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Medical Facility Employees' Disaster Awareness, Attitude, Preparedness and Resilience in Northern Negros Occidental

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Abstract:

Disasters pose significant threats to healthcare facilities, necessitating robust disaster preparedness and resilience strategies to ensure continuity of care and minimize adverse impacts. This study investigates the levels of disaster awareness, attitude, preparedness, and resilience among 201 employees of medical facilities in Northern Negros Occidental and explores their interrelationships across demographic groups including age, sex, length of service, and department. Utilizing a mixed-methods approach, the research employed descriptive, comparative, and correlational methodologies. Data were collected through a validated survey questionnaire, achieving high internal consistency across all constructs ($\alpha > 0.89$). Results indicate that overall disaster awareness, attitude, preparedness, and resilience are notably high among employees, with mean scores ranging from 4.60 to 5.54 on a six-point Likert scale. However, significant gaps were identified in misinformation about disaster preparedness, highlighting vulnerabilities in recognizing and managing misinformation during disaster events. Comparative analysis revealed significant differences in disaster resilience based on age, particularly in altruism and coping strategies. Correlational analysis demonstrated significant positive relationships between disaster awareness and both attitude ($p = 0.010$) and resilience ($p = 0.003$), as well as between attitude and both preparedness and resilience ($p < 0.001$). These findings highlight the need for healthcare institutions to integrate disaster misinformation management into standard emergency protocols. Policymakers should consider mandatory resilience training for medical personnel, incorporating psychological preparedness alongside logistical readiness. Strengthening disaster response frameworks by leveraging experienced staff as mentors and improving hospital-based disaster education can significantly enhance institutional preparedness.
Keywords: *Disaster Preparedness, Resilience, Healthcare Facilities, Disaster Awareness, Employee Attitude, Northern Negros Occidental*

Introduction:

Disasters, as defined by the World Health Organization (WHO) in 2022, are significant disruptions in the functioning of a community or society that result in extensive human, material, economic, or environmental losses and impacts. These events surpass the affected community's or society's capacity to cope using its available resources, leading to severe consequences such as loss of life, injury, disease, and various adverse effects on human, physical, mental, and social well-being. Additionally, disasters cause substantial damage to property, destruction of assets, loss of essential services, social and economic disruption, and environmental degradation (Congress of the Philippines, 2010).

In the context of healthcare facilities, disasters pose unique challenges. Hospitals are critical infrastructures that not only continue to treat existing patients but also handle the influx of individuals injured by the disaster (Convoy & Westphal, 2013). Disasters can harm both patients and healthcare workers, destroy vital resources within healthcare facilities, and indirectly lead to significant financial losses for these organizations (Simon, 2021). Ensuring the safety and functionality of hospitals during emergencies requires a comprehensive approach that includes operations planning, financial management, public services coordination, and architectural and engineering assessments to identify and mitigate vulnerabilities (Adini et al., 2012).

Effective disaster management in healthcare settings is essential for maintaining robust public health systems and ensuring the timely dissemination of accurate health information to the appropriate personnel (Chan & Purohit, 2020). Inadequate health information can lead to poor decision-making, adversely affecting response activities and increasing morbidity and mortality rates. Disaster awareness, preparedness, attitude, and resilience among healthcare employees are critical components that influence the effectiveness of disaster response and management. Understanding these factors within medical facilities is crucial for developing strategies that enhance hospital responsiveness and ensure the continuity of healthcare services during disasters. (At this point, consider briefly introducing the four key study variables—awareness, attitude, preparedness, and resilience—to help set up the research focus.)

Disaster awareness is foundational for effective disaster risk reduction and management. It encompasses several dimensions, including disaster education awareness, pre-disaster awareness, false disaster awareness, and post-disaster awareness (Dikmenli et al., 2018). Similarly, disaster attitude, comprising cognitive, affective, and behavioral dimensions, significantly influences how individuals respond to disasters (Turkan et al., 2019). Disaster preparedness involves the formulation of action plans and the establishment of response systems prior to disaster

events (Han & Chun, 2021), while disaster resilience refers to the ability to resist, absorb, accommodate, adapt to, transform, and recover efficiently from disasters (Biddle et al., 2020).

Despite the critical importance of these factors, there is a paucity of studies examining the interrelationships among disaster awareness, attitude, preparedness, and resilience within medical facilities. Most existing research focuses on individual aspects of disaster management, with limited exploration of how these variables interact and influence each other in the context of healthcare settings. This study aims to bridge this gap by investigating these variables among employees in a medical facility in Northern Negros Occidental. Specifically, the study seeks to determine the extent of disaster awareness, attitude, preparedness, and resilience among these employees and to explore how these factors differ and relate across various demographic groups, including age, sex, length of service, and department.

Based on these objectives, the study proposes the following hypotheses: First, there is a significant difference in the extent of disaster awareness, attitude, preparedness, and resilience of medical facility employees in Northern Negros Occidental when grouped according to age, sex, length of service, and department. Second, the extent of disaster awareness is significantly related to the extent of disaster attitude, preparedness, and resilience among the employees. Third, the extent of disaster attitude is significantly related to the extent of disaster preparedness and resilience. Finally, the extent of disaster preparedness is significantly related to the extent of disaster resilience among the employees. By testing these hypotheses, the research aims to uncover the nuanced relationships between these critical factors, thereby providing actionable insights for enhancing disaster management and resilience within medical facilities.

The findings of this study are expected to inform the development of comprehensive disaster risk reduction and management programs tailored to the needs of healthcare facilities. Understanding the extent of disaster awareness, attitude, preparedness, and resilience among medical facility employees is crucial for implementing strategies that enhance hospital responsiveness and ensure the continuity of healthcare services during disasters. Ultimately, this research seeks to contribute to the body of knowledge on healthcare resilience, providing actionable insights for hospital administrators, human resource developers, disaster management professionals, and policymakers to strengthen the disaster preparedness and resilience of medical facilities.

Review of Related Literature

Disaster awareness is a foundational element in effective disaster risk reduction and management. Dikmenli et al. (2018) emphasize the importance of disaster awareness for prompt action during and after disasters, as well as for making necessary preparations beforehand. Disaster awareness encompasses several dimensions, including disaster education awareness, pre-disaster awareness, false disaster awareness, and post-disaster awareness. Disaster education awareness involves the knowledge, skills, and attitudes necessary for individuals and communities to understand disaster risks and impacts, take appropriate preparatory actions, and build resilience against disaster-related challenges (Renn et al., 2018). Pre-disaster awareness includes activities related to risk assessment, hazard mitigation, emergency planning, and preparedness (Cutter et al., 2008). False disaster awareness refers to the perception that reducing the destructive effects of disasters is impossible, leading to a sense of powerlessness among individuals or communities (Paton, 2006). Post-disaster awareness involves the knowledge, skills, and attitudes necessary for recovery, including understanding the physical and psychological impacts of disasters, accessing available resources and support services, and taking steps to rebuild and restore affected areas (Norris et al., 2008).

Studies on disaster awareness among healthcare professionals reveal varying levels of preparedness and attitudes. Yousefi et al. (2019) found that nurses in Mosul teaching hospitals exhibited high levels of disaster awareness and knowledge but maintained a neutral attitude towards disaster management. Similarly, Iranian nurses demonstrated moderate levels of knowledge and performance in disaster preparedness, coupled with high levels of positive attitude (Turkan et al., 2019). However, disaster awareness tends to peak post-disaster and subsequently decline over time (Turkan et al., 2019), highlighting the need for sustained education and training programs.

Disaster attitude, comprising cognitive, affective, and behavioral dimensions, plays a crucial role in how individuals respond to disasters. The cognitive dimension includes beliefs, perceptions, and knowledge related to disasters, understanding potential hazards, preparedness and response strategies, and confidence in coping with disaster events (LePine & Van Dyne, 2001). The affective dimension encompasses emotional responses such as fear, anxiety, stress, and trauma (Norris et al., 2008). The behavioral dimension involves actions and behaviors in response to disasters, including preparedness, response, and recovery efforts (Pennings & Grossman, 2008). Turkan et al. (2019) highlighted that while awareness levels are high, attitudes towards disaster management can significantly influence the effectiveness of disaster response and preparedness initiatives.

Disaster preparedness involves the formulation of action plans and the establishment of response systems prior to disaster events (Han & Chun, 2021). It includes planning, convenience and availability of equipment, implementation of disaster plans, employee preparedness towards emergencies and disasters, and the anticipation, awareness, and

management of psychological responses (Borbon, 2020; FEMA, 2019; Girardet, 2020; Toole & Gambatese, 2002). Nurses play a pivotal role in disaster management, utilizing their expertise to provide care that mitigates risks to lives and health (Verheul & Dückers, 2020). Effective disaster preparedness in healthcare settings ensures that hospitals can maintain essential functions and provide continuous care during and after disasters.

Disaster resilience, defined as the ability to resist, absorb, accommodate, adapt to, transform, and recover efficiently from disasters (Biddle et al., 2020), is critical for sustaining healthcare operations under crisis conditions. Zhong et al. (2014) describe hospital disaster resilience as the capacity to resist, absorb, and respond to disasters while maintaining essential functionality and eventually recovering to an original or adaptive state. Fallah-Aliabadi et al. (2020) note that a resilient health system can effectively prepare for, withstand, and respond to the public health consequences of disasters, thereby reducing vulnerability and enhancing adaptive capacity (Almedom, 2008). Key dimensions of disaster resilience include optimism, altruism, preparation for disaster, social support, perceived control, self-efficacy, coping strategies, and positive growth (Mao et al., 2020; Pham et al., 2014; Lowe et al., 2015; O'Neill et al., 2022). These factors collectively contribute to an individual's or organization's ability to recover and grow following a disaster event.

Theoretical frameworks underpinning this study include the Theory of Planned Behavior (TPB) by Ajzen (1991), which predicts deliberate behavior based on the intention to perform the behavior. According to TPB, attitude toward behavior, subjective norms, and perceived behavioral control are key components influencing behavioral intentions. This theory is relevant in understanding how disaster awareness and attitude among healthcare employees influence their preparedness and resilience actions.

Previous research has identified gaps in the literature regarding the interrelationships among disaster awareness, attitude, preparedness, and resilience within medical facilities. Most studies have focused on individual aspects of disaster management, with limited exploration of how these variables interact and influence each other in the context of healthcare settings. This study seeks to address this gap by examining the extent of disaster awareness, attitude, preparedness, and resilience among medical facility employees in Northern Negros Occidental and exploring the relationships among these variables in relation to demographic factors such as age, sex, length of service, and department.

By integrating insights from various studies and theoretical perspectives, this literature review underscores the multifaceted nature of disaster management in healthcare settings and highlights the importance of a comprehensive approach that addresses both psychological and operational aspects. Understanding these dynamics is essential for developing effective disaster risk reduction and management programs that enhance the resilience and responsiveness of medical facilities during catastrophic events.

Methodology

This study employed a quantitative approach, integrating descriptive comparative and descriptive correlational research methodologies to comprehensively assess disaster-related variables among employees of medical facilities in Northern Negros Occidental. Descriptive research was utilized to systematically and accurately describe the levels of disaster awareness, attitude, preparedness, and resilience among the employees (Dulock, 1993). This approach facilitated the assessment of current states and characteristics within the population of interest. Additionally, descriptive comparative research was implemented to develop valid theoretical concepts and identify explanations for empirical phenomena by investigating significant differences in disaster-related variables across demographic groups such as age, gender, length of service, and department (Bureau & Salomonsen, 2012). This comparative aspect aimed to elucidate whether variations exist in disaster preparedness and resilience based on these demographic factors. Furthermore, descriptive correlational research was conducted to explore the relationships among disaster awareness, attitude, preparedness, and resilience without inferring causality, thereby providing insights into how these variables interrelate within the healthcare setting.

The study targeted employees from two medical facilities in Northern Negros Occidental. Medical Facility A comprised 300 employees, while Medical Facility B included 120 employees, totaling 420 potential participants. A sample size of 201 was determined to ensure statistical significance, accommodating a 5% margin of error and a 95% confidence level. Stratified random sampling was employed to ensure representation across various departments, age groups, genders, and lengths of service within each facility. This sampling technique enhanced the generalizability of the findings to the broader population of medical facility employees in the region.

The research instrument was an adapted and modified survey questionnaire tailored to the specific needs of this study. The questionnaire was divided into two main sections: the first section collected demographic information, including age, sex, length of service, and department, while the second section assessed the primary variables—disaster awareness, attitude, preparedness, and resilience—using a six-point Likert scale. Respondents rated each item from 1 ("very low") to 6 ("very high") across the four variables, allowing for nuanced measurement

of each construct. The Likert scale facilitated the quantification of subjective perceptions and attitudes, enabling statistical analysis of the data.

To ensure the validity of the instrument, both content validity and face validity were rigorously evaluated. Content validity was assessed by thirteen expert reviewers who examined the questionnaire for comprehensive coverage of the relevant content areas pertaining to disaster awareness, attitude, preparedness, and resilience (Heale & Twycross, 2015). The Content Validity Index (CVI) was calculated, yielding a score of 0.951, which indicates strong content validity. Face validity was further established by ensuring that each item accurately represented the intended constructs based on their apparent meaning (Nevo, 1985). Additionally, Lawshe's Content Validity Ratio and Good and Scates' instrument validation scale were employed to corroborate the validity of the survey instrument, reinforcing its appropriateness for measuring the targeted variables.

Reliability testing was conducted to evaluate the internal consistency of the survey instrument using Cronbach's Alpha. The reliability coefficients obtained were as follows: disaster awareness ($\alpha = 0.89$), disaster attitude ($\alpha = 0.97$), disaster preparedness ($\alpha = 0.95$), and disaster resilience ($\alpha = 0.95$). These coefficients indicate high to extremely high internal consistency for each of the constructs, suggesting that the items within each scale reliably measure the intended variable.

Upon confirming the validity and reliability of the survey instrument, printed questionnaires were distributed to the selected participants. Ethical clearance was obtained from the Ethics Committee of Medical Facility A and the Human Resource Manager of Medical Facility B. The researcher personally managed the distribution and collection of the questionnaires to ensure compliance with ethical standards and to maximize response rates. Participants were informed about the purpose of the study, assured of the confidentiality and anonymity of their responses, and provided with the option to withdraw from the study at any point without any repercussions.

Data analysis was conducted in several stages to address the research questions and test the proposed hypotheses. For the first four research questions, which examined the extent of disaster awareness, attitude, preparedness, and resilience among medical facility employees both collectively and across different demographic groups, descriptive statistics including mean and standard deviation were calculated. For the fifth research question, which investigated significant differences in disaster-related variables based on demographic factors, the Mann-Whitney U test was employed following assessments of data normality and homogeneity of variances. This non-parametric test was chosen due to the ordinal nature of the Likert scale data and potential deviations from normal distribution. Inferential statistics were applied to test the relationships between variables as outlined in the hypotheses. Specifically, Spearman's Rho correlation was utilized to determine the strength and direction of relationships between disaster awareness and disaster attitude, as well as between disaster awareness and disaster preparedness. This correlation method was appropriate given the ordinal data and the absence of assumptions about the linearity of relationships. The data analysis process involved using statistical software (e.g., SPSS) to compute the necessary descriptive and inferential statistics. The results were then interpreted in the context of the research objectives and hypotheses, providing a comprehensive understanding of disaster preparedness and resilience among medical facility employees.

Ethical standards were meticulously adhered to throughout the study to protect the rights and well-being of participants. Prior to data collection, approval was obtained from the Ethics Committee of Medical Facility A and the Human Resource Manager of Medical Facility B. The researcher secured written consent from participants, which was also endorsed by their adviser, program head, and department dean. Confidentiality and anonymity were strictly maintained, ensuring that individual responses could not be traced back to any participant. Participation was entirely voluntary, with participants given the freedom to withdraw from the study or skip specific questions at any time without any negative consequences. The researcher conducted the study impartially and independently, upholding rigorous standards of integrity and quality. All collected data were stored securely and were only accessible to the research team, with survey responses being confidentially handled and disposed of appropriately after analysis.

Results

The study assessed disaster awareness, attitude, preparedness, and resilience among 201 employees of two medical facilities in Northern Negros Occidental. Overall disaster awareness was high, with a mean score of 4.65 (SD = 0.421). Specifically, disaster education awareness scored very high (M = 5.49, SD = 0.566), pre-disaster awareness was also very high (M = 5.41, SD = 0.571), and post-disaster awareness was similarly very high (M = 5.50, SD = 0.623). In contrast, false disaster awareness was notably low, with a mean score of 2.21 (SD = 1.469).

When analyzing disaster awareness by age, both younger employees (33 years old and below) and older employees (34 years old and above) demonstrated high overall awareness, with mean scores of 4.69 (SD = 0.413) and 4.60 (SD = 0.431), respectively. Younger respondents showed a very high post-disaster awareness (M = 5.52, SD = 0.639) compared to older respondents (M = 5.48, SD = 0.603). False disaster awareness remained low across both

age groups, with younger employees scoring a mean of 2.30 (SD = 1.559) and older employees scoring 2.08 (SD = 1.327).

Gender-based analysis revealed that male respondents had an overall disaster awareness score of 4.79 (SD = 0.438), while female respondents scored slightly lower at 4.60 (SD = 0.404). Both genders rated disaster education awareness and post-disaster awareness very high. However, males exhibited a moderately low awareness of false disaster scenarios (M = 2.86, SD = 1.667) compared to females (M = 1.96, SD = 1.309).

Employees were also grouped by length of service, with shorter-tenured employees (116 individuals) reporting an overall disaster awareness mean of 4.68 (SD = 0.428) and longer-tenured employees (85 individuals) scoring 4.62 (SD = 0.412). Both groups maintained very high scores in disaster education awareness and similarly low scores in false disaster awareness.

In terms of disaster attitude, the overall score was very high (M = 5.28, SD = 0.541). The cognitive domain scored very high (M = 5.58, SD = 0.661), while the affective domain received a high rating (M = 4.76, SD = 1.138). Behavioral attitudes were also very high (M = 5.50, SD = 0.579). Age group comparisons showed that both younger (M = 5.26, SD = 0.566) and older respondents (M = 5.31, SD = 0.505) had very high overall disaster attitudes. Gender analysis indicated that both male (M = 5.19, SD = 0.600) and female respondents (M = 5.31, SD = 0.515) rated their overall disaster attitude as very high.

Disaster preparedness was consistently rated very high across all domains, with an overall mean score of 5.52 (SD = 0.437). Specific domains such as planning (M = 5.58, SD = 0.528), convenience (M = 5.57, SD = 0.494), and implementation (M = 5.58, SD = 0.482) all received very high ratings. Both younger (M = 5.54, SD = 0.424) and older respondents (M = 5.49, SD = 0.455) reported very high overall disaster preparedness. Gender-based analysis showed that both male (M = 5.46, SD = 0.422) and female respondents (M = 5.54, SD = 0.441) rated their overall disaster preparedness as very high.

Disaster resilience was also rated very high overall, with a mean score of 5.40 (SD = 0.423). The self-efficacy domain scored very high (M = 5.54, SD = 0.544), while optimism was rated high (M = 4.88, SD = 0.862). Both younger (M = 5.43, SD = 0.422) and older respondents (M = 5.35, SD = 0.424) demonstrated very high overall disaster resilience. Gender analysis indicated that both male (M = 5.37, SD = 0.370) and female respondents (M = 5.41, SD = 0.443) rated their overall disaster resilience as very high.

Inferential statistical analysis revealed significant differences in disaster resilience based on age, specifically in the domains of altruism and coping strategies. Additionally, correlations indicated significant relationships between overall disaster awareness and both disaster attitude ($p = 0.010$) and disaster resilience ($p = 0.003$). Furthermore, disaster attitude was significantly related to both disaster preparedness and resilience ($p < 0.001$), and disaster preparedness was significantly related to disaster resilience ($p < 0.001$).

Discussion

The study demonstrates that employees of medical facilities in Northern Negros Occidental possess high levels of disaster awareness, attitude, preparedness, and resilience. These findings suggest that existing training and educational programs are effective in equipping healthcare workers with the necessary knowledge and skills to manage disasters. The high scores in disaster education awareness, pre-disaster awareness, and post-disaster awareness reflect a strong foundational understanding of disaster dynamics and necessary preparations. This is consistent with previous research by Yousefi et al. (2019) and Turkan et al. (2019), which also reported high disaster awareness among healthcare professionals.

However, the consistently low scores in false disaster awareness across all demographic groups highlight a critical gap. The inability to discern false or misleading information can impede effective disaster response, as misinformation can lead to inappropriate actions during emergencies. This finding aligns with Paton's (2006) emphasis on the importance of media literacy and critical information evaluation in disaster preparedness. Enhancing false disaster awareness through targeted training programs that focus on identifying and managing misinformation is essential to mitigate potential risks during disaster events.

The analysis by age revealed that both younger and older employees maintain high disaster awareness, suggesting that training programs are effectively reaching employees across different age groups. However, the universal low scores in false disaster awareness indicate that this issue is pervasive and not confined to any particular age group. Tailored educational approaches that address this gap across all age demographics could enhance overall disaster preparedness.

Gender-based differences in disaster awareness and attitude indicate that males and females may benefit from different training focuses. While both genders demonstrate high disaster education and post-disaster awareness,

females scored lower in false disaster awareness compared to males, consistent to the results of the study of Turkan et al. (2019) which found that male healthcare workers reported higher disaster preparedness confidence, possibly due to prior training and leadership expectations.". This suggests the need for gender-sensitive training programs that address specific weaknesses and leverage the strengths of each gender. Such tailored approaches could improve the overall effectiveness of disaster preparedness initiatives.

The high overall disaster attitude scores reflect a strong positive disposition towards disaster preparedness among employees. The cognitive and behavioral domains received very high ratings, indicating that employees understand the importance of disaster preparedness and are committed to proactive behaviors. However, the lower and more variable scores in the affective domain suggest that emotional readiness and personal commitment could be enhanced. Addressing emotional aspects through initiatives such as stress management workshops, resilience training, and team-building exercises could improve emotional engagement and ensure that positive attitudes translate into effective actions during disasters.

Disaster preparedness scores were uniformly high, underscoring robust readiness among employees to respond to disasters effectively. High ratings in planning, convenience, and implementation indicate that protocols and strategies are well-established and communicated effectively within the facilities. This aligns with Samsuddin et al. (2018), who highlighted the critical role of thorough planning and implementation in disaster preparedness. However, the slight variability in employee preparedness suggests that ongoing training and drills are necessary to maintain and enhance preparedness levels across all staff.

Disaster resilience was rated very high, with particular strengths in self-efficacy and coping strategies. High self-efficacy scores indicate that employees feel confident in their abilities to manage and respond to disasters, which is crucial for effective disaster response. The strong scores in altruism and preparation for disaster further emphasize employees' commitment to maintaining functionality and supporting each other during crises. However, the lower scores in optimism suggest a need for interventions aimed at fostering a more positive outlook on disaster recovery and future preparedness. Enhancing optimism could contribute to greater psychological resilience and overall disaster readiness, as suggested by Bollettino et al. (2018) and Khalil et al. (2022).

The significant correlations between disaster awareness, attitude, and resilience underscore the interconnectedness of these variables. Increased disaster awareness positively influences both attitudes and resilience, highlighting the importance of comprehensive educational programs that not only impart knowledge but also foster positive attitudes and psychological resilience. However, the lack of a significant relationship between disaster awareness and preparedness suggests that other factors, such as organizational support and resource availability, also play crucial roles in disaster preparedness. This indicates the need for a multifaceted approach that combines education with practical training and robust support systems.

Furthermore, the significant relationship between disaster attitude and both preparedness and resilience emphasizes the role of positive attitudes in enhancing disaster readiness. Positive attitudes contribute to higher levels of resilience, indicating that fostering a positive and proactive attitude is crucial for building a resilient healthcare workforce. This relationship is supported by studies such as Fatoni et al. (2022) and Çam (2017), which highlighted the positive impact of attitudes on disaster preparedness and resilience.

Analysis

The high levels of disaster awareness, attitude, preparedness, and resilience observed among medical facility employees suggest that current training programs are effective in establishing a solid foundation for disaster management. However, the persistent low scores in false disaster awareness reveal a significant vulnerability that must be addressed to ensure comprehensive disaster readiness. This gap underscores the necessity for incorporating critical information evaluation and media literacy into disaster preparedness training.

The significant correlations between disaster awareness, attitude, and resilience highlight the importance of integrated training programs that address multiple facets of disaster preparedness. Enhancing awareness not only increases knowledge but also positively influences attitudes and resilience, creating a more prepared and resilient workforce. The lack of a significant relationship between awareness and preparedness indicates that additional factors, such as organizational support, resource availability, and personal motivation, are critical in translating knowledge into action. Therefore, disaster preparedness strategies should adopt a holistic approach that combines education with practical training and robust support systems.

Addressing the emotional aspects of disaster preparedness, as indicated by the lower scores in the affective domain, is essential for fostering a more engaged and motivated workforce. Implementing initiatives such as stress management workshops, resilience training, and team-building exercises can enhance emotional readiness and ensure that positive attitudes translate into effective actions during disasters.

The gender-based differences in disaster awareness and attitude suggest that tailored training programs are necessary to address specific needs and leverage the strengths of each gender. Gender-sensitive approaches can improve the overall effectiveness of disaster preparedness initiatives by ensuring that all employees are equally equipped to manage disasters effectively.

Furthermore, the high levels of disaster resilience, particularly in self-efficacy and coping strategies, indicate that employees feel confident in their abilities to handle disasters. However, the lower scores in optimism suggest that fostering a more positive outlook on disaster recovery is necessary to enhance overall resilience. Programs aimed at enhancing optimism through positive psychology initiatives and community support networks could significantly bolster disaster resilience.

Finally, the study's findings emphasize the importance of continuous evaluation and improvement of disaster preparedness programs. Regular assessments can help identify areas of strength and weakness, allowing for targeted interventions that address specific gaps in disaster preparedness and resilience. By adopting a comprehensive and integrated approach, medical facilities can enhance their disaster management capabilities, ensuring a resilient and effective response to disasters.

Conclusion:

Medical facilities, encompassing hospitals and healthcare installations, are inherently susceptible to various disaster vulnerabilities due to their critical role in community health and their complex operational structures. This study highlights the imperative need for focused risk mitigation strategies tailored to the unique challenges faced by these institutions. While the overall disaster awareness among employees was commendably high, significant gaps were identified in false disaster awareness. This deficiency underscores the necessity for targeted educational initiatives aimed at enhancing employees' ability to discern and respond appropriately to misinformation during disaster events. Addressing these gaps is crucial for improving the overall preparedness and response efficacy of medical facilities.

The assessment of disaster attitudes among employees revealed a predominantly positive reception towards disaster management practices. This positive attitude reflects a robust understanding and emotional engagement with disaster preparedness principles, laying a solid foundation for effective disaster readiness. The high levels of cognitive agreement indicate that employees are well-informed about disaster protocols and the importance of preparedness, aligning with findings from previous studies that emphasize the role of knowledge in shaping positive attitudes (Yousefi et al., 2019; Turkan et al., 2019).

In evaluating disaster preparedness, the study found strong consensus and readiness across planning and implementation domains. These high scores suggest that current disaster preparedness strategies are effective in establishing comprehensive protocols and ensuring their successful execution. However, the slightly lower emphasis on individual employee preparedness indicates that while organizational structures are robust, there is room for improvement in fostering personal readiness. Enhancing individual preparedness can be achieved through regular training, simulation exercises, and continuous professional development, ensuring that all employees are equally equipped to handle disaster scenarios (Samsuddin et al., 2018).

Disaster resilience was another critical area assessed in this study, revealing that participants possess a strong sense of self-efficacy and collective resilience. High scores in self-efficacy suggest that employees feel confident in their abilities to manage and recover from disasters, which is essential for effective disaster response. However, the lower scores in optimism highlight the need for interventions aimed at fostering a more positive outlook on disaster recovery and future preparedness. Enhancing optimism through resilience training programs, psychological support, and community-building activities can further strengthen the overall resilience framework, enabling more effective and sustained responses to disaster events (Bollettino et al., 2018; Khalil et al., 2022).

The significant correlations observed between disaster awareness, attitude, preparedness, and resilience underscore the interconnectedness of these factors in shaping an effective disaster management framework. Enhanced disaster awareness positively influences both attitudes and resilience, reinforcing the importance of comprehensive educational programs that integrate knowledge dissemination with emotional and psychological support. Conversely, the lack of a significant relationship between awareness and preparedness suggests that other factors, such as organizational support, resource availability, and personal motivation, also play pivotal roles in disaster preparedness. This finding aligns with existing literature that advocates for a multifaceted approach to disaster management, combining education with practical training and robust support systems (Paton, 2006; Yousefi et al., 2019).

In conclusion, while the high levels of disaster awareness, attitude, preparedness, and resilience among medical facility employees in Northern Negros Occidental are encouraging, addressing the identified gaps in false disaster awareness and emotional engagement is essential for achieving comprehensive disaster readiness. Implementing targeted training programs that focus on misinformation identification and fostering a positive and resilient mindset

will enhance the overall disaster preparedness and response capabilities of medical facilities. Future research should explore additional factors influencing disaster preparedness and resilience, such as organizational culture, resource allocation, and individual psychological traits, to further refine and optimize disaster management strategies within healthcare settings.

Recommendations:

Based on the findings of this study, it is imperative to implement targeted interventions aimed at enhancing false disaster awareness among medical facility employees. Despite high overall disaster awareness, the significant gaps identified in recognizing and managing misinformation pose a substantial risk to effective disaster response. To address this, comprehensive training programs should be developed that focus specifically on media literacy and the identification of misinformation. These programs can include workshops and simulation exercises that expose employees to various sources of information, teaching them to critically evaluate the credibility and reliability of the data they encounter during disaster situations (Paton, 2006; Yousefi et al., 2019). Additionally, integrating e-learning modules that provide ongoing education on misinformation management can ensure that employees remain adept at navigating the rapidly evolving information landscape during emergencies (Yousefi et al., 2019).

The positive reception towards disaster management practices among employees, as revealed by their disaster attitudes, underscores the necessity of fostering a robust understanding and emotional engagement with disaster preparedness principles. To build upon this foundation, it is recommended to incorporate emotional resilience training into disaster preparedness programs. Such training can include stress management techniques, mindfulness practices, and peer support systems that help employees maintain psychological well-being during and after disaster events (Çam, 2017; Bollettino et al., 2018). Enhancing emotional engagement will not only reinforce employees' commitment to disaster preparedness but also improve their ability to respond effectively under pressure, thereby strengthening overall disaster readiness (Bollettino et al., 2018).

The evaluation of disaster preparedness indicates a strong consensus and readiness across planning and implementation domains, highlighting the effectiveness of current disaster preparedness strategies. However, to further bolster individual employee preparedness, it is essential to emphasize personalized training and continuous professional development. Implementing regular drills and simulation exercises that mimic real-life disaster scenarios can enhance employees' practical skills and confidence in their ability to respond appropriately (Samsuddin et al., 2018; Shanableh et al., 2023). Additionally, providing access to up-to-date resources and ensuring that all employees are familiar with their specific roles and responsibilities during disasters will contribute to a more cohesive and efficient response effort (Georgieva et al., 2024).

Disaster resilience among participants was notably strong, particularly in terms of self-efficacy and collective resilience. To further enhance this resilience framework, it is recommended to implement optimism-boosting initiatives. Programs that focus on positive psychology, such as resilience training workshops and initiatives that highlight successful disaster recoveries, can cultivate a more optimistic outlook among employees (Khalil et al., 2022; Bollettino et al., 2018). Fostering a positive mindset will not only enhance individual resilience but also contribute to a more supportive and resilient organizational culture, enabling more effective recovery and adaptation following disaster events (Çam, 2017).

Moreover, leveraging the expertise of long-tenured employees through mentorship programs can facilitate the transfer of valuable knowledge and best practices to newer staff members. Establishing mentorship and peer-led training sessions can ensure that institutional knowledge is preserved and continuously enhanced, thereby strengthening the overall disaster preparedness and resilience of the medical facility (Rojas & Castro, 2023; Georgieva et al., 2024). Encouraging experienced employees to take on leadership roles in disaster preparedness committees can also promote a culture of continuous improvement and collaborative learning within the organization.

Finally, regular assessments and continuous improvement processes should be institutionalized to monitor the effectiveness of disaster preparedness strategies and resilience-building initiatives. Conducting periodic evaluations through surveys, drills, and feedback sessions will help identify emerging gaps and areas for enhancement, ensuring that disaster preparedness programs remain relevant and effective in addressing the evolving challenges posed by different types of disasters (Samsuddin et al., 2018; Munasinghe et al., 2019). By adopting a systematic approach to evaluation and improvement, medical facilities can sustain high levels of preparedness and resilience, ultimately safeguarding the well-being of both employees and patients during disaster events.

References:

Adini, B., Laor, D., Cohen, R., & Israeli, A. (2012). Decision to evacuate a hospital during an emergency: the safe way or the leader's way?. Journal of public health policy, 33, 257-268.

Ajzen, I. (1991). The theory of planned behavior. Organizational behavior and human decision processes, 50(2), 179-211.

Almedom, A. M. (2008). Resilience to disasters: a paradigm shift from vulnerability to strength. African Health Sciences, 8(Suppl 1), S1.

Biddle, L., Wahedi, K., & Bozorgmehr, K. (2020). Health system resilience: a literature review of empirical research. Health policy and planning, 35(8), 1084-1109.

Bollettino, V., Alcayna, T., Enriquez, K., & Vinck, P. (2018). Perceptions of disaster resilience and preparedness in the Philippines. Cambridge, MA, USA: Harvard Humanitarian Initiative.

Borbon, M. (2020). Evaluation on Disaster Preparedness among Resort Employees in Coastal Area situated in Batangas, Philippines.

Bureau, V., & Salomonsen, H. H. (2012). Comparing comparative research designs.

Çam, O., & Büyükbayram, A. (2017). Nurses' Resilience and Effective Factors. Journal of Psychiatric Nursing/Psikiyatri Hemsireleri Dernegi, 8(2).

Chan, J. L., & Purohit, H. (2020). Challenges to transforming unconventional social media data into actionable knowledge for public health systems during disasters. Disaster medicine and public health preparedness, 14(3), 352-359.

Congress of the Philippines. (2010). RA 10121: An Act Strengthening the Philippine Disaster Risk Reduction and Management System. Philippines, 3086, 1–34.
http://www.ndrrmc.gov.ph/attachments/article/45/Republic_Act_10121.pdf

Convoy, S., & Westphal, R. J. (2013). The importance of developing military cultural competence. Journal of Emergency Nursing, 39(6), 591-594.

Cutter, S. L., Barnes, L., Berry, M., Burton, C., Evans, E., Tate, E., & Webb, J. (2008). A place-based model for understanding community resilience to natural disasters. Global environmental change, 18(4), 598-606.

Dikmenli, Y., Yakar, H., & Konca, A. S. (2018). Development of disaster awareness scale: A validity and reliability study. Review of International Geographical Education Online, 8(2), 206-220.

Fallah-Aliabadi, S., Ostadtaghizadeh, A., Ardalan, A., Fatemi, F., Khazai, B., & Mirjalili, M. R. (2020). Towards developing a model for the evaluation of hospital disaster resilience: a systematic review. BMC health services research, 20, 1-11.

Fatoni, F., Panduragan, S. L., bin Sansuwito, T., & Pusporini, L. S. (2022). Disaster Preparedness: Knowledge, Attitude, and Practice Among Rural Communities in Indonesia: A Cross Sectional Survey. Malaysian Journal of Medicine and Health Sciences, 18(17 S), 163–170.

Federal Emergency Management Agency. (2019). Healthcare facilities and power outages: Guidance for state, local, tribal, territorial, and private sector partners. Healthcare Facilities and Power Outages, August, 1–40. https://www.fema.gov/sites/default/files/2020-07/healthcare-facilities-and-power-outages.pdf

Georgieva, M. G., Kostadinov, R., Semerdjieva-Filipova, M. A., & Valkanova, E. V. (2024). Hospital professional staff awareness of hospital plans for the provision of teams for medical support in case of disasters. Vojnosanitetski pregled, 81(04).

Girardet, L. H. (2020). United Nations Office for Disaster Risk Reduction (UNDRR).

Han, S. J., & Chun, J. (2021). Validation of the disaster preparedness evaluation tool for nurses—the Korean version. International Journal of Environmental Research and Public Health, 18(3), 1348.

Heale, R., & Twycross, A. (2015). Validity and reliability in quantitative studies. Evidence-based nursing, 18(3), 66-67.

Khalil, M., Ravaghi, H., Samhouri, D., Abo, J., Ali, A., Sakr, H., & Camacho, A. (2022). What is "hospital resilience"? A scoping review on conceptualization, operationalization, and evaluation. Frontiers in public health, 10, 1009400.

LePine, J. A., & Van Dyne, L. (2001). Voice and cooperative behavior as contrasting forms of contextual performance: evidence of differential relationships with big five personality characteristics and cognitive ability. Journal of applied psychology, 86(2), 326.

Lowe, S. R., Sampson, L., Gruebner, O., & Galea, S. (2015). Psychological resilience after Hurricane Sandy: the influence of individual-and community-level factors on mental health after a large-scale natural disaster. PloS one, 10(5), e0125761.

Mao, X., Loke, A. Y., & Hu, X. (2020). Developing a tool for measuring the disaster resilience of healthcare rescuers: a modified Delphi study. Scandinavian journal of trauma, resuscitation and emergency medicine, 28, 1-12.

Munasinghe, N. L., & Matsui, K. (2019). Examining disaster preparedness at Matara district general hospital in Sri Lanka. International Journal of Disaster Risk Reduction, 40, 101154.

Nevo, B. (1985). Face validity revisited. Journal of Educational Measurement, 22(4), 287-293.

Norris, F. H., Stevens, S. P., Pfefferbaum, B., Wyche, K. F., & Pfefferbaum, R. L. (2008). Community resilience as a metaphor, theory, set of capacities, and strategy for disaster readiness. American journal of community psychology, 41, 127-150.

Paton, D. (2006). Warning Systems: Issues and considerations for warning the public. University of Tasmania.

Pham, D., Vo, M., & Prevention, C. (2014). United Nations Development Programme (UNDP).

Pennings, J. M., & Grossman, D. B. (2008). Responding to crises and disasters: the role of risk attitudes and risk perceptions. Disasters, 32(3), 434-448.

Renn, O., Klinke, A., & Schweizer, P. J. (2018). Risk governance: application to urban challenges. International journal of disaster risk science, 9, 434-444.

Rojas, G. F., & Castro, E. G. De. (2023). Awareness and Practices On Disaster Management Of Healthcare Workers of Sorsogon Provincial Hospital. Arjhss.Com, 01, 43–57. https://www.arjhss.com/wp-content/uploads/2023/01/G614357.pdf

Samsuddin, N. M., Takim, R., Nawawi, A. H., & Alwee, S. N. A. S. (2018). Disaster preparedness attributes and hospital's resilience in Malaysia. Procedia engineering, 212, 371-378.

Shanableh, S., Alomar, M. J., Palaian, S., Al-Ahmad, M. M., & Ibrahim, M. I. M. (2023). Knowledge, attitude, and readiness towards disaster management: A nationwide survey among healthcare practitioners in the United Arab Emirates. PloS one, 18(2), e0278056.

Simon, R. R. (2021). Disaster Management - Hospital Perspective. Interntional Journal of Research and Analytical Reviews (IJRAR), 8(1), 390–393. https://www.researchgate.net/publication/349027664_Disaster_Management_-Hospital_perspective

Toole, T. M., & Gambatese, J. A. (2002). Primer on federal occupational safety and health administration standards. Practice periodical on structural design and construction, 7(2), 56-60.

Türkan, A. H., Kılıç, İ., & Tiryakioğlu, M. (2019). Development of a disaster attitude scale and assessment of university students' attitudes towards disasters. Ege Academic Review, 19(4), 457-467.

Verheul, M. L., & Dückers, M. L. (2020). Defining and operationalizing disaster preparedness in hospitals: a systematic literature review. Prehospital and disaster medicine, 35(1), 61-68.

WHO (2022). A Policy Paper on Facility-Level Preparedness. 140.

Yousefi, K., Larijani, H. A., Golitaleb, M., & Sahebi, A. (2019). Knowledge, attitude and performance associated with disaster preparedness in Iranian nurses: a systematic review and meta-analysis. Advanced journal of emergency medicine, 3(4).

Zhong, S., Clark, M., Hou, X. Y., Zang, Y., & FitzGerald, G. (2014). Validation of a framework for measuring hospital disaster resilience using factor analysis. International journal of environmental research and public health, 11(6), 6335-6353.