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Disaster Risk Reduction (DRR) Knowledge of Volunteers and Coordinators in Wright I District: Basis for Localized Information Booklet

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Abstract

Aim: This study aimed to assess the demographic profile, level of knowledge, and challenges encountered by Disaster Risk Reduction (DRR) volunteers in the District of Wright I and to determine the relationship between these factors. Additionally, it sought to develop a localized DRR information booklet to enhance the knowledge and capacity of volunteer respondents in disaster preparedness and risk management.

Methodology: The study utilized a descriptive-correlational research design involving 70 participants selected through total population sampling. Data were collected using a validated survey questionnaire and analyzed using descriptive statistics, Spearman's Rho for continuous variables, and the Chi-Square test with Cramér's V for categorical variables to determine relationships between demographic profiles, knowledge levels, and challenges encountered.

Results: The findings revealed that most volunteers were young adults aged 26–35, with relatively short service durations but high educational attainment. The respondents demonstrated a generally high level of DRR knowledge and a very positive attitude towards volunteerism. A significant, moderate positive correlation ($\rho = 0.440$, $p < 0.01$) was found between DRR knowledge and the challenges met, indicating that volunteers with higher knowledge tended to recognize and navigate challenges more effectively. Among demographic factors, only relevant training showed a weak but significant positive correlation with DRR knowledge. In contrast, other factors, such as age, sex, civil status, occupation, and length of service, were not significantly related to knowledge or challenges. Based on these findings, a Localized DRR Information Booklet was developed as an output to address identified gaps in training, practical application, and community preparedness resources.

Conclusion: The study concluded that DRR volunteerism in Wright I is characterized by youthful, educated, and committed individuals who require sustained training and practical support to translate knowledge into effective disaster response. Tailored, accessible resources like the localized DRR booklet are crucial in equipping volunteers for real-world challenges and strengthening community-based resilience.

Keywords: Community Preparedness, Disaster Resilience, Disaster Risk Reduction, DRR Training, Localized Information Booklet, Volunteers

INTRODUCTION

Disasters—both natural and human-induced—continue to impact societies worldwide, threatening lives, economies, and sustainable development. The United Nations Office for Disaster Risk Reduction (UNDRR, 2015) has long emphasized the importance of preparedness, mitigation, and resilience in addressing the increasing frequency and intensity of such hazards. This global commitment was first embodied in the Hyogo Framework for Action (UNDRR, 2005) and further strengthened by the Sendai Framework for Disaster Risk Reduction 2015–2030 (UNDRR, 2015), which prioritizes community involvement, capacity building, and the promotion of disaster risk reduction (DRR) education as essential strategies to reduce vulnerabilities and risks.

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In the national context, the Philippines remains one of the world's most disaster-prone countries due to its geographic location along the Pacific Ring of Fire and the typhoon belt (Iuchi et al., 2019; Carada, 2020; Kim et al., 2021). The country consistently ranks high in global disaster vulnerability indices. According to the World Risk Report of the United Nations University–Institute for Environment and Human Security [UNU-EHS], the Philippines is identified as the third most disaster-prone nation among 173 countries. In response, the Philippine government enacted Republic Act No. 10121, also known as the Philippine Disaster Risk Reduction and Management Act of 2010 (Republic of the Philippines, 2010), which mandates a comprehensive, proactive, and community-based approach to disaster preparedness and response.

Within the education sector, the Department of Education (DepEd, 2015) institutionalized DRR initiatives through DepEd Order No. 37, s. 2015, which introduced the Comprehensive Disaster Risk Reduction and Management (DRRM) in Basic Education Framework. This order mandates the integration of DRR education into the K to 12 curriculum and the implementation of school-wide preparedness plans to safeguard students, teachers, and school personnel.

At the local Level, the District of Wright I in Samar faces ongoing challenges due to its exposure to natural hazards such as typhoons, floods, and landslides. The district's 25 public schools, located in both urban and rural barangays, include several classified as high-risk areas. Geo-hazard mapping conducted by the Municipal Disaster Risk Reduction and Management Office (MDRRMO, 2022) identified schools in Barangays Bato, Bagas, and Apolonia as particularly vulnerable to flooding and landslides. Recent calamities, including Typhoon Karding (October 2023) and Typhoon Egay (July 2023), caused extensive damage to educational infrastructure, disrupting classes and learning continuity. Schools such as San Isidro Elementary School, Tula Elementary School, and Pequit Integrated School experienced submerged classrooms and damaged learning materials. The division's DRR coordinator documented infrastructure losses in all 24 schools following Typhoon Pepito in December 2024 (DepEd Wright Division DRR Coordinator's Report, 2024).

These recurring disasters have revealed significant gaps in local DRR preparedness and response. Despite efforts by local government units (LGUs), school administrators, and volunteers to implement DRR initiatives, resource limitations, logistical barriers, and inconsistent community participation continue to impede their effectiveness. The role of DRR volunteers and school coordinators is central, as they serve as frontline responders during disaster situations. However, their levels of preparedness, knowledge, and capacity to manage disaster risks effectively remain underexamined and urgently require attention.

Disaster Risk Reduction knowledge among volunteers and coordinators is a critical factor in community safety and resilience. Their understanding of disaster-related concepts—including risk perception, adaptation, preparedness, and mitigation—directly influences the success of local response operations. Inadequate training, limited access to updated DRR information, and insufficient skills development constrain these essential actors, weakening community preparedness and increasing disaster vulnerability.

Moreover, the educational setting plays a pivotal role in cultivating a culture of disaster resilience. Schools serve not only as centers of learning but also as emergency shelters and community information hubs during times of crisis. The integration of DRR education, as mandated by DepEd Order No. 37, s. The 2015 report (DepEd, 2015) highlights the vital link between education and disaster preparedness. It ensures that learners, teachers, and the broader community acquire the competencies necessary to reduce risks and recover from disasters. In this context, the effectiveness of DRR volunteers and school coordinators in imparting knowledge and leading preparedness initiatives becomes paramount.

This study, therefore, aims to assess the Level of DRR knowledge among volunteers and coordinators in the District of Wright I and to identify the challenges they face in fulfilling their roles. By examining gaps in knowledge, skills, and resources, this research seeks to inform the development of localized, targeted intervention programs, including the proposed Localized DRR Information Booklet. Ultimately, this effort contributes to enhancing community resilience, promoting educational continuity, and safeguarding lives and property in disaster-prone school communities.

Objectives

This study aimed to develop a localized information booklet to strengthen disaster preparedness in the District of Wright I by assessing the knowledge and challenges of DRR volunteers and coordinators and determining the relationship between these variables.

Specifically, it sought to answer the following questions:

1. What is the demographic profile of the DRR volunteer and coordinator-respondents in terms of:

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1.1 Age and sex;
1.2 Civil status;
1.3 Highest educational attainment;
1.4 Length of service as DRR volunteer or coordinator;
1.5 Relevant training attended, including Level and number of hours; and
1.6 Occupation?

2. What is the level of knowledge on DRR among the DRR volunteers and coordinator-respondents in terms of:
   2.1 Disaster-related knowledge; and
   2.2 Disaster preparedness and readiness.
3. What are the challenges encountered by the DRR volunteer and coordinator-respondents in terms of:
   3.1 Resource and logistical challenges;
   3.2 Training and knowledge challenges; and
   3.3 Communication and Social Challenges.
4. Is there a significant relationship between the demographic profile of the DRR volunteer and coordinator respondents and their Level of knowledge of DRR, as well as the Challenges encountered as DRR volunteers and coordinators?
5. Is there a significant relationship between the perceived Level of knowledge of DRR and the challenges encountered by the DRR volunteer and coordinator-respondents?
6. What localized DRR information booklet was developed as an output of this study to enhance the knowledge and capacity of the DRR volunteer and coordinator-respondents on disaster risk reduction?

Hypothesis

Given the stated research problems, the following hypotheses were tested at a 0.05 level of significance:

1. H_0: There is no significant relationship between the demographic profile of the DRR volunteer and coordinator-respondents and their Level of knowledge on Disaster Risk Reduction (DRR) and Challenges encountered as DRR volunteers and coordinators.
2. H_0: There is no significant relationship between the perceived Level of knowledge of DRR and the challenges encountered by the DRR volunteer and coordinator-respondents.

METHODS

Research Design

This study employed a descriptive-correlational research design to investigate the relationships between demographic characteristics, disaster risk reduction (DRR) knowledge, and the challenges encountered by DRR volunteers and coordinators. A cross-sectional, quantitative approach was employed, utilizing a structured survey questionnaire to collect data at a single point in time. The collected data were analyzed through descriptive statistics to summarize profiles and responses, while inferential statistics—including Spearman's Rank Correlation, Chi-Square Test of Independence, and Cramér's V—were used to determine relationships and the strength of associations among variables. Data analysis was facilitated using SPSS, with the appropriateness of statistical methods validated by a statistician.

Population and Sampling

The population of this study included all Disaster Risk Reduction (DRR) volunteers and coordinators in the District of Wright I, Schools Division of Samar for the school year 2024–2025. This consisted of 70 individuals: 45 local government unit (LGU) volunteers and 25 school-based DRR coordinators, one from each public school in the district. Since the population size was small and accessible, a total enumeration sampling method was used, where all members of the population were included as respondents.

Instrument

The study utilized a structured questionnaire developed by the researchers based on the objectives and related literature. It was divided into three parts. Part I gathered the respondents' demographic information, including age, sex, civil status, educational attainment, occupation, length of service, and relevant training attended. Part II assessed their knowledge of disaster risk reduction using a five-point Likert scale adapted and localized from Tuladhar et al. (2015), covering concepts such as preparedness, adaptation, awareness, and risk perception. Part III

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identified the challenges encountered by the respondents through a Likert-type frequency scale ranging from Never to Always, focusing on concerns like resource limitations, training needs, communication barriers, and emotional or psychological difficulties.

To ensure its validity, the questionnaire was reviewed by three experts in disaster risk reduction and research. Their suggestions were integrated to enhance the clarity and relevance of the items. A pilot test was conducted with 20 respondents from a neighboring district not included in the main study. The reliability of the instrument was tested, resulting in a Cronbach's alpha value of 0.798, indicating acceptable internal consistency.

Data Collection

Data were collected from February 6 to April 5, 2025. The survey was administered to school-based DRR coordinators and LGU volunteers within the District of Wright I. School-based DRR coordinators accomplished the questionnaire either online via Google Forms or through printed copies, depending on their access to internet connectivity. For LGU volunteers, especially those in remote areas with limited internet access, printed questionnaires were personally distributed and retrieved. The data collection process was carried out in both school and community settings. School principals assisted in facilitating the distribution and retrieval of forms from coordinators, while LGU officials and MDRRMO staff coordinated the process with the volunteers. Completed questionnaires were checked for completeness before being consolidated for data encoding and analysis.

Treatment of Data

Data were analyzed using SPSS software. Descriptive statistics, including frequency, percentage, weighted mean, median, mode, and standard deviation, summarized the respondents' profiles, knowledge levels, and challenges. The Median Absolute Deviation (MAD) was used to measure the spread of the responses, providing a clear picture of variability. For relationships between variables, Spearman's rank correlation tests the strength and direction of associations. The Chi-Square Test was used to examine the relationships between categories, and Cramér's V measured the strength of these relationships, with values ranging from 0 (no association) to 1 (strong association). All hypotheses were tested at a significance level of 0.05. Decisions to accept or reject hypotheses were based on these tests, ensuring that the results were accurate and reliable, aligning with the study's goals. The resulting data were systematically presented through tables, charts, and graphs to enhance clarity and emphasize the significance of the findings.

Ethical Considerations

The researchers ensured that all ethical guidelines were followed, including obtaining informed consent from participants and ensuring the confidentiality and privacy of their responses throughout the study.

RESULTS and DISCUSSION

Demographic Profile of the Respondents

Table 1 presents the demographic and professional characteristics of the DRR volunteers and coordinators in the District of Wright I. The data cover their age, sex, civil status, educational attainment, length of service, relevant training attended, and occupation.

Table 1. Demographic Profile of the Respondents

Age (Years Old)	f	%
18–25	5	7.1
26–35	47	67.1
36–45	12	17.1
46–55	5	7.1
56 and Above	1	1.4
Total	**70**	**100**
Sex	**f**	**%**
Male	39	55.7
Female	31	44.3
Total	**70**	**100**

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Civil Status	f	%
Single	42	60
Married	28	40
Total	**70**	**100**
Educational Levels	**f**	**%**
College Level	**8**	11.43
College Graduate	33	47.14
With Units in Masters	19	27.14
Master's Degree Holder	5	7.14
with Doctorate Units	1	1.43
Doctorate Degree Holder	4	5.71
Total	**70**	100
Number of Years	**f**	**%**
1 year	52	74.29
2 - 5 years	10	14.29
6 - 10 years	7	10
11 years and Above	1	1.43
Total	**70**	**100**
	SD	**2.52**
	Mean	**2 years**
Training Level	**Mean**	**Interpretation**
School-Based	2.42	Oftentimes
District	1.89	Sometimes
Division	1.64	Never
Region	1.34	Never
National	1.3	Never
Legend: *1.00–1.75: Never; 1.76–2.50: Sometimes; 2.51–3.25: Oftentimes; and 3.26–4.00: Always*		
Occupation	**f**	**%**
Administrator	11	15.71
Administrative Support Staff	6	8.57
Teacher	35	50
BLGU/LGU	18	25.71
Total	**70**	**100**

Age and Sex. The data show that most respondents belong to the 26–35 age group (67.1%), indicating a predominantly young DRR volunteer population. The mean age is 33 years, reflecting a generally early adult demographic likely to contribute energy and responsiveness to DRR activities. In terms of sex, 39 respondents (55.71%) were male, while 31 (44.29%) were female, showing a relatively balanced distribution.

This finding supports the study by Nursey-Bray et al. (2022), which noted that age and gender influence the effectiveness of volunteer networks in disaster preparedness, with younger volunteers contributing to adaptability and active participation in community resilience initiatives.

Civil Status. As shown, the majority of respondents are single (60%), while 40% are married. This suggests that a larger portion of the DRR volunteers may have more flexible time and availability for disaster preparedness activities, which can positively influence participation in community-based DRR programs.

Educational Attainment. A notable portion of the respondents (13.28%) have attained or are pursuing graduate-level education, indicating a relatively high educational background among DRR volunteers. This educational advantage may enhance their ability to understand, interpret, and effectively implement disaster risk reduction concepts. Their study found that volunteers with advanced education tend to participate more actively in DRR planning and are better equipped to analyze disaster-related information for community-based applications. These findings suggest that while higher education contributes to disaster preparedness, there is a need for enhanced disaster education at all levels, including primary and secondary schools, to build community resilience (Drzewiecki et al., 2020).

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Length of Service. Findings show that the majority of DRR volunteers have only one year of service (74.29%), indicating a relatively new volunteer base in the district. The mean length of service is 2 years, with a standard deviation of 2.52, reflecting variation in respondents' experience. Notably, only 1.43% of volunteers have served for over a decade. This finding supports the observation of Amini et al. (2024), who argued that while training is important, the effectiveness of DRR volunteers improves significantly with accumulated, hands-on experience. Their study highlighted that limited continuity and practical engagement can hinder volunteers' readiness and decision-making abilities in disaster situations.

Relevant Training Attended. As shown, respondents most frequently attend school-based training, averaging (M=2.42), "Oftentimes." District-level training attendance (M = 1.89) is rated as "Sometimes." Participation in division, regional, and national training is minimal, falling under the category of "Never." This indicates limited exposure to advanced DRR training opportunities, which may impact the volunteers' overall preparedness and skill development. This finding supports Briceño's (2015) observation that despite global advances in DRR frameworks, inconsistent and uneven training access—particularly at local levels—hampers practical knowledge application. Without structured, tiered training programs, local volunteers may lack essential competencies for effective disaster preparedness and response.

Occupation. As shown, half of the DRR volunteers are teachers, followed by local government personnel (BLGU/LGU) at 25.71%. Administrators and administrative support staff make up smaller portions at 15.71% and 8.57%, respectively. This suggests that the volunteer force is predominantly composed of members from the education sector, which may positively impact the dissemination of DRR information within communities. This supports the findings of Nakum (2022), who emphasized the important role of educators in school-based disaster risk reduction in the Philippines. Teachers, with their community presence and communication skills, are well-positioned to spread DRR knowledge and encourage preparedness among students and families.

Level of Knowledge on Disaster Risk Reduction (DRR)

Table 2 The Level of knowledge of the DRR volunteers and coordinators in Wright I District across two dimensions: disaster-related knowledge and disaster preparedness and readiness.

Table 2. Level of DRR Knowledge

Disaster-related Knowledge	**Mean**	**MAD**	**Interpretation**
1. I know when a disaster will occur.	3.74	0.7	High Knowledge
2. I know disasters cannot be prevented, but they can be mitigated.	4.24	0.69	Very High Knowledge
3. I have participated in disaster risk education training or workshops.	3.77	1	High Knowledge
4. I can distinguish between natural and human-induced disasters.	4.2	0.75	High Knowledge
5. I am aware of the common types of disasters that can occur in my locality.	4.21	0.7	Very High Knowledge
6. I understand the causes and effects of different types of disasters.	4.31	0.76	Very High Knowledge
7. I am familiar with key disaster risk reduction (DRR) terminologies (e.g., hazard, vulnerability, mitigation).	4.03	0.72	High Knowledge
8. I am familiar with the agencies responsible for disaster response and management in my area.	4.29	0.71	Very High Knowledge
9. I understand the importance of early warning systems in disaster preparedness.	4.51	0.61	Very High Knowledge
10. I am aware of the different phases of disaster management (prevention, preparedness, response, recovery).	4.19	0.74	High Knowledge
Grand Mean	**4.15**	**0.7**	**High Knowledge**
Disaster Preparedness and Readiness	**Mean**	**MAD**	**Interpretation**
1. surviving a disaster depends on luck.	3.34	1.08	Moderate Knowledge
2. I know the importance of disseminating	4.27	0.69	Very High Knowledge

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experiences or knowledge about disasters.			
3. The government will provide enough facilities after a disaster, so we will not face any problems.	3.93	0.61	High Knowledge
4. I am confident in the government's reconstruction activities following a disaster.	3.86	0.67	High Knowledge
5. I know the importance of talking about disasters with neighbors, friends, and colleagues.	4.14	0.69	High Knowledge
6. I listen to experts or DRR leaders who work in or engage with disaster management activities.	4.29	0.65	Very High Knowledge
7. I have an emergency plan in place for my family in the event of a disaster.	4.11	0.78	High Knowledge
8. I am familiar with the designated evacuation centers and safe zones in my community.	4.19	0.72	Very High Knowledge
9. I participate in community disaster preparedness drills and training programs.	4.09	0.86	Very High Knowledge
10. I understand the importance of preparing an emergency survival kit with essential supplies.	4.3	0.76	Very High Knowledge
Grand Mean	**4.05**	**0.75**	**High Knowledge**

Legend: *1.00 – 1.80: No Knowledge (NK); 1.81 – 2.60: Limited Knowledge (LK); 2.61 – 3.40: Moderate Knowledge (MK); 3.41 – 4.20: High Knowledge (HK); 4.21 – 5.00: Very High Knowledge (VHK).*

Level of Knowledge on Disaster-Related DRR Concepts. The overall grand mean of 4.15 shows that DRR volunteers and coordinators in Wright I District have a high level of knowledge about disaster-related concepts. They scored very high in understanding the importance of early warning systems (4.51), knowing the causes and effects of disasters (4.31), and identifying the agencies responsible for disaster management (4.29). This means respondents are well-informed about the essential elements of disaster risk reduction. Other topics, such as recognizing when a disaster might occur (3.74), distinguishing between natural and human-made disasters (4.20), and understanding DRR terminology (4.03), were rated as high. However, some areas still require improvement.

These results support Lin et al. (2024), who stressed that localized, hands-on training improves volunteer knowledge and readiness. They also differ from the concerns of Setten and Lein (2019), who noted gaps between knowledge and actual practice. In Wright I, high scores suggest that volunteers not only learn DRR concepts but also apply them effectively. Lastly, the findings confirm Briceño's (2015) claim that continuous, community-based training helps solve issues of uneven knowledge distribution. This highlights the need for ongoing, locally tailored training programs to strengthen volunteer skills, especially in disaster-prone areas.

Disaster Preparedness and Readiness. The findings show that DRR volunteers and coordinators in Wright I District have a high level of knowledge of disaster preparedness, with a grand mean of 4.05. Several areas scored very high, such as the importance of spreading disaster-related information (4.27), listening to DRR leaders and experts (4.29), and preparing an emergency survival kit (4.30). This means respondents are highly aware of the importance of preparedness actions and the value of reliable information during emergencies.

Other areas, such as having a family emergency plan (4.11) and participating in community drills (4.09), were rated as having high knowledge. This demonstrates good awareness but also suggests room for improvement, particularly in consistently applying these practices. A notable concern was the belief that surviving a disaster depends on luck (3.34), which fell under the category of moderate knowledge. This reveals remaining misconceptions and highlights the need for education programs that address cultural beliefs and promote personal responsibility in disaster preparedness.

These results support those of Quadras, Shashidhara, and Nayak (2017), who emphasized that focused preparedness training enhances volunteer readiness and confidence. They also reflect the concerns that having disaster knowledge is not enough — it must be personally accepted and practiced. In Wright I, while knowledge is generally strong, the presence of fatalistic attitudes and reliance on external help suggest the importance of continuous, practical, and culturally appropriate learning activities. The results highlight the success of localized, structured training programs in the Wright I District while pointing to the need for ongoing, inclusive, and belief-sensitive capacity-building efforts to improve community disaster preparedness further.

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Challenges Encountered by the DRR Volunteer and Coordinator-Respondents

Table 3 presents the challenges faced by DRR volunteers and coordinator-respondents in Wright I District across four thematic categories: Resource and Logistical Challenges, Training and Knowledge Challenges, Communication and Social Challenges, and Physical, Emotional, and Psychological Challenges.

Table 3. Challenges Encountered by Respondents as DRR Volunteers

Resource and Logistical Challenges	**Mean**	**MAD**	**Interpretation**
1. Lack of resources or equipment (e.g., protective gear, emergency supplies).	3.59	0.75	Often
2. Limited funding for DRR activities or initiatives.	3.47	0.83	Often
3. Insufficient logistical support for transportation or accommodation.	3.44	0.98	Often
4. Difficulty accessing disaster-prone areas during relief efforts.	3.47	0.94	Often
5. Unpreparedness of local infrastructure (e.g., roads, buildings) for disasters.	3.56	0.87	Often
6. Limited access to reliable information about disaster situations.	3.39	0.85	Sometimes
Grand Mean	**3.49**	**0.87**	**Often**
Operational and Capacity Challenges	**Mean**	**MAD**	**Interpretation**
1. Insufficient training for disaster response and preparedness.	3.21	0.82	Sometimes
2. Insufficient public awareness or community knowledge about disaster risks.	3.16	0.88	Sometimes
3. Difficulty in assessing needs accurately in affected areas.	3.24	0.8	Sometimes
4. Unclear roles and responsibilities among DRR team members.	3.3	0.83	Sometimes
Grand Mean	**3.23**	**0.83**	**Sometimes**
Support and Coordination Challenges	**Mean**	**MAD**	**Interpretation**
1. Limited support from local authorities or government agencies.	3.43	0.73	Often
2. Inadequate community participation in DRR activities.	3.4	0.92	Often
3. Difficulty in coordinating with other volunteers or agencies.	3.3	0.87	Sometimes
4. Inconsistent policies or procedures related to DRR efforts.	3.13	0.9	Sometimes
Grand Mean	**3.32**	**0.86**	**Sometimes**

Resource and Logistical Challenges. Disaster Risk Reduction (DRR) volunteers often face resource and logistical challenges, with an average rating of 3.49, indicating that these issues occur frequently. The most significant issues are a lack of essential items, such as protective gear, emergency kits, and first-aid supplies (3.59), and unprepared local infrastructure (3.56). Other common problems include limited funding (3.47), poor transportation support (3.44), and difficulty accessing disaster-prone areas (3.47). Limited access to reliable disaster information (3.39) is less frequent but still notable.

These findings support Das (2018), who pointed out that poor logistics at the community level reduce the effectiveness of disaster response. Yabe, Rao, and Ukkusuri (2021) also highlighted how geographic isolation and a lack of resources exacerbate these issues, leading to delays in emergency efforts. To improve, there needs to be more local investment in equipment and infrastructure, better funding, and stronger logistical coordination—especially in remote or high-risk areas, such as the Wright I District.

Operational and Capacity Challenges. These issues occur occasionally (mean 3.23), with unclear roles among DRR team members being the primary concern (3.30), which affects teamwork and efficiency. Other challenges include difficulty assessing community needs (3.24), lack of training (3.21), and low public awareness of disaster risks (3.16).

Yabe et al. (2021) noted that unclear responsibilities and insufficient training can reduce the effectiveness of disaster management. The United Nations Office for Disaster Risk Reduction (UNDRR, 2015) recommends transparent governance, defined roles, and continuous capacity building. More regular briefings, clear role delegation, and community awareness programs would improve volunteer readiness and performance.

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Support and Coordination Challenges. Volunteers sometimes face support and coordination problems (mean 3.32). The biggest is limited support from local authorities (3.43) and low community participation (3.40), both "often" experienced. Problems with coordination among volunteers or agencies (3.30) and inconsistent DRR policies (3.13) also occur sometimes.

These issues align with findings by Benson, Twigg, and Myers (2001), who noted that weak institutions and poor inter-agency links hinder DRR sustainability. Coppola (2011) also emphasized that lack of clear communication and guidelines leads to coordination breakdowns. The UNDRR (2015) suggests inclusive planning and clear inter-agency protocols to improve cohesion, volunteer retention, and community resilience. Strengthening local government support, boosting community involvement, and standardizing policies would enhance the effectiveness of DRR in the Wright I District.

Relationships Between Demographic Profile, DRR Knowledge, and Challenges Met by DRR Volunteers

Table 4 presents the relationship between the Demographic Profile, Level of DRR Knowledge, and the challenges they encountered as DRR volunteers.

Table 4. Relationship between Demographic Profile and Level of Knowledge of DRR of the Respondents

Variable	Correlation	Level of DRR Knowledge	Interpretation	Challenges Met as DRR Volunteers	Interpretation
Age	Spearman's Rho (ρ)	.122	Not Significant / Accept Ho	-.027	Not Significant / Accept Ho
Sex	Chi-Square (χ^2)	0.408	Not Significant / Accept Ho	0.363	Not Significant / Accept Ho
	Cramers' V	0.559	Strong	0.826	Very Strong
Civil Status	Chi-Square (χ^2)	0.104	Not Significant / Accept Ho	0.173	Not Significant / Accept Ho
	Cramers' V	0.649	Strong	0.877	Very Strong
Highest Educational Attainment	Chi-Square (χ^2)	0.03	Not Significant / Accept Ho	0.006	Significant / Reject Ho
	Cramers' V	0.619	Strong	0.896	Very Strong
Length of Service as DRR Volunteers	Spearman's Rho (ρ)	-.123	Not Significant / Accept Ho	-.120	Not Significant / Accept Ho
Relevant Training Attended	Spearman's Rho (ρ)	.251*	**Significant / Reject Ho** (Weak)	-.018	Not Significant / Accept Ho
Occupation	Chi-Square (χ^2)	0.395	Not Significant / Accept Ho	0.066	Not Significant / Accept Ho
	Cramers' V	0.558	Strong	0.874	Very Strong

Legend for Cramers' V: 0*.10 - 0.29:Weak; 0.30 - 0:49: Moderate; 0.50 - 0.69: Strong; 0.70 and above: Very Strong*

The study found that age, sex, civil status, length of service, and occupation had no significant effect on DRR knowledge. This supports Gaillard and Mercer (2013), who noted that while personal backgrounds shape experiences, they do not necessarily determine disaster knowledge. However, attending DRR-related training showed a weak but significant positive relationship with knowledge. This confirms the findings of Canlas and Karpudewan (2023) that training improves disaster preparedness. As Bosher (2024) emphasized, training must also be updated and suited to local needs to be effective in actual disaster situations.

Educational attainment showed a possible link to DRR knowledge, but it was not firmly proven. This partly aligns with Hoffmann and Muttarak (2015) and UNISDR (2015), who emphasize the role of education in building disaster preparedness. Lastly, the challenges faced by volunteers were similar regardless of their demographic

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profiles, reflecting the conclusions of Ganoe, Roslida, and Sihotang (2023) that DRR challenges are common and not influenced by personal background.

Relationship between the Respondents' Perceived Level of Knowledge of DRR and the Challenges They Encountered as DRR Volunteers

Table 5 displays the result of the correlation analysis between the respondents' perceived Level of DRR knowledge and the challenges they encountered as DRR volunteers.

Table 5. Relationship between the Respondents' Level of Knowledge of DRR and the Challenges They Encountered as DRR Volunteers

Variables	Spearman's Rho (ρ)	p-value	Interpretation
DRR Knowledge vs. Challenges Met	.440**	.000	Significant / Reject Ho (Moderate Positive Correlation)

**. Correlation is significant at the 0.01 level (2-tailed).

The findings revealed a moderate positive and statistically significant relationship (ρ = 0.440, p = 0.000) between these two variables. Since the p-value is less than 0.01, the null hypothesis is rejected, indicating that a significant relationship exists. This suggests that as DRR volunteers gain more knowledge, they tend to become more aware of or encounter a broader range of challenges in their volunteer work. It reflects the idea that an increased understanding of disaster preparedness and management may heighten volunteers' sensitivity to operational limitations, coordination issues, and resource gaps during disaster response activities. This finding is consistent with the insights of Spiekermann et al. (2015), who emphasized the importance of integrating both knowledge and practical capacity-building to manage disaster risks effectively. This result underscores the importance of ongoing, practical, and scenario-based training for DRR volunteers — not only to enhance their knowledge but also to equip them with the skills and strategies necessary for addressing the inevitable challenges they encounter in the field.

Development of a Localized DRR Information Booklet

In response to the findings of this study, a localized DRR information booklet titled *"Empowering DRR Volunteers of District of Wright I Through Knowledge and Preparedness"* was developed as a practical, culturally relevant learning resource.

The booklet is structured into six practical chapters, as reflected in Table 6

Table 6. Localized DRR Information Booklet Developed Based on Study Findings

Chapter Title	Content Description	Findings Addressed
Chapter 1: The DRR Volunteer Profile in the District of Wright I	Presents the demographic characteristics, strengths, and challenges of DRR volunteers in the district.	Addresses the youthful, highly educated but inexperienced volunteer profile with identified service gaps.
Chapter 2: Volunteer Attitudes Toward DRR – The KAPATIRAN System	Introduces a values-based system promoting unity, altruism, collaboration, and proactive action in DRR volunteerism.	Responds to the positive attitudes of volunteers toward DRR and encourages sustained engagement.
Chapter 3: Knowledge and Skills for Effective DRR	It covers core DRR concepts, preparedness, risk perception, awareness, and practical adaptive strategies.	Targets high DRR knowledge areas with identified misconceptions and gaps in applied community practice.
Chapter 4: Addressing Common Challenges in Volunteer Service	Provides solutions to common problems, including resource constraints, coordination issues, and concerns about	Responds to frequent challenges faced by volunteers: logistical constraints, role clarity, and morale.

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	well-being.	
Chapter 5: Basic Medical and First Aid Preparedness	Offers practical medical, first aid, and mental health guidance for volunteers during disaster operations.	Fills identified training gaps in first aid, safety, and volunteer welfare during operations.
Chapter 6: Building Future-Ready Volunteerism	Promotes strategies for mentoring, youth involvement, digital tools, and inclusive, culturally responsive DRR education.	Addresses the need for sustained training, mentorship programs, and inclusive, community-based DRR efforts.

The booklet was designed to address key gaps identified in the research, including limited formal training opportunities, lack of localized DRR materials, resource constraints, and challenges in volunteer coordination and well-being. It specifically targets the youthful and highly committed, yet relatively inexperienced, DRR volunteer force in the district. Each chapter provides practical solutions to overcome common volunteer challenges, offers basic first aid and mental health preparedness, and presents strategies for future-ready, inclusive volunteerism. Aligned with Republic Act No. 10121 and DepEd Order No. 50, s. 2011, the booklet served as both a reference and training guide for volunteers, schools, barangays, and community organizations. It aims to bridge the gap between theoretical knowledge and field application, empowering DRR volunteers to build safer, more resilient communities.

Conclusions

Based on the findings of this study, it can be concluded that while the DRR volunteer force in the District of Wright I is composed of highly motivated and well-educated individuals, particularly from the education and local government sectors, gaps remain in formal training, practical application, and access to resources. The majority of volunteers demonstrated high levels of DRR knowledge and a positive attitude toward disaster preparedness, yet their participation in advanced training sessions was limited. Notably, demographic factors such as age, sex, civil status, occupation, and length of service were not significantly associated with either DRR knowledge or the challenges faced by volunteers. However, the relevant training attended showed a significant positive correlation with knowledge levels, reinforcing the importance of continuous capacity building. Furthermore, a moderate positive relationship was established between DRR knowledge and the challenges encountered, suggesting that better-informed volunteers are also more aware of the complexities and limitations of disaster risk reduction efforts. In response, a Localized DRR Information Booklet was developed as an output of this study to address identified gaps, serving as a practical, context-specific resource for grassroots disaster preparedness and volunteer engagement. The booklet aims to enhance the knowledge of volunteers, strengthen their capacity, and promote sustainable, community-based disaster resilience initiatives in the district.

Recommendations

In light of the study's findings, it is recommended that disaster risk reduction (DRR) programs in the District of Wright I prioritize continuous, targeted training initiatives to enhance the practical skills and knowledge of volunteers. Given the significant link between training attended and DRR knowledge, regular capacity-building activities should be institutionalized, incorporating simulations, drills, and community-based exercises to enhance DRR knowledge and skills. Furthermore, the integration of DRR concepts into the school curriculum and barangay initiatives is encouraged, capitalizing on the strong presence of educators and local officials among volunteers. Efforts should also focus on improving access to training for volunteers in remote areas through digital modules and mobile learning platforms. To address the identified gaps and challenges, it is further recommended that the Localized DRR Information Booklet, developed from this study, be formally adopted and disseminated. The booklet should serve as standard material for barangay DRRM councils, schools, and volunteer groups, providing accessible, culturally responsive, and practical guidance for disaster preparedness activities. Local government units and partner agencies should support the reproduction, contextualization, and inclusion of this in community training.

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