a low mental health readiness in coping with emergency situations, particularly in times of crisis such as typhoon situations. Reser (2019) indicated that mental health preparedness contains factors within individual abilities such as knowledge, thinking, motivation, anticipation, management, and decision-making.

This finding is supported by Sharma (2015) who conducted a study on community health preparedness in Iran. He concluded that mental health preparedness in Iran is low.

According to McCabe, et al, (2013) Individuals need to be psychologically prepared to successfully manage a disaster warning situation or disaster impact and to reduce the resulting psychological distress. Psychological preparedness prior to disaster may enable individuals to anticipate and identify their feelings, and manage their emotional responses, resulting in the engagement of better coping mechanisms.

Table 2. Mental health preparedness of the respondents.

Indicators	Mean	Interpretation
1. I can assess the likelihood of a typhoon crossing the country	2.21	Rarely
2. I regularly monitor news bulletins and Weather Bureau advisory during storm season.	4.06	Often
3. I am confident that I know what to do and what actions to take in a severe weather situation.	2.32	Rarely
4. I would be able to locate the severe storm preparedness materials in a typhoon warning situation easily.	3.23	Sometimes
5. I know how to adequately prepare my home for the forthcoming storm or cyclone season.	3.45	Sometimes
6. I know where I can quickly find the emergency contact information in a severe weather situation.	4.02	Often
7. I am familiar with the severe storm preparedness materials available to me.	3.48	Sometimes
8. I know which household preparedness measures are needed to stay safe in a very severe storm situation.	4.20	Often

9. I am familiar with the weather signs of an approaching storm.	4.22	Often
10. I know what to look out for in my home and work place if an emergency weather situation should develop.	4.27	Often
11. I am familiar with the disaster warning system messages used for extreme weather events.	2.98	Sometimes
12. I know what the difference is between a typhoon warning and a typhoon watch situation.	2.01	Rarely
13. I am knowledgeable about the impact that very severe storms can have on my home.	4.07	Often
14. I feel reasonably confident in my own ability to deal with stressful situations that I might find myself in.	2.23	Rarely
15. In a severe storm situation I would be able to cope with my anxiety and fear.	1.89	Rarely
16. I think I am able to manage my feelings pretty well in difficult and challenging situations.	2.42	Rarely
17. When necessary, I can talk myself through challenging situations.	2.11	Rarely
18. I seem to be able to stay cool and calm in most difficult situations.	2.00	Rarely
19. I know which strategies I could use to calm myself in a severe storm situation.	2.45	Rarely
20. If I found myself in a severe storm or cyclone situation I would know how to manage my own response to the situation.	3.06	Sometimes
21. I would be able to tell easily if those around me are in distress.	2.45	Rarely
22. If others are in distress, I would know how to calm them down.	2.03	Rarely
23. I know which strategies I could use to calm others in a severe storm or cyclone warning situation.	3.33	Sometimes
24. I am able to identify my feelings pretty well in challenging situations.	3.21	Sometimes
25. During severe storms or cyclones I would notice if I am feeling anxious or stressed.	3.48	Sometimes
26. I usually prepare mentally for situations that might be difficult or stressful.	2.41	Rarely
Average Weighted Mean	2.98	Sometimes

Scale: 1.00-1.50 Never; 1.51-2.50 Rarely; 2.51-3.50 Sometimes; 3.51-4.50 Often; 4.51-5.00 Always

Relationship between the profile variables and the disaster mental health preparedness

The correlation analysis in Table 3 reveals that two of the profile variables have a moderate relationship to disaster mental health preparedness which means that as the individual gets older and has higher SES his/her disaster mental health preparedness level also increases.

This finding is supported by Kar (2013) that adults are more resilient to disasters compared to children and adolescents who are emotionally vulnerable to their experiences during a disaster. This can be due to the fact that as people age, their experiences taught and equip them with the necessary requisites of coping. The same study confirmed that low socioeconomic status is one of the risk factors in developing psychological morbidities when faced with disastrous events. Cannon (2012) found that there is a direct relationship between low socio-economic status & post-disaster mental health disorders.

Table 3. Relationship between the profile variables and the disaster mental health preparedness.

Profile Variables	Disaster mental health preparedness	Correlation Coefficient	Interpretation
Age		.378	Moderate
Sex		.124	Negligible
SES		.377	Moderate

Scale: 0.000-0.125 Negligible; 0.126-0.375 Weak; 0.376-0.625 Moderate; 0.626-0.875 Strong; 0.876-1.000 Perfect

Profile variables affecting disaster mental health preparedness

The regression analysis in Table 3 indicates that two of the profile variables significantly affect disaster mental health preparedness. Age ($\beta=.302$, $p=.003$) and SES ($\beta=.285$, $p=.047$)

significantly affect disaster mental health preparedness. The finding implies that age has influenced disaster mental health preparedness by 30.2% while 28.5% by SES.

Batool (2015) pointed out that for a holistic approach to disaster mitigation, both the young and old populace should be engaged in the preparation, implementation and evaluation process. People who are equipped and prepared for confronting a disaster cope better, but people who fail to prepare are caught unawares and are less able to manage and cope when an unavoidable catastrophe happens.

Cannon (2012) underscored that low socio-economic status is one of the primary risk factors for disaster mental health preparedness. This was supported by Chan (2015) who found that low socioeconomic status has a direct effect on the disaster mental health of the people.

This finding is also supported by Eriksen, 2013 who cited that a report from the World Bank and the Global Facility for Disaster Reduction and Recovery (GFDRR) on the impacts of natural disasters around the world notes that “poor people, with fewer resources, tend to invest less in preventing and mitigating the adverse effects of natural hazards and environmental changes”.

Given the range of findings in this area, Reser (2019) conclude that “a characteristic such as socioeconomic status should be considered as a possible contributor to, and predictor of, how risks are perceived and interpreted.

Table 4. Profile variables affecting disaster mental health preparedness

Profile Variables	Beta Coefficient	Significance	Interpretation
Age	.302	.003	Significant
Sex	-.140	.153	Not Significant
SES	.285	.047	Significant

R=.800; R2=0.639; F=107.242; Sig.=0.000

Conclusions

1. Majority of the respondents fall under the 21-30 age category, and the least represents the senior citizen's group. More females participated in the study which mostly come from the mass base.
2. The respondents are not well-prepared mentally in facing disasters
3. Both age and socioeconomic status are moderately related to mental health preparedness
4. Age and socioeconomic status significantly affect mental health preparedness.

Recommendations:

In line with the conclusions drawn from the study, the following are hereby recommended by the researchers:

1. This study can be conducted with the vulnerable sector of society as respondents such as those suffering from psychological distress
2. To foster long-term resiliency and strengthen disaster management practices, it is suggested that psychological preparedness be one of the components of the existing disaster readiness policies and programs after a disaster, and to foster long-term resilience.
3. It is suggested that during the planning, implementation, and evaluation of disaster management programs, multisectoral representatives be involved including youth and the elderly and people coming from different socioeconomic strata.

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