



A STATE OF DISASTER PREPAREDNESS AND MANAGEMENT: A PHENOMENOLOGY OF DAVAO CITY LIBRARIES

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Abstract:

Disaster has indeed affected library services and how libraries provide their services to their patrons. However, with disaster preparedness and management, libraries can be proactive and resilient in mitigating the risk of disaster in the library. Disaster preparedness and management is a topic of interest. This phenomenology study seeks to probe the challenges, coping mechanisms, and insights shared by head librarians using in-depth interviews. Eight (8) participants were chosen using the purposive sampling method, and data was analysed using thematic analysis. Based on the findings, it was revealed that the participants had faced difficulties in library disaster/disaster preparedness and management, which are encompassed by the following themes: (I) Inconvenienced Patrons, (ii) Stressed Librarians, (iii) Damage to Property, (iv) Lack of Resources. They also utilized coping mechanisms such as (I) Preserving the Collection, (ii) Ensuring the Safety of Patrons, (iii) Following Emergency Response Protocols, and (iv) Rapid Recovery of Library Services. Lastly, when asked about their shared insights, the following themes emerged: (I) Build Alliances with Local Partners, (ii) Strengthen Disaster Risk Governance, and (iii) Fortify Institution-Based Disaster Preparedness. The findings contribute to understanding the importance of disaster preparedness and management in libraries and provide implications for policy-making on enhancing libraries' resilience to mitigate disasters.

Keywords: library and information science, disaster preparedness, disaster management, thematic analysis, Philippines, head librarian, Philippines phenomenology

1. Introduction

Looking at the state of libraries today, the vast collections of knowledge are vulnerable to disaster, which endangers the library's operation and service. Disaster is an unpredicted incident, sudden event, or serious disruption of the functioning of the

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community or a society causing widespread human materials, economic or environmental losses and putting every resource in any institution, including the library, at threat which can strike or occur at any place, anytime without warning due to nature or artificial action and libraries are of no exception (Aboyade *et al.*, 2021; Gohain *et al.*, 2021; Hussain, 2019; Nongrang & Khongtim, 2021). “*This phenomenon poses a tremendous threat to libraries and their collection, as it frequently occurs without warning and catches libraries off guard, resulting in profound consequences*” (Tukur, 2022, para 1).

Recently, one of the disasters that hit the library was the COVID-19 pandemic, which disrupted library services and operations. Further, COVID-19 made the library change its role and adapt to the changing environment. This was made possible because of the disaster preparedness and management plan that the library employed. Disaster management can be regarded as an organized conscious effort to control any planned or unplanned catastrophe; it involves dealing with and avoiding natural and artificial disasters, preparedness before and rebuilding and supporting after a disaster has happened (Adadu & Ianna, 2019, p.62).

Although the library is in the post-pandemic era, the COVID-19 pandemic was not the first infectious disaster. In the past two decades the world has been plagued by several emergencies in the shape of disasters, infectious and diseases outbreak mainly known as influenza A (HINI) (1918), Ebola (1976), Hantavirus (1993), SARS (2003), MERS (2018) viruses and most recently COVID-19 (2019) has held a global impact in terms of resources, economic disruption and most important human and health (Soroya *et al.*, 2020). During the Ebola epidemic, librarians played a role in the Ebola response event management model (Ihekwoaba *et al.*, 2021).

The Philippines, an archipelago, is a tropical country with typhoons, a well-known calamity that threatens livelihood, education, and the economy. An example is typhoon Yolanda, also known as Haiyan internationally, which is one of the deadliest typhoons in the Philippines (Lum & Margesson 2014; Okere & Taiwo 2011 as cited in Orenia & Cabonero, 2023 p.2). Schools and their libraries were damaged due to submergence in mud-field floodwater (Superio & Alayon, 2019, as cited in Orenia & Cabonero, 2023, p.2). Specifically, Davao City in the Southern Philippines was a typhoon-free city until it experienced signal number 1 when typhoon Pablo hit the Southern Philippines. Still, it maintains Davao Central 911, a rescue and emergency unit (Tamayo 2016 as cited in Torrentira *et al.*, 2019 p119). There was a quick response from 83% of government personnel to the disaster (Torrentira *et al.*, 2019). The Republic Act (RA) 10121, also known as the Philippines Disaster Risk Reduction and Management (DRRM) Act, was enacted in 2010 to strengthen the Philippines DRRM system, provide a national DRRM framework, and institutionalize the national DRRM plan (Orenia & Cabonero, 2023). They further stated that the DRRM Act is helpful in making disaster plan manuals, especially in academic libraries.

Contrary to disaster, war is another terrible library disaster. The battle of Marawi was identified to be the most massive urban warfare in the Philippines since World War II. Marawi city is the capital of Lanao Del Sur province in Mindanao. It was a conflict

between the Philippine government forces and the terrorist group (Superio *et al.*, 2019). Due to this crisis, libraries were affected and damaged. The libraries in Marawi City are prone to disaster (Superio *et al.*, 2019). Parallel to the Ukraine war is another example of a library disaster caused by war. The American Library Association (ALA, 2022) reported that the Ukraine Library Association (ULA) received 165 requests for support from libraries across Ukraine. The American Library Association (ALA) sent \$25,000 to the Ukraine Library Association (ULA) to restart work, fulfill restoration and preservation of libraries that suffered as a result of hostilities or actions of Russian occupying forces and administration (including repair work, purchase of equipment, replenishment of book collections and other resources), develop and provide services to Internally Displaced Persons (IDPs), war veterans and those who study online.

This study's importance is extended to librarianship in terms of disaster preparedness and disaster management of libraries in Davao City. The perspective of libraries in using different plans and policies in preparing and managing library disasters, the challenges libraries face in preparing and managing library disasters, and the benefits of using electronic resources in managing modern-day library disasters in our society. Through this study, the readiness and response of libraries towards library disasters that hinder the delivery of library services to library patrons will help formulate a policy that would address and improve the current issues or concerns about library management and preparedness towards disasters.

To provide each theoretical basis to support the present study, the Protection Motivation Theory by Roger (1975), The Protection Action Decision Model (PADM) by Lindell & Perry (2012), Person relative to Event Theory (PrE-Theory) by Duval & Mulilis (1999), Innovation Theory by Roger (1983) and Self Efficacy Theory by Albert Bandera (1983). The first theory relevant to this study by Roger (1975) emphasizes the appeal of fear. In addition, it shows the four factors' people use to protect themselves: the perceived severity of the threatening event, the probability of the occurrence or vulnerability, the efficacy of the recommended preventive behavior, and the perceived self-efficacy. The Protection Motivation Theory signifies both the threat appraisal, which assesses the severity and seriousness of the situation, and the coping appraisal, which assesses the response to the threat (Iroeze & Iroeze, 2021). This theory will help the library prepare for library disasters, assist them in responding to disasters, and aid them in managing disasters.

Moreover, the second theory used for this study's relevance is by Lindell and Perry (2012), which emphasizes behavioral response and protection action. The Protection Action Decision Model is based on people's responses to environmental hazards and threats. The Protection Action Decision Model (PADM) shows the core perception of disaster: threat perception, protection action perception, and stakeholder perception. Further, this theory is applied to libraries so that they can understand how to respond to library disasters and what protective action they should take.

Further, the third theory, also relevant to this study, is Duval and Mulilis (1999), which emphasizes threat and vulnerability appraisal, self-efficacy, outcome efficacy,

coping appraisal, perceived resources availability, and perceived event severity (Paton, 2018). This theory will be useful to libraries in determining their level of preparedness and the seriousness of library disasters.

Moreover, the fourth theory, which is helpful for the relevance of this study by Roger (1983), emphasizes the adoption pattern, explaining the mechanisms and assisting in predicting whether and how an invention will be successful. Further, this theory is applied to librarians so that they can understand how innovative technology can be used to continue providing library services for library users amid or during a disaster.

Finally, the fifth theory, also relevant to this study, is by Bandura (1977), which emphasizes how an individual demonstrates his or her ability to perform a particular job or task. In addition, self-efficacy influences behavior by determining the goals and challenges, how much effort they put into achieving and overcoming their challenges, and how much they can tolerate them. The theory applies to this study because when libraries face challenging disasters, they need to keep providing library service to users and not let such disasters completely disrupt the library services and operation. Nevertheless, these theories are important to libraries during disasters. As disaster poses a serious challenge, Bandura's (1977) purview is that it will be a great contribution to libraries. In addition, this self-efficacy theory will enhance the adoption of the Protection Motivation Theory, the Protection Action Decision Model (PADM), and the Person Relative to Event Theory (PrE-Theory) because it allows the library to prepare and take drastic action in the face of disaster.

2. Literature Review

Nowadays, many academic libraries are technologically driven and have evolving emerging disasters. Disasters are inescapable; no library is immune to disaster, and it can befall any library at any time without appropriate measures. Whether a human-caused or natural disaster, no library can escape the devastation of disaster, and no library is immune or spared from either natural or human-caused disaster. Therefore, library managers need to be sensitive and prepare for disasters (Benedict *et al.*, 2020; Olubiyo, 2023; Orenia & Cabonero, 2023; Tukur, 2022).

Moreover, disasters are unfortunate events that affect the normal routine of life in our society. Disasters have the following effects: they disrupt normal day-to-day life, negatively influence the emergency system, and affect normal needs and processes, depending on the intensity and severity of the disaster (Saranya, 2021). The librarians cannot act quickly to organize and save efforts without an existing disaster preparedness plan (Abdullahi *et al.*, 2022).

Recently, the COVID-19 pandemic was a library disaster since it disrupted the smooth operation of the library service. Likewise, any event or series of events significantly disrupting the library's ability to support institutional activity and research over a period is a disaster (Chandra, 2004, as cited in Adadu & Ianna, 2019, p.61). With the explosion of the COVID-19 pandemic, governments worldwide imposed closure on

the doors of academics because student health is of utmost priority. Budgets or a lack of human resources affect academic routines. As a result, standard library services are inaccessible to users. Though libraries have adopted several measures, the workflows of libraries are still struggling to recover (Panda *et al.*, 2021).

Moreover, the entire library operation was affected due to the sudden outbreak of the COVID-19 pandemic. The massive lockdown during the outbreak of this COVID-19 pandemic restricted the movement of people from their homes, which in turn affected higher education facilities. The pandemic deeply affected educational institutions and libraries (Panda *et al.*, 2021; Shabbir *et al.*, 2020; Soroya *et al.*, 2020).

In line with library disasters, flooding is a consistent library disaster. In a study on public libraries affected by floods in South Kerala conducted by Saranya and Devi (2021a), they stated that floods are devastating for libraries as they equally affect the users, staff, and resources of the library. They further stated that dams and rivers increase the chances of flooding. In their findings, 85.26% of the libraries in South Kerala reported that 60 to 79% of the damage was caused by flood. They continue to argue that the Kerala Library Council estimated that 228 libraries affiliated with the council were either destroyed or washed away by the 2018 Kerala flood. They further stated that the flood-hit public libraries had soiled books, damaged furniture and equipment, and mud tugged when volunteers went to clean them. Similarly, when a library experiences a water disaster, whether from a frozen pipe that bursts, malfunctioning HVAC systems, heavy rain, or another cause, quick action can help mitigate the damage (Livingston & Barera, 2021). Furthermore, the authors stated ways to prevent water disasters and understand the nature and location of water-based threats; the library should have a monitoring system to monitor humidity and temperature levels constantly, maintain heating, ventilation, and air conditioning (HVAC) system, quick response, removal of all directly impacted or possible imparted material from the site of the disaster, assess the disaster and improved procedure, regularly monitoring humidity and temperature level.

Disaster preparedness and disaster management must be employed in response to the library disaster. A disaster preparedness plan that is prepared to reduce the impact of losses caused by a disaster is understood as a disaster preparedness plan (Rachman, 2020). Disaster preparedness provides a platform to design effective, realistic, and coordinated planning, reduce duplication of efforts, and increase the effectiveness of library members' disaster preparedness and response. Further, "*disaster preparedness is a continuous and integrated process resulting from a wide range of risk reduction activities and resources rather than a distinct sectoral activity. It requires the contribution of many different areas ranging from training and coordination to healthcare, recovery, livelihood to institutional development*" (Iroeze & Iroeze 2021, para 17 & 18).

Furthermore, Libraries need to be prepared for any disaster, whether human-caused or natural. Disaster preparedness entails preventing, responding to, and recovering from disasters (Tukur, 2022). The readiness to confront a disaster can be reviewed when a disaster management plan is in process (Nongrang & Khongtim, 2021). By implementing the best practices for providing services and managing disasters, the

capability of the library team needs to be assessed (Kaur & Mahajan, 2021). Disaster preparedness includes actions designed to enhance the ability to undertake emergency actions to protect properly and engage in post-disaster restoration and early recovery activities (Hussain, 2019).

In agreement with that, disaster preparedness is an indispensable plan for the efficient functioning of any library. Disaster preparedness is to predict where possible, prevent disasters, mitigate their impact on vulnerable populations, and respond to and effectively cope with the consequences. Disaster preparedness provides a platform to design effective, realistic, and coordinated planning, reduce duplication of effort, and increase the overall effectiveness of library member disaster preparedness and response efforts. Disaster preparedness plans are essential for libraries, as they collect and provide access to information and knowledge of human intellectual, scholarly ideas and work. The plan is prepared to minimize the impact of losses caused by disasters. Disaster preparedness is a continuous and integrated process resulting from a wide range of risk-reduction activities and resources rather than a distinct sectoral activity (Abdullahi *et al.*, 2022; Iroeze & Iroeze, 2021).

For proper training and for the response to be implemented quickly and effectively against disaster, a disaster preparedness plan must be done well ahead of time. An essential requirement for disaster management is the easy development of a disaster preparedness plan (Abdullahi *et al.*, 2022). Disaster control covers planning, risk assessment, training, and finance for a successful implementation. Therefore, disaster control practices are mandatory for all, including academic libraries and organizations (Abdullahi *et al.*, 2022).

In the same vein, a study was conducted on library preparedness in Indonesia by Rachman (2020); the findings show that out of the 42 respondents, 45% of the respondents revealed that the libraries had planning documents relating to disaster preparedness, and 55% did not have such documents. Further, 40% of the respondents revealed that the library had disaster preparedness guidelines, while most of the respondents, 60%, revealed that they did not have such guidelines. In addition, the findings also showed that out of the 42 respondents, 57% had experienced a library disaster, 29% of respondents revealed that the library had never experienced a disaster, and 40% did not provide an answer to the question. Academic libraries should not take disaster preparedness for granted, as it is crucial for libraries not to be caught off guard by disaster (Iroeze & Iroeze, 2021).

On the other hand, disaster management is a dynamic process. It encompasses the classical management functions of planning, organizing, staffing, leading, and controlling (Gohain *et al.*, 2021). Nowadays, in both the library and the Information Center, the issue of disaster management is particularly important. Therefore, disaster management plans must be implemented in every library and information center (Nongrang & Khongtim, 2021). Further, a "*disaster control plan is essential in every organization as it tells staff members what to do and what not to do when disasters strike*;

librarians are not exempted from it" (Gohain *et al.*, para 11). They further stated that the library needs to try to prepare itself for disaster.

In general, a disaster plan is necessary for the library to assist in eliminating panic and damage to the library resources by providing step-by-step instructions and not just for preventing disasters. The restoration and recommencement of the library in collective form in minimal time is the objective of disaster management (Gohain *et al.*, 2021; Kaur & Mahajan, 2021). Every library must have an effective disaster management plan to protect its collections, infrastructures, and services. Also, *"the library and information center should make a consistent attempt to cope with disasters"* (Kaur & Mahajan, 2021, p.14). Through a disaster management plan, authorities are committed to the procurement and maintenance of facilities and equipment, training, and testing of procedures, which in turn commit staff to take responsibility for the prevention, response, and recovery process (Muir & Shenton, 2002 as cited in Ilo *et al.*, 2019 p.334).

Furthermore, the library service, equipment, documents, resources, buildings, and human safety are threatened or endangered by disaster; therefore, disaster management and planning should be one of the most important aspects of library management (Olubiyo, 2023). *"Disaster management is an important issue that librarians must take seriously because not all disasters can be prevented"* (Bansal 2015, as cited in Osawe & Akporhonor, 2022, p.22). Disaster management is a costly and daunting venture if adequate preparedness measures are not implemented. Through effective disaster management practices, libraries and other organizations have minimized exigencies that would have otherwise resulted in a significant or total loss of lives and properties (Ilo *et al.*, 2019).

Nevertheless, disaster happens without notice. Therefore, libraries must take the initiative against unexpected events and always be prepared to respond to any disaster or emergency. Initiative-taking disaster management becomes imperative for universities, especially in libraries (Aboyade *et al.*, 2021; Iroeze & Iroeze, 2021). Disaster response is crucial during and after a catastrophe. Libraries must have disaster management and preparedness measures to diminish any disastrous events in the library (Abdullahi *et al.*, 2022). Subsequently, a disaster management plan must be incorporated into the planning phase of establishing a library and Information Center (Iroeze & Iroeze, 2021). A disaster response strategy must be in place to ensure an adequate response to disasters, both expected and unexpected (Kaur & Mahajan, 2021).

In agreement, *"in the context of libraries, disaster management is a part of library management which deals with safety and security of the libraries, library staff, collections and services from any potential loss and damage through a cycle process of prevention, preparedness, response, and recovery"* (Gohain *et al.*, 2021, para 10). Disaster management is a combination of four major activities: disaster prevention, disaster preparedness, disaster response, and disaster recovery (Benedict *et al.*, 2020; Kaur & Mahajan, 2021).

In response, *"the library authority must make library professionals and staff aware, trained and fully equipped for different disasters that can happen in the library. When the staff is aware and prepared for any disaster that can occur suddenly, they will be able to handle it during the emergency"* (Nongrang & Khongtim, 2021, p.1). Disasters can be managed, controlled,

and prevented if library staff members can be trained and equipped adequately. The training of library staff should be educating library staff on specific skills required to combat disasters as they relate specifically to library resources and not be trained on how to manage general disasters in the library (Ilo *et al.*, 2019). They further stated that the training of library personnel to manage disaster equipment, communicate timely and effectively, evacuate resources, and conduct the content of disaster plans is a form of checkmating disasters. Also, ensuring capacity building among personnel through various disaster training and retraining programs takes precedence in forestalling emergencies in the library (Ilo *et al.*, 2019).

Subsequently, in a study conducted by Tukur (2021), the author identified three phases of disaster management. The first phase, phase one (before the disaster), involves the library and Information Center's action to prevent the unfortunate disaster. The second phase, phase two (during the disaster), consists of responding to the disaster at the time of the occurrence. It is said to be the most dreadful phase. The third and final phase (after the disaster) involves a series of actions employed to restore, recover, and minimize the effects of the disaster. Therefore, a disaster plan should be well structured and developed and in a formal written form, which is essential and must be documented (Gohain *et al.*, 2021). The disaster management plan plays the most essential role in the disaster management process (Nongrang & Khongtim, 2021).

Likewise, whenever a disaster hits the library, the library will be in a vile condition, and the academic library has the duty, no matter how the disaster appears or influences the library, to safeguard and preserve its collection as the most important policy (Benedict *et al.*, 2020). Therefore, disaster management ensures the mitigation of disasters that occur unexpectedly in university libraries. Disaster management includes developing disaster recovery plans, reducing the risk of disaster, and implementing plans that hinge on disaster (Osawele & Akporhonor, 2022).

Similarly, in disaster management, some situations hinder the proper and smooth management of disaster in any organization, and the library is not exempted. Some of the problems encountered in disaster management in libraries include a lack of adequate facilities, inadequate fund allocation to libraries, and a lack of interest on the part of some librarians in disaster management issues (Echezona *et al.*, 2010, as cited in Olubiyo, 2023, p.7). Also, Tukur (2022) stated that there could be a number of obstacles hindering disaster preparedness in the libraries: their lack of funds for the disaster teams for training and purchase of adequate equipment for disaster preparedness, nonchalant attitude, and poor leadership. According to (Boatbil *et al.*, 2015 as cited in Abdullahi *et al.*, 2022), "*some of the challenges of disaster control are power supply, poor cooperative network, lack of funding, lack of security, lack of firefighting equipment, poor physical security presence and lack of fire/disaster drills for staff.*" On the other hand, the benefits of disaster training include but are not limited to an increase in the creation of disaster awareness, familiarity with disaster plans (where there is one), harmony among the disaster team, proficiency in handling print and digital materials, skills on ways to rescue lives trapped in the library, salvaging affected resources and evacuation of damaged material (Ilo *et al.*, 2019).

Finally, disaster management is a program that deals with risk reduction. It covers the system's preparation, support, and restructuring in case of any disaster. It is an unending process and by no means an end after a disaster hits a place (Olubiyo, 2023). In addition, libraries should take adequate measures to prevent disaster eruptions. Mistaken hazards or disasters in libraries can be avoided or mitigated through meticulous disaster planning. The plan should be occasionally monitored and reviewed (Saranya & Devi, 2021b).

Moreover, the research gap in the conduct of this study is significant for the universal amelioration of librarianship and the development of a complete and sustainable study, respectively. Therefore, the inquiry is a qualitative study that includes investigating the state of libraries in disaster preparedness and disaster management. In this study, participants are selected from academic libraries in Davao City. Also, this study will be conducted in Davao City because there is a lack of disaster preparedness and management plans among academic libraries in Davao City. But also, the adaptability, transitional process, and self-improvement of the library in disaster preparedness and disaster management during library disaster to deliver library services.

Also, there is a lack of research on the status of libraries in disaster preparedness and disaster management during library disasters in Davao City. This current research study may help libraries grasp that other applicable policies can be used to prepare for and manage library disasters. Indeed, this is a good opportunity to contribute to the discipline of librarianship. Besides, the unlikeliness of this study is unique because of the scope and implications of library preparedness and library management in the case of disaster. Hence, this research is justifiable because the issues library is significant in using different methods in disaster management and preparedness in librarianship.

Moreover, this study addressed the Sustainable Development Goals (SDG). Indeed, this study will address SDG 9, which is industry, innovation, and infrastructure, and SDG 11, which is sustainable cities and communities. This study aims to achieve these goals since disaster management will decrease economic losses and innovation, reduce vulnerabilities and risk, create a safe environment, and create a more resilient infrastructure.

Also, this study will address the purpose of determining the state of libraries in the Davao region in terms of preparedness and management of disasters during library disasters. Specifically, this study presents a unique perspective of the libraries towards disaster preparedness and management, challenges and difficulties faced by libraries, the coping mechanism of libraries in preparing and managing library disasters, and insight that this study's respondents can share. Moreover, the study is a qualitative study that will determine the similarities and differences of library experience in disaster preparedness and management and the readiness and response of libraries during a disaster.

Furthermore, the significance of the research findings will lead to a better improvement of libraries in formulating policies that will combat and tackle any disaster or crisis that would hinder library performance in the future. Not only that, but the

findings of this research will also provide the benefits of disaster preparedness and disaster management plans. In addition, the significance of this study would help libraries to prepare more against any future library disaster that would disrupt the operation and services of the library. Further, this study may also contribute to the body of knowledge in terms of the discipline of librarianship. In addition, this study will also be useful to future researchers and students of library and information science as it will provide them with helpful information when undergoing any form of research or learning activity.

The intention of this qualitative study is to design a collective study within the boundaries of libraries in the Davao region relating to the state of libraries' disaster preparedness and disaster management. Even though libraries are the study participants, chief librarians will be directly involved and included in the study. The participation of other stakeholders within the library, such as librarians, library assistants, library users, and other well-known library staff, would not be asked. Hence, this study is delimited to only selected libraries and chief librarians. Hence, these participants face challenges and difficulties during the library disaster and how they cope with these challenges caused by the disaster in their workplace. Hence, this study did not take an external perspective like that of professional organizations.

3. Materials and Method

3.1 Study Participants

In this phenomenological approach, the target study participants were eight (8) libraries. Specifically, eight (8) Chief Librarians/Head Librarians of the selected academic libraries were chosen since they had experience and agreed to participate in this study. Nevertheless, eight (8) sample sizes were adequate for data saturation for this study. Moreover, researchers could adopt 5-25 individuals who had experienced the same phenomenon for in-depth interviews, which was recommended (Creswell, 2006; Creswell, 2013). The appropriate data gathering and analysis method includes in-depth interviews, poems, documents, written anecdotes, philosophy, poetry, or art (Creswell, 2013; Law *et al.*, 1998).

This study utilized a purposive sampling technique to represent the intended study population better (Tenny *et al.*, 2017). Purposive sampling involves identifying and selecting individuals or groups of individuals who are especially knowledgeable about or experienced with the phenomenon (Cresswell & Clark (2011), as cited in Palinkas *et al.*, 2015, para 4).

In choosing the study participants, the inclusion criteria were established, and there were eight (8) Chief Librarians/Director of Libraries/University Librarian/Head Librarians/Officer-in-Charge of the Library from the eight (8) selected academic libraries in Davao City who have been working in that library for 5 years. An in-depth interview was conducted with the selected study participants from the academic libraries. Excluded from this study were academic librarians, library assistants, library users, other known

library staff, and library stakeholders. The withdrawal criteria were that the study participants could withdraw anytime they wanted to, especially whenever they felt discomfort physically, emotionally, socially, and mentally.

Furthermore, this study was conducted in Davao City, and the study participants were eight Chief Librarians from the eight (8) academic libraries selected from different universities and colleges in Davao City. In this phenomenological study, the selected academic libraries comprised both private and public institutions, respectively, to avoid bias. The selected academic libraries were Assumption College of Davao, Ateneo de Davao University, Davao Doctors College, Holy Cross of Calinan College, University of Immaculate Conception, University of Mindanao, Saint John Paul II College, and University of the Philippines Mindanao.

3.2 Materials and Instrument

An interview guide was utilized for this study and validated by experts before the design and procedure. The in-depth interview was a technique that was designed to obtain the informants' experience with the research topic. The collection of data was conducted after the ethics clearance from the University of Mindanao Ethics Review Committee (UMERC) and approval from the selected academic libraries in Davao City. The potential study participants were invited for a one-on-one interview, during which a letter of consent form was sent to them. Once the study participants had confirmed their participation in this research, an interview was scheduled.

A recorded in-depth interview was utilized in this study. The interview guide was used to determine the challenges, coping strategies, and insight into disaster preparedness and management. Also, the interview guide was validated by five (5) subject matter experts. After collecting the data from the participants, the data was transcribed from the audiotape and was analyzed using a thematic analysis. Indeed, the instrument used was a researcher-made in-depth interview guide, which was validated by five (5) subject matter experts and garnered an average of 8.2 with a description of good. Hence, the interview guide that was used is valid.

3.3 Design and Procedure

A phenomenology approach was utilized in this research study. This phenomenology approach collected data about the lived experience of librarians who experienced the phenomena of library disaster. Eight (8) Chief Librarians were thoroughly investigated. With this, there was an understanding of the phenomenon of this study, and data was analyzed from different situations. Phenomenology comes from social science and requires a researcher to enter an individual's life world and use the self to interpret the individual's (all groups') experience (Law *et al.*, 1998). Further, the target of the phenomenological approach was to understand the lived experience, the challenges, the coping mechanisms of this study, and the shared insight. A phenomenological approach describes the common meaning of the lived experience of a concept or a phenomenon of several individuals (Creswell, 2013).

Furthermore, the objective of this phenomenological research was to extract themes from the experience of the study participants and convert this experience to a description to understand the phenomenon and grasp insights that were shared about the phenomenon.

In conducting this research, there was a need for care, diligence, and sensitivity to the experience of these study participants. The key role of the researcher was to design, interview, transcribe, verify, report, interpret, and analyze. Further, the primary data for this study was an in-depth interview in the settings where the participants were convenient. In addition, to establish credibility, the researcher personally collected the data by visiting the different selected academic libraries where the librarians were interviewed. In agreement, the role of the researcher was to go into the field to make a description and understanding of both external observable behavior and internal state (worldview, opinion, values, attitudes, and symbolic constructs) (Patton, 2002).

3.5 Data Gathering Procedure

Before data gathering, an in-depth interview guide with questions within the study's parameters was developed. Experts validated this guide to ensure the viability of the expected results. After the validation process, the paper was submitted for peer review by the ethics board of the University of Mindanao Ethics Review Committee. Besides a friendly suggestion and recommendation from UMEREC, a final view of the manuscript and interview was drawn. Furthermore, a letter of request was sent to the office of the selected academic libraries in Davao City, asking for permission to conduct the study. Afterward, the permit to conduct the study was approved, and the researcher then proceeded to the selected academic libraries to interview the Chief Librarians of the selected academic libraries.

The main activity, which was conducting an in-depth interview, was prepared. The mood was first set to make it more comfortable for the study participants to converse. Further, it was explained to the study participants that this interview was developed to know the live experience and coping mechanism for library disaster. With this, the study participants were humbly asked for 30 to 40 minutes for an interview. Indeed, the study participants were requested to read the interview protocol, which clearly states that they have the freedom to participate and can withdraw at any time during the interview. Furthermore, after the study participants signed the interview protocol, data gathering began through one-on-one interviews with the study participants. Also, permission was requested from the study participants to make an audio recording and take notes. After the data was gathered, the study participants were informed that they were open to suggestions and recommendations if they had any further queries or additional answers. Finally, the in-depth interview was wrapped up. The duration of this study was 6 months.

Thematic analysis was utilized to analyze the collected data. Thus, thematic analysis identifies patterns or themes within qualitative data (Maguire & Delahunt, 2017). They further explained that a thematic analysis aimed to identify themes, which are

patterns in the data that are important or interesting, and use these themes to address the research or say something about an issue. Moreover, thematic analysis was used to determine the participants' lived experiences, challenges, and coping mechanisms for the research. Further, a thematic analysis would produce trustworthy and insightful findings. In line with that, the method of identifying, analyzing, and reporting patterns (themes) within data is a thematic analysis (Braun & Clark, 2006).

In this phenomenology study, trustworthiness was considered. Trustworthiness emphasizes the concept of validity and reliability of this qualitative research. Thus, validity and reliability were used to convey this research study's trustworthiness, authenticity, and credibility. Hence, to establish the trustworthiness of this study, four components were used as proposed by Lincoln and Guba, namely, credibility, dependability, conformability, and transferability (Stahl & King, 2020).

Further, credibility was highly considered in this study. The research adviser was consulted to conduct this study and gather data. A way to pursue credibility is to involve informants (tutees, tutors, or program coordinators from a writing center) in verifying researchers' interpretation after the fact (Stahl & King, 2020). Also, to establish credibility, the study participants were observed during data collection, especially during the actual interview, and no relevant data was excluded, and no irrelevant data was included. Further, proper checking, analysis, and interpretation of the collected data were performed, ensuring that it was accurately reflected. Credibility addresses the fit between respondents' views and the researcher's representation of them (Tobin & Begley, 2004, as cited in Nowell *et al.*, 2017, p.3). Moreover, dependability was taken into consideration for this qualitative study. To ensure dependability, a record of the translation, transcripts, and audio recordings of all the in-depth interviews conducted with the study participants was kept to ensure that all the data were accurate. To achieve dependability, the research process was logical, traceable, and documented (Tobin & Begley, 2004, as cited in Nowell *et al.*, 2017, p.3). Anticipation that there was a peer review in terms of dependability (Stahl & King, 2020). To establish confirmability, subjective opinions, assumptions, and judgments were avoided in order to avoid distortion of data. Stahl and King (2020) state, "*In this qualitative circumstance, it makes sense to aim for noninvolvement; the least researchers contaminate the pristine, natural environment*" (p.28). Thus, only the study participants' opinions shared during the interview were analyzed. To achieve transferability, a sufficient and rich description of the opinions of the study participants was gathered by interviewing the academic librarians in eight (8) different academic libraries to spot similarities between situations to ensure that the result of this study would be transferable to another context with sufficient details and accuracy. The sites that may wish to transfer the findings will remain unknown. Moreover, a thick description was provided so that those who seek to transfer the findings to their own site can judge transferability (Lincoln & Guba, 1985 as cited in Nowell 2017 p.3). Likewise, qualitative researchers maintain that patterns and descriptions from one context may be applicable to another. If one cannot learn from study extensions that might fit with a subsequent set of circumstances, the impact of the original study is limited (Stahl & King, 2020).

3.6 Ethical Consideration

This research study was conducted by adhering to the ethical protocols and guidelines set forth by the University of Mindanao Ethics Committee (UMERC) under Protocol Number 2024-206. For ethical consideration of this study, the privacy and confidentiality of the study participants were kept private and confidential. With this, the Republic Act 10173 Data Privacy Act of 2012 was adhered to. Furthermore, data gathering was conducted individually and was managed privately. Hence, an interview guide questionnaire and an audio recorder were assigned, and the study participants' identities were kept hidden. Also, the data collected from the informant was kept confidential, and the interview guide questionnaire and audio recorder were kept secret. In addition, the study participants were informed that the study would protect them from any physical, psychological, emotional, legal, financial, or social harm. Not only that, but the outcome obtained from the study participants was also not shared but kept confidential. The participation of the study participants was solely based on voluntary participation. The study participants had the free will to withdraw from this study without any form of consequence, and they would not be harmed because of their participation and non-participation in this study after fully knowing the purpose of this study. This study was conducted with formality and adherence to the ethical standards. Hence, a letter was sent to the Chief Librarian of the selected academic libraries beforehand since they are the head of the academic library asking for permission to conduct the interview. The research was conducted after approval was obtained from the selected academic libraries. The study participants gave their consent to conduct the interview and were fully aware of the process. The interview guide questionnaire for this research was noticeably clear and comprehensive. Thus, the study participants understood the purpose of this study. This study did not involve any risk that the population may experience in physical, psychological, social, or economic concerns and other issues; in addition, the rights of every individual were protected and secured.

Moreover, plagiarism was avoided, and those correct and accurate ways of citing ideas from other writers and scholars were fully observed. To do this, this study underwent grammatical and plagiarism checking. Furthermore, the researcher avoided any form of fabrication by ensuring no made-up tales from the literature reviewed. Thus, all information presented was carefully written and cited. Not only that, but the information sources that were used are from reliable journals and other scholarly works. In addition, falsification and misrepresentation of works were avoided as this study complies with the citation procedure set forth by the American Psychological Association (APA). Thus, the data and information obtained were presented in the most precise way of writing.

Furthermore, this study did not use any form of deceit or dishonesty to harm the respondents' welfare. In addition, all information written was checked and validated by a panel of experts. Further, there was no conflict of interest in conducting this study, whereas this study was strictly professional and had no set of conditions. Moreover, the researcher is not familiar or acquainted with the study participants to avoid potential

conflicts of interest. In addition, this research considered the authorship qualification in conducting this research. Further, the researcher, together with the help and guidance of the research advisor, will have substantial input to the concept and design, gathering of data, analysis, and interpretation of data. Moreover, the researcher and the research advisor will collaboratively draft and revise the article for significant intellectual content.

4. Results and Discussion

4.1 Challenges Encountered During Disaster and Disaster Preparedness and Management

In view of the challenge that could be shared in enhancing disaster preparedness and management in the library, four essential themes have been developed, as shown in Table 3. They are as follows: Inconvenienced patrons, Stressed librarians, Damaged Property, and Lack of resources. These challenges represent the libraries' lived experiences, which the study participants shared. Table 3 presents the emergent themes and the significant statements.

Table 1: Essential Themes and Significant Statements on the Challenges/
Difficulties Faced in Library Disaster/Disaster Preparedness and Management

Themes	Core Ideas
Inconvenienced Patrons	• The COVID-19 pandemic increased the use of online resources as students were forced to study at home (L1)
	• When an earthquake hit, everyone was ordered to vacate the library (L2)
	• Users experience frustration and inconvenience when libraries are closed after a disaster (L8)
	• The library management system could not be accessed, and user data was lost; students could not be given clearance (L5)
	• Students' access to the library is disrupted, which increases dependence on online resources (L6)
	• During an earthquake, students were asked to duck, cover, and hold before evacuating the library (L1)
Stressed Librarian	• Staff experienced increased stress and workload after a disaster due to cleaning and salvaging resources (L7)
	• Panic is initially felt during an earthquake, but the staff eventually apply what they learn from drills (L3)
	• Due to a technological disaster, the library and IT support team became confused and blamed each other (L5)
	• Disaster and management protocols are being taken for granted (L5)
	• A student tried stealing a book from the library (L2)
Damage to Property	• When the roof leaked due to heavy rainfall, some collections were affected (L4)
	• During a water leak, biology books were damaged even though they were dried by air conditioning (L7)
	• During an earthquake, some bookshelves toppled over each other (L4)
	• A fire outbreak happened in the library due to a defective ceiling fan (L5)
Lack of Resources	• Lack of funds to implement a comprehensive disaster plan (L6)
	• The library has no fixed budget for disaster and preparedness (L2)

	<ul style="list-style-type: none"> • We face financial constraints and a lack of staff ((L5)
	<ul style="list-style-type: none"> • One challenge we face is funding limitations; no money to fix the library ceiling (L6)
	<ul style="list-style-type: none"> • Constrained budget for infrastructure upgrade and staff training (L7)
	<ul style="list-style-type: none"> • When a member of the disaster action team resigns (L3)
	<ul style="list-style-type: none"> • Lack of training on emergency response procedures (L8)
	<ul style="list-style-type: none"> • Not all books in our collection are digitized (L2)

4.1.1 Inconvenienced Patrons

This is the first theme that the study participants shared. Most participants stressed that their patrons experienced disruptions in library services whenever the library experienced a disaster, restricting access to library resources. Hence, these are the responses that the study participants shared.

Participant 1 said:

“The disaster affected library staff by forcing them to work from home. The disaster negatively impacted the library, especially students who were writing theses because they could not make use of the library resources. Still, the library has online resources that help students use the library and access it.”

“The disaster forced library staff to work from home, negatively impacting the library, especially for students drafting their thesis who could not access physical resources. However, the library’s online resources have been helpful for students to continue their research and access necessary materials.” (IDI_L1)

Similarly, Participant 8 said:

“Library staff often view disaster as significant challenges that can disrupt normal library operations, damage collections, and affect the overall functioning of the library. They are responsible for implementing emergency response plans to ensure that services are continued. The users may experience frustration and inconvenience when libraries are closed, or services are limited during a disaster.”

“Library staff often view disaster as significant challenges that can disrupt normal operation, damage collections, and affect the overall functioning of the library. They implemented emergency response plans to ensure that services continued. Users may experience frustration and inconvenience when libraries are closed or services are limited during a disaster.” (IDI_L8)

The study participants' narrative statement shows that patrons experience interruption or difficulty accessing library resources during library disaster. This could cause frustration among library users as disaster has made it impossible for them to use the library. Furthermore, when disaster hits the library, and it shuts down its physical

building, there is overdependence on online resources that some library users cannot access due to connectivity and the digital divide. During the pandemic, library services became virtual, and this caused a hindrance to some patrons who had no internet connectivity or computer devices such as laptops or computers (Tsekea & Chigwada, 2021).

Also, patron and staff interaction during the COVID-19 pandemic was restricted due to the social distancing rule. Some library functions were kept on hold during the lockdown despite the difficulties of internet connectivity and computer facilities since some library services could not thrive in an online environment (Chisita & Chizoma, 2021). Likewise, after an earthquake shook New Zealand in 2016, the Victoria University of Wellington library was affected, which made academic staff request primary materials since it was a key research time. This earthquake caused severe inconvenience because the National Library of New Zealand and the National Archive of New Zealand closed due to this disaster (Missingham & Fletcher, 2020).

4.1.2 Stressed Librarians

The second theme most participants revealed is that librarians go through a lot of stress and work overload because of library disasters. Library disaster affects not only the users but also the library staff since it gives the librarians excess workload and disrupts their daily routine in the library, causing frustration. This theme is particularly important because the study participants stressed how frustrating library disasters can be for them. A noticeable response from the study participants.

Participant 7 said:

“From the library staff’s perspective, disaster can significantly impact operations and services. Staff members may face challenges in ensuring the safety of patrons and themselves during emergencies and protecting valuable library collections and infrastructure. Additionally, staff may experience increased stress and workload as they work to address the aftermath of a disaster, including cleaning damage, calling for salvage materials, and restoring operations. Overall, disasters can disrupt library operations and services, posing challenges for staff and users alike. However, effective disaster preparedness and management strategies can help me get the impacts and facilitate the timely recovery of library operations to better serve the community’s needs.”

“From the perspective of library staff, disasters can significantly impact operations and services. Staff members may face challenges in ensuring the safety of patrons and themselves during emergencies and protecting valuable library collections and infrastructure. Additionally, staff may experience increased stress and workload as they work to address the aftermath of a disaster, including cleaning up damage, salvaging materials, and restoring operations. Overall, disasters can disrupt library operations and services, posing challenges for staff and users alike. However, effective disaster

preparedness and management strategies can mitigate these impacts and facilitate the timely recovery of library operations to serve the community's needs better." (IDI_L7)

The above narrative gives a detailed response to how library staff are stressed and exhausted because of the library disaster. Whenever a disaster hits the library, the librarians experience increased stress and workload due to the aftermath of the disaster. Many libraries were well-equipped during the pandemic to support remote work; however, the librarians' workload increased with the sudden transition to remote access. This burden, combined with the challenges of relying on and expanding technological infrastructure, caused many librarians to be left feeling overwhelmed (Fitzgerald *et al.*, 2023). They further stated that during a pandemic, although library staff were referred to as essential, at the same time, library staff were experiencing furloughs, uncertainty, increased workloads, and fatigue.

4.1.3 Damage to Property

This is the third theme extracted from the data analysis. It brings to light that damage to library property is inevitable whenever the library is struck with disaster. Library disasters not only affect the library's human aspect but also the library's treasured resources, such as library collections and all other library resources, which can hinder library services. This is some of the feedback from the study participants during the in-depth interview.

Participant 4 said:

"The library was not that prepared; however, after the earthquake, the library had to put brackets on the shelves, which are made of two or three shelves to be connected so that whenever an earthquake occurs, they will not fall, unlike before. Also, due to the flood, the library makes sure that their collections start on the second floor. However, the second floor is primarily where the library's main collection is kept on the third floor is to be safe from flooding. Also, we had to change the building roof for the first time in 1984."

"The library was not well prepared initially. However, brackets were installed after the earthquake to connect the shelves, ensuring they remained stable during future quakes. Additionally, due to flooding, the library has started its collection on the second floor, primarily in your reading area. In contrast, the main collection begins on the 3rd floor to protect it from floodwaters. The building's roof was also replaced for the first time in 1984." (IIDL_L4)

Similarly, Participant 7 said:

"We have experienced an earthquake before. The laboratory had a water leak earlier this year, and our biology books got wet. As librarians, we let them dry with the air conditioner, but the books were damaged."

“We have experienced an earthquake before. Earlier this year, there was a water leak in the laboratory, causing our biology books to get wet. We tried to dry them using air conditioning as librarians, but my body books were significantly damaged.” (IDI_L7)

The responses from the study participants reveal that library disaster can cause destructive measures to the library by damaging its collections and other resources. When libraries face disaster, they face difficulties when it comes to protecting their collections, as these collections are valuable to libraries. A qualitative approach was taken by Rachman (2020) to library disasters; either natural or human-caused disasters still threaten the collections and services of libraries. In addition, library collections are threatened by earthquakes and floods, and the collections and services are also threatened by human vandalism and problems arising from unstable electricity power supplies and hardware and software malfunctions.

4.1.4 Lack of Resources

This is the fourth theme derived from the data analysis. Resources are significant when libraries are trying to prepare for or manage disasters. Without resources, libraries will be defenseless against library disasters, and mitigating disasters would seem impossible. Hence, these are some of the responses recorded by the study participants.

Participant 5 said:

“Some of the challenges we face are financial constraints. Also, the disaster management plan proposal will be difficult to implement because I have to present it first to the library committee.”

“Some of the challenges we face include financial constraints, a lack of staff, and time-consuming processes. Additionally, implementing the disaster management plan will be difficult because I need to present it to the library committee first.” (IDI_5)

Similarly, Participant 2 said:

“One of the challenges we face is budgeting because the library has no fixed budget; delivery only gets phoned in whenever a request is made. We also lack multiple exit doors and staff to implement an evacuation plan.”

“One of the challenges we face is budgeting, as the library has no fixed budget and only receives funding upon request. Additionally, we lack multiple exit doors and sufficient staff to implement an evacuation plan.” (IDI_L2)

Also, Participant 3 said:

“Some challenges we face are the budget for training staff, medical kits, or emergency kits. Another challenge we faced was the resignation and orientation of new staff. Finally, we have challenges when using the fire extinguisher.”

“One of the challenges we face is budgeting, as the library has no fixed budgets and only receives funding upon request. Additionally, we lack multiple exit doors and sufficient staff to implement an evacuation plan.” (IDI_L2)

This narrative from the study participants reveals the challenges libraries face when there is a lack of or limited resources to prepare for and manage a disaster. Resources such as adequate funding, staff, and facilities are necessary when preparing for and managing disaster. Without these resources, disaster preparedness and management are challenging tasks to achieve. Lack of sufficient facilities, inadequate funds allocation to libraries, and lack of interest on the part of some librarians in disaster management issues are some of the problems data encountered in preparing and managing disasters (Oyeniran, 2023). Similarly, Ilo *et al.* (2019) found that the main challenges facing disaster training include inadequate facilities, equipment, and lack of funding.

In addition, adequate equipment, facilities, and infrastructure like fire extinguishers, smoke detectors, fire alarms, E-resources backup, solar power systems, and temperature are necessary to prevent major loss of library collections in case of disaster (Nongrang & Khongtim, 2021). Also, adequate funding is essential for the proper management of disasters. This will deal with disasters and provide periodic maintenance to library facilities (Adadu & Ianna 2019). In addition, conducting training, mock drills, simulations, and exercises will prepare library staff for any disaster (Nongrang & Khongtim 2021).

4.2 Coping Mechanisms of Libraries

In light of how libraries cope with disaster preparedness and management challenges, four essential themes are reflected in Table 2: preserving the collection, ensuring the safety of patrons, following emergency protocols, and rapid recovery of library services. Further, these libraries' experiences represent challenging realizations they could share, disclose, and reveal to other libraries. Moreover, coping with any challenges and difficulties will feel overwhelming. Indeed, our coping mechanisms will help us prepare for any library disaster. The coping mechanism is backed up by the Protection Motivation Theory PMT (Roger, 1975), one of the theoretical frameworks given to support this study, based on two key components: threat appraisal and coping appraisal. The threat appraisal evaluates a situation's danger level and severity, while the coping appraisal examines the ability to respond.

The table also displays the significant statements from the transcript of participants' responses to their coping mechanisms during the in-depth interviews.

Table 2: Essential Themes and Significant Statements on the Coping Mechanism of Librarians

Themes	Core Ideas
Preserving the collection	• Implementing the digital preservation initiative (L8)
	• Just involved in the digitalization of our library resources (2)
	• A comprehensive approach to ensure the safety of collection (L6)
	• Libraries need to preserve their collection (L4)
	• Strategies, plans, and actions to safeguard the library collection (L8)
	• E-resources is a good tool for disaster preparedness (L1)
Ensuring the Safety of Patrons	• Make sure every exit is free and easy to pass, with multiple exits (L1)
	• Have a spacious exit area to avoid a stampede (L3)
	• Ensuring the safety of patrons in times of disaster (L6)
	• Librarians would instruct students on exit pathways and evacuation areas (L3)
	• University student council help in disseminating information (L1)
	• When there was an earthquake, we checked all areas of the library so that no student was left behind (L7)
Followed Emergency Response Protocols	• Implemented what we learned from the drills (L1)
	• The school established a Disaster Action Team (L3)
	• The library is prepared in terms of medical kits (L3)
	• Conducted risk assessments to identify potential threats (L7)
	• Follow the school management plan for disasters(L5)
	• Regular staff training sessions and drills (L7)
	• Have our own disaster management and recovery plan (L4)
Rapid Recovery of Library Services	• Providing remote access to digitalized materials (L2)
	• Dedicating effort to recover, restore, and swiftly resume normal functioning (L7)
	• Maintain the continuity of services during and after a disaster (L6)
	• Proactive communication is crucial, maintaining open channels for staff (L7)
	• Made announcements in social media and emails to prepare for disaster (L1)

4.2.1 Preserving the Collection

Preserving the collection is the first major essential theme that occurred. It was common among the study participants that they shared the preservation method the library engages in as a way of coping. It is not just the library’s experience but also the management plan in which the library and the parent institution are involved. Hence, the study participants are very assertive when sharing their experiences. Thus, these were noticeable in their response as they disclosed.

Participant 8 said:

“Implement the digital preservation initiative, continue evaluation and improvement. We participated in fire drills and earthquake drills conducted by the university.”

“We are implementing the digital preservation initiative and continuously evaluating and improving it. Additionally, we participated in the University’s fire and earthquake drills.”
(IDI_L8)

The shared narrative of the study participants shows that the selected academic libraries have a better way of coping with the challenges faced with disaster preparedness

and management, as we can see in their answers that they have an effective way to meet the challenges. Most academic libraries are ready to combat the challenges they have faced in disaster preparedness and management. Academic libraries will achieve two main objectives by implementing preservation measures: supporting the institution's teaching and research objectives and ensuring the long-term usability and availability of essential library collections (Abdullahi *et al.*, 2022). They further stated that libraries prioritize the long-term preservation of their collections, ensuring that materials remain accessible to users over time. However, library items inevitably deteriorate due to usage and potential disaster. Hence, there is a need to preserve these valuable resources. Digital preservation incorporates a range of strategies aimed at safeguarding access to digitally stored information over time. Various methods have been developed to achieve this and protect digital access, including migration, emulation, refreshing, encapsulation, and replication (Ilo *et al.*, 2019). Focusing on preserving significant collections should be a disaster management priority with exceptional value because of their uniqueness and historical, cultural, or aesthetic importance. It is placeable due to its rarity, significance, or monetary worth (Brown & Ianna, 2019).

Moreover, the protection of cultural and historical heritage is handled by University Librarians to prevent disruptive incidents is a great effort by taking a broader view, building organizational resilience and staff emotional intelligence, especially the front liners that will respond to any emergency the library may face (Garnett, 2019). The author further argued that the custodians of the past are university librarians.

4.2.2 Ensuring the Safety of Patrons

This is the second theme extracted; it was revealed that safety is one coping mechanism the library employs. The library should provide safety measures for patrons and staff, provide a safe environment, and ensure that exits are free from all risks or blockages. Due to the challenges libraries face in disaster preparation and management, guaranteeing the safety of patrons is one of the tools libraries use as a coping mechanism in disaster management. Whenever a disaster strikes, libraries make sure that their number one priority is the safety of their patrons before anything else. Participant 1 said:

“The library was prepared for the disaster. The library managed it due to the use of signage that pointed to the exit. We make sure that every exit is free and easy to pass; the library has multiple exits. We also have fire extinguishers and fire hydrants in case of fire.”

“The library was well prepared for the disaster. Effective signage pointed to the exits, ensuring everyone could find their way out easily. We made sure that all the exits were clear and unobstructed, with multiple exits available. Additionally, the Library was equipped with a fire extinguisher and fire hydrant in case of fire.” (IDI_L1)

Participant 3 similarly said:

“Some of the opportunities I see are a need for more medical kits in the library, more designated exits for emergencies, and the need to be spacious and not narrowed and have white stairs to avoid stampedes. Also, the staff will need more training.”

“Some opportunities I see include the need for more medical kits in the library and additional designated emergency exits. These exits should be spacious, not narrow, and have wide stairs to prevent stampedes. Additionally, the staff will require more training.”
(IDI_L3)

The study participants' response reveals that it also pertains to how libraries safeguard their patrons in the event of a disaster. Library staff should prioritize the safety and well-being of people over the protection of materials in the face of potential library emergencies, taking proactive measures to mitigate harm while awaiting the arrival of emergency responders. This includes ensuring the evacuation of patrons and staff as human safety takes precedence over the preservation of library collections (Chiderah & Iroeze, 2021). Prompt action is necessary to address a disaster. The response process consists of two phases: early response and late response. The early response phase, which includes critical activities like search and rescue operations and emergency relief efforts, aims to lessen the disaster impact and set the stage for effective recovery management in the subsequent phase (Abdullahi *et al.*, 2022).

4.2.3 Followed Emergency Protocols

This theme is the third theme extracted from the data analysis; it shows how the library implements some of the procedures, programs, and protocols they developed as a coping tool to battle the challenges of disaster preparedness and management. This theme reveals how important it is to have a disaster preparedness plan. Implementing these programs, procedures, or protocols could guarantee the safety of library patrons and staff and protect the collections of library resources.

Participant 3 said

“The implementation of DAT training and the adaptation of programs set by the University Health and Safety Office.”

“Implementing Disaster Action Team (DAT) training and adopting programs set by the University Health and Safety Office.” (IDI_L3)

Participant 5 also said:

“Some of the programs used to follow the school management plan for disaster, and we'll just follow the school disaster plan for the library.”

“Some of the programs involved following the school’s disaster management plan, with the library adhering to the school’s disaster plan.” IDI_L5

The study participants' responses show that most libraries follow and implement emergency protocols set by either their parent institution or the library itself. The study participant response shows that by implementing emergency protocol, the library can cope with disaster preparedness and management challenges. This theme shows that libraries are not vulnerable but have the tools to cope with the challenges of preparing for and managing disasters.

Disaster safety measures would be brought together when implementing an emergency disaster plan with the guidelines and provide a comprehensive approach to ensure a safe environment. Following the emergency plan can foster a safety culture, reducing risk and promoting a more secure climate (Kuzucuoglu, 2022). The author further stated that all library staff should participate in regular emergency and disaster drills to ensure preparedness. Additionally, library staff should establish a communication network by sharing phone numbers and addresses. Lastly, to enhance readiness, the following measures should be taken, create and display an emergency evacuation floor plan in the library, familiarize all library personnel with the location of primary and secondary evacuation exits, emergency assembly point, fire extinguisher, and emergency evacuation exits within the facility.

Establishing a disaster team is crucial, as it comprises individuals with diverse roles and responsibilities to respond to disasters effectively. This team should be led by a designated disaster coordinator who oversees all aspects of disaster management, including prevention, preparation, response, and recovery. Having a coordinated team ensures a comprehensive and efficient approach to managing disasters (Brown & Ianna, 2019). The library must create a robust disaster control plan and periodically conduct extensive simulated drills to evaluate and refine its response strategies to ensure readiness in the face of disaster (Bansal, 2015, as cited in Oyeniran, 2023, p.29).

Whenever the Library assumes a disaster response role, librarians experience discomfort when taking up these responsibilities. Disaster-related tasks may resemble the day-to-day library routine, but they fall out of the scope of the normal Library daily operation. To mitigate these discomforts and ensure an effective response, librarians need to participate in emergency management planning, processes, and programs. By involving librarians, roles and strategies for serving the local community during crises are enabled (Mabe & Ashley, 2019).

4.2.4 Rapid Recovery of Library Services

This is the fourth theme derived; most participants revealed that libraries need to keep providing services to their patrons no matter the circumstances. Indeed, library disasters affect not only libraries but also library users. Also, disasters can indeed affect the day-to-day operations of libraries, which is why libraries need to be prepared to manage such

disasters. Indeed, these were evident in the study participants' responses as they shared.

Participant 1 said:

"The programs and announcements are very effective because a university student council represents the students and will also help disseminate the information."

"The programs and announcements are remarkably effective because the university student council, representing the students, also helps disseminate the information."
(IDI_L1)

Similarly, Participant 6 said:

"Our library uses the Drive True system, regular earthquake and fire drills, and infrastructure improvement."

"Our library utilizes the drive-through system (a system where students can borrow books through appointments by clicking on the home link of the library page and booking an appointment), conducts regular earthquake and fire drills, and implements infrastructure improvements." (IDI_L6)

Also, Participant 2 similarly said:

"The practice of digitalizing every book is one of our strengths because the resources can be accessed even if they are damaged. The weaknesses are that there is only one exit door and a lack of electronic resources. Also, come on, not all books in our collections are digitalized."

"One of our strengths is digitalizing every book, allowing access to resources even if damaged. However, a weakness is that there is only one exit door and a lack of electronic resources. Additionally, command, not all books in our collection are digitalized."
(IDI_L2)

The study participants' responses showed that most of the academic libraries shared their sentiments about the rapid recovery of the library. Indeed, the study participants showed that even with disaster preparedness and management challenges, they are still prepared to provide library services to their patrons, even going as far as using technology. This use of technology to continue providing library services aligns with the theory given to support this study, which is the innovation theory by Roger (1983).

A guide that was drafted by the Australian Library and Information Association (ALIA) on disaster management stated that during the recovery phase, one key aspect is the gradual restoration of regular library services, aligning with the library's operational

capacity and ability to provide access to physical and digital collections. This process involves keeping users updated on available services, communicating opening hours and offering special support to communities impacted by the disaster (Brown & Ianna, 2019). They further argued that recovery entails a series of measures to mitigate the impact of a disruption and restore services to a state of normalcy as closely as possible to ensure continuity and minimize prolonged effects.

Furthermore, during the post-disaster recovery, Librarians perform specific functions to help the library recover, such as supporting research by providing access to literature, assisting in publication efforts, and collecting and analyzing data on the disaster, which can be used to improve future responses. They can help contribute to future disaster preparedness and response by documenting lessons learned (Nwafor-Orizu & Obiozor-Ekeze, 2024).

4.3 Insights Shared for Disaster Preparedness and Management

In view of the insights that can be shared in enhancing disaster preparedness and management in the library, three essential themes have been developed, which are shown in Table 3. They are as follows: Build alliances with local partners, strengthen disaster risk governance, and fortify institutional-based disaster preparedness. These insights represent the libraries' learning experiences, which they wish to continue applying and sharing with other libraries. These insights can serve as valuable knowledge and guidance for all types of libraries in the community. Table 3 presents the emergent themes and the significant statements.

Table 3: Themes on Insights for Insights into Disaster Preparedness and Management

Themes	Core Ideas
Build Alliances with Local Partners	• Secure grants for funding resilience-building initiatives (L7)
	• Build partnerships with local emergency services (L6)
	• Stay compliant with evolving regulations on DRRM (L7)
	• Coordinate with local government agencies for rescue and first aid training (L3)
	• There should be a unified disaster preparedness plan among libraries (L5)
	• Partner with the Bureau of Fire Firefighters for drills (L2, L4)
	• Collaborate with DRMC when they announce national drills (L1)
Strengthen Disaster Risk Governance	• A key priority is risk assessment before a disaster plan (L3)
	• Create a disaster preparedness and recovery plan for libraries (L8)
	• Investing in digital infrastructure and training staff (L6)
	• Subscribing to cloud storage to preserve the library collection (L2)
	• Leverage technology such as sensors, monitoring systems, and digital preservation (L7)
Fortify Institution-Based Disaster Preparedness	• Invest in resources like waterproof shelving and protective cover for books (L7)
	• Improve disaster preparedness manual and implement them (L5)
	• Exit signs should be improved and more visible to students (L1)
	• Library users should be given disaster preparedness orientation (L6)
	• Disaster action team should coordinate with the university safety office(L3)
	• Being mindful of announcements and guidelines from local agencies (L4)
	• Develop a robust communication strategy for staff and patrons (L6)

	<ul style="list-style-type: none">• Have an online bulletin board online for disaster response (L3)• Go paperless for the safety of the library collection during a disaster (L2)
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4.3.1 Build an Alliance with Local Partners

This is the first theme extracted from the data analysis; the study participants commonly shared this theme. Thus, the study participants believe there is a need to align, collaborate, and build partnerships with agencies in their community. These were evident in the feedback the study participants shared.

Participant 5 said:

“Collaborating and partnership would lessen the effect of disaster. The partnership with DACUN will lessen the effect of disasters.”

“Collaboration and partnership can lessen the impacts of disasters. Specifically, partnering with DACUN (Davao Colleges and Universities Network) will help mitigate the effects of such events.” (IDI_L5)

Similarly, Participant 6 said:

“Collaboration with other libraries, local emergency services, and disaster response organizations can enhance resource sharing, provide additional expertise, and improve overall resilience.”

“By partnering with other libraries, local emergency services, and disaster response organizations, we can leverage shared resources, tap into specialized expertise, and collectively enhance our resilience to disasters and emergencies.” (IDI_L6)

Based on the study participants' responses, libraries need to partner with agencies outside their parent institution. From their responses, building an alliance and collaboration will help strengthen library disaster preparedness and management. The library needs to partner with the Bureau of Firefighters to combat any library fire and learn how to use a fire extinguisher; partnering with the city or local government can help the library perform regular earthquake drills to equip them whenever an earthquake strikes also, collaborating with other libraries can provide them with new information that could help develop a proper disaster preparedness and management plan.

The library disaster management strategies and plan should be aligned with and reference relevant local, state, and national emergency laws, regulations, and plans, as well as coordinate with external agencies and services, including municipal, state, and national emergency services, fire service departments and other local and national infrastructure and services (Brown & Ianna, 2019). Collaborations across different sectors, such as public-private partnerships, play a crucial role in disaster management. This is because disaster recovery necessitates the collective effort of various community sectors.

As disasters are inherently local, the affected municipalities are responsible for responding to them, making cross-sector partnerships essential for effective disaster management (Kobashi *et al.*, 2022).

4.3.2 Strengthen Disaster Risk Governance

This is the second theme derived from the data analysis; it was a common response from the study participants that they disclosed their views that strengthening the library disaster risk governance is a key to improving the library's existing disaster preparedness plan, program, or protocol for the library. Indeed, by maintaining the library's existing disaster preparedness and management plan, the library will be equipped with the necessary tools to manage library disasters if or when they occur. These were manifested in the study participants' responses, as they revealed.

Participant 8 had this to say:

"My recommendations are training and capacity building, policy development, and continuity planning."

"I recommend focusing on training and capacity building, policy development, and continuity planning." (IDI_L8)

Participant 5 also said

"My recommendation is that other libraries should give priorities to disaster preparedness, they should plan for disaster preparedness and libraries should share their experiences for improvement and protection."

"My recommendation is that other libraries should prioritize disaster preparedness. They should develop comprehensive disaster preparedness plans and share their experiences to foster improvement and perfection." (IDI_L5)

Based on the feedback of the respondents. This indicates that it is still necessary to strengthen library disaster preparedness and management plans. In addition, the responses show that libraries should invest in digital infrastructure, train library staff, and focus on risk assessment. All these will enable the library to prepare and develop a reinforced disaster preparedness and management plan. The study participants' responses show that libraries need to focus on various aspects and modern aspects of developing a disaster and management plan.

It is crucial for the library to have proactive plans in place to mitigate the impact of a disaster. For instance, in the event of a fire, the library should be equipped with enough fire extinguishers and strategic locations in the library, and staff should receive training on how to effectively use them (Aina, 2004 as cited by Chiderah & Iroeze, 2021). When conducting a risk assessment, it is essential to engage staff members, particularly

those with experience and longstanding tenures, as they possess valuable insights about past events and incidents, making them a crucial source of information for identifying potential risks (Brown & Ianna, 2019).

Libraries should be equipped with the necessary tools to prevent and respond to disaster, including fire extinguishers, fire alarms, water sprinklers, smoke detectors, first aid kits, and clear signages, including “You are here” maps. By having these essential resources available, the library can reduce the risk of disaster and ensure a prompt and effective response (Chiderah & Iroeze, 2021).

4.3.3 Fortify Institutional-based Disaster Preparedness

This is the third theme extracted from the data analysis; most participants stressed that this theme can also be an instrument for promoting and influencing policymakers about the necessity of a disaster preparedness plan. This theme educates libraries and their parent institutions about modern library disasters, which can encourage them to have an institutional-based disaster preparedness plan and assist libraries in preparing for any kind of library disaster. The study participants' responses manifested these as they shared.

Participant 6 said:

“Some of my recommendations are regular updates and ensuring disaster plans are regularly reviewed and updated. Also, public education, educating patrons about disaster preparedness and how to access library services during emergencies. He also has communication skills, developing robust communication strategies for staff and patrons.”

“Some of my recommendations include regularly updating disaster plans to ensure they are reviewed and revised consistently. Additionally, public education is crucial; patrons should be educated about disaster preparedness and how to access library services during emergencies. Housing communication by developing robust strategies for staff and patrons is also essential.” (IDI_6)

The study participants' responses indicate a need to improve and fortify institutional-based disaster preparedness. Also, in line with fortifying disaster preparedness, the library should function as a communication hub for the staff and patrons. This will enlighten both the staff and patrons, keep them aware of all necessary information on library disasters, and further create awareness of how to handle them. The library and the parent institution are responsible for fortifying institutional-based disaster preparedness.

For instance, university libraries in Southern Nigeria have implemented various disaster prevention strategies, including creating a comprehensive disaster preparedness plan, conducting vulnerability analysis and risk assessment to identify potential threats, regularly backing up the library website to prevent data loss, providing staff training and awareness programs to emphasize the importance of safeguarding document against

disaster. These proactive measures aim to mitigate the impact of disasters and ensure the preservation of library resources and services (Echezona *et al.*, 2010, as cited in Oyeniran, 2023, p.9). According to the Australian Library and Information Association (ALIA), libraries are crucial in facilitating communication and information sharing after a disaster. By utilizing social media and other online platforms, they can provide essential updates, connect people with vital resources, and serve as a trusted source of information. The Yarra Plenty Regional Library Services' response to the Victorian bushfires, which included setting up a wiki to share critical information, is a prime example of this approach in action (Brown & Ianna, 2019).

Institutional-based disaster preparedness is important because it actively assists in building warning systems in schools and provides evacuation routes, emergency equipment, training, and continuous simulation of disasters. Further, it familiarizes students with the strategic steps to take during a disaster. (Pranata, *et al.*, 2020). Also, it will equip students with the knowledge and skills to mitigate the impact of disasters (Patel *et al.*, 2023). Institutional disaster training will significantly reduce the costs of damage caused by the disaster, and student involvement can be valuable in disaster response, prevention, and mitigation (Patel *et al.*, 2023).

5. Implications for Practice

The findings of the analysis have significant implications for how academic libraries practice disaster preparedness and management. Libraries need to have a superbly detailed policy or plan on how academic libraries must practice disaster preparedness and management in a quality standard. Further, from the shared narratives of the study participants, it was significant for them to have different preparation and management techniques when facing the current situation.

Moreover, libraries need to prioritize developing a feasible disaster management plan. This disaster management plan should incorporate these four stages: prevention stage, preparation stage, response stage, and recovery stage. To ensure comprehensive disaster preparedness and response, it is recommended that libraries and librarians undertake the following during the prevention stage: conduct regular risk assessments, inspect the library for threats, and eliminate vulnerabilities. In the preparation stage, develop a disaster plan that includes training a disaster team, appointing a team leader, creating a command structure, collecting and keeping staff emergency contacts confidential, securing emergency equipment and supplies, obtaining insurance, and documenting all library resources. During the response stage, activate the disaster plan, take proactive measures to prevent further damage, and direct the designated staff. Finally, in the recovery stage, clean affected areas, salvage damage, meet with the disaster team for evaluation, replenish disaster supplies, and promptly resume normal library services.

In addition to the disaster management plan, partnerships with local agencies such as the fire brigade, city government, and other academic libraries should also be part of

the disaster plan. This is because these agencies provide new information and insights on how libraries should go about managing disaster, especially during the disaster response stage, where the mock drills and training of these agencies come into play, and the recovery stage, where information can be shared on how other libraries overcame their disaster.

Furthermore, libraries should invest in Information Communication Technology (ICT) and digital infrastructure. These are some of the practices libraries can incorporate. Investing in ICT and digital infrastructure will be a great advantage to the library disaster management plan; this can foster the resumption of library services and give the library a backup for its resources. Also, the library should ensure that all staff members are on the disaster management team and have continued training and mock drills on library disasters.

Also, libraries should invest in building infrastructure like earthquake-resistant buildings or retrofitting library buildings. This will either assist the library to withstand earthquakes, strengthen the library building, and increase the seismic resistance against earthquakes. Further, infrastructures like shelves in the library should be fixed to the floors and walls to avoid toppling and damaging shelves. By carrying out this action, patrons will be safe from shelves toppling on them during earthquakes or tremors. In addition, libraries need to make repairs to their buildings, such as repairing leaking roofs, busted pipes, or leaking HVAC systems, to prevent flooding. Also, libraries need to relocate their materials to the upper level to prevent the destruction of materials in case of flooding.

Therefore, academic libraries in Davao City should develop and implement a well-structured disaster plan and invest in acquiring infrastructure and equipment such as smoke detectors, fire alarms, electronic resources, and fire extinguishers. However, due to challenges such as lack of budgets, adequate equipment, and staff faced by many of these academic libraries in Davao City, an alternative plan recommended is that these academic libraries in Davao City should partner with the city government, National Disaster Risk Reduction and Management Council (NDRRMC) and the fire brigade since these agencies are experts in mitigating disaster. Also, the parent institution of these academic libraries in Davao City has its own established disaster management plan. Therefore, academic libraries should adopt and integrate this disaster plan into their system. By doing so, the academic libraries in Davao City will not be vulnerable to disaster.

Further, from the shared narratives of the study participants, it was significant to see the challenges or difficulties libraries face, how the libraries coped with these challenges, and the lessons learned from them. Moreover, in coping with the challenges and difficulties that affect disaster preparedness and management by these academic libraries, following emergency protocol was an essential theme. Libraries must implement whatever emergency protocol is in place, created by their parent institution or part of the library disaster management plan. By doing so, the library can mitigate the disaster's effect on the library. Finally, from the insight shared, building alliances with

local partners and strengthening disaster risk governance can be practiced in libraries. This will give libraries current information about modern library disasters and new skills and knowledge on how to be resilient to disasters. By building alliances, libraries can gather information about how other organizations handled their disasters, and by strengthening disaster risk governance, libraries can gain new skills.

Moreover, the findings of this research study enable libraries and librarians to acknowledge the merits and opportunities of having a disaster plan, which is necessary for mitigating disaster. This research study reveals that disaster should not be underestimated or looked over because disaster is a massive threat to the vast collections of libraries and cannot be avoided. Also, the findings of this research present an alternative disaster plan, such as a partnership with a local agency, for libraries that lack resources such as funding, manpower, and equipment. Finally, the study finds that disaster preparedness should be a culture that every library needs to adopt because it is essential to the operations and resources of the library.

5.1 Implication for Future Research

Future research into disaster preparedness and management in academic libraries in Davao City may have a more desirable outcome. Nevertheless, from insights and future direction of academic libraries in enhancing disaster preparedness and management, I found some insights that could be a basis for a research study, such as building an alliance with local partners and strengthening disaster risk governance.

Indeed, future researchers can explore building alliances with local partners as potential future research since partnership and collaboration with other agencies can assist libraries in their preparedness and management. It will provide libraries with enhanced resource sharing, provide additional expertise, and improved overall resilience. Strengthening disaster risk governance will provide a future vision of how libraries should improve their disaster preparedness plan and the tools needed to improve it. However, these two insights would be better for future research studies. Besides, more study is recommended to strengthen the body of knowledge and information and for the development of theoretical models for disaster preparedness and management in the libraries because, from the findings of this study, many libraries do not have a well-drafted disaster preparedness and management plan.

Precisely, based on my limited study, for participants who were willing to participate in this study, future qualitative research is necessary for future research with a wider audience. Nevertheless, there is a need to conduct more in-depth, inclusive reviews and analyses of qualitative studies to overcome the challenges and difficulties libraries face and to reveal areas that demand additional investigation to assist libraries in being more resilient to disaster. Indeed, future research should build upon the present study's results and other investigators' findings, suggesting the efficiency of a resilient disaster preparedness and management approach.

6. Concluding Remarks

Disaster is a terrible event that could happen to any library, and libraries need to be prepared for it. Although libraries face challenges that hinder their preparation and management of disaster, there are opportunities for libraries to cope with and improve their preparedness and management plan. From this research, it is beneficial that libraries consider investing in modern practices of disaster preparedness and management protocols. These involve investing in digital technologies and infrastructure, collaboration, regular training, and mock drills. Indeed, investment should include sensors, fire suppressors, monitoring systems, RFID, and cloud storage systems collaborating with other libraries and agencies, either public or private. Lastly, training staff and engaging in mock drills have proven effective, especially when a disaster like an earthquake or fire hits the library.

Moreover, libraries need an effective disaster management plan, making them more resilient to any type of disaster. Indeed, all libraries know the importance and value of having a fortified disaster preparedness and management plan because it helps protect library collections, mitigate and reduce the effect of disaster, and protect their patrons and staff. Also, when developing a disaster management plan, the library should know budgeting, available resources, and manpower.

Nevertheless, the findings of this study will enable library policymakers to know the value of disaster preparedness and management plans and assist them in drafting and fortifying one. Libraries also need to learn from past experiences, share their experiences with other libraries, and constantly review and update their preparedness and management plans. Continuous evaluation of a disaster preparedness and management plan will enhance library response and recovery capabilities. A proper and structured disaster preparedness and management plan will mitigate the impact of disaster and make the library more resilient in case of future crises. In summary, investing in digital technologies, digital infrastructure, collaboration, involvement in staff training, mock drills, and a well-structured disaster management plan will promote preparedness practices and culture.

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Conflict of Interest Statement

The author declares no conflicts of interest.

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The author is a graduate student in Library and Information Science at the University of Mindanao. With a bachelor's degree in library and information science from Delta State University Abraka. The author is a member of the Librarian Registration Council of Nigeria (LRCN) and a member of the Teachers Registration Council of Nigeria (TRCN). The author also has qualifications in Project Management, Human Resources Management, Logistic and Supply Management and Google Cybersecurity.

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Omoefe Michel Dafegoma
A STATE OF DISASTER PREPAREDNESS AND MANAGEMENT:
A PHENOMENOLOGY OF DAVAO CITY LIBRARIES

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