

The Implementation Level of Disaster Risk Reduction Management and Disaster Preparedness in Selected Schools in Davao de Oro

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Abstract

The Implementation of Disaster Risk Reduction Management and Disaster Preparedness emerged as a critical concern in educational institutions to ensure the well-being and protection of students, teachers, and staff. The main objective was to evaluate the level of Disaster Risk Reduction Management implementation and disaster preparedness as perceived by Junior High School Students in one of the Division of Davao de Oro schools. The sample consisted of one hundred (100) respondents. The researchers collected the data through the adopted and modified questionnaire and administered it with the proper observance of ethical protocols. Generally, students perceived that the Disaster Risk Reduction Management Program level is highly implemented. Results also revealed that the perceived level of preparedness of the Disaster Risk Reduction Management (DRRM) program among students is at a moderate level, indicating the need for program improvements. Finally, the study recommends that the DRRM programs and activities undergo regular evaluation for improvement, with the installation of information corners, signages, markers, intensified drills, and ensuring students' knowledge of evacuation sites. Collaboration between government agencies, NGOs, and indigenous communities should be encouraged to deepen understanding and inclusivity in disaster preparedness.

Keywords: Disaster Risk Reduction Management, Disaster Preparedness, School, Students

1. Introduction

In today's fast-changing world, the need to prioritize disaster readiness and risk reduction management, as well as safety in schools, has become more vital than ever before. Safety in schools encompasses a broad range of measures to foster a secure and nurturing environment for students, staff, and visitors. It involves addressing various aspects, including physical safety, psychological well-being, and protection from potential hazards. With the increasing occurrence and intensity of disasters and potential threats to school security, ensuring the well-being and protection of students and staff has emerged as a critical concern. This necessitates a comprehensive approach that combines proactive measures for disaster preparedness, effective risk management strategies, and the implementation of robust safety protocols within educational institutions. The organized actions done to lessen the effects of natural and artificial catastrophes and improve resilience in the face of such disasters are referred to as disaster risk reduction and management. This approach emphasizes identifying, assessing, and mitigating risks, as well as the development of strategies to prepare for and respond to emergencies.

According to Cahill (2006), disasters significantly negatively impact people's physical, psychological, and social well-being. They can cause death, displacement, trauma, and long-lasting disturbances to social structures and livelihoods. According to McNaughton (2009), Asia Pacific is the most disaster-prone region globally, with, on average, 40 percent of the globe's disasters. In 2008, more than 2,000 schools in Myanmar were destroyed by Cyclone Nargis. In the same year, an estimated 10,000 school students in China were killed by the collapse of school buildings in an earthquake, the reason Twigg (2015) highlights how integrating disaster risk reduction (DRR) in school curricula and activities can improve students' knowledge, abilities, and danger awareness, empowering them to adopt safer behaviors and act as change agents in their communities.

Disasters such as earthquakes, volcanic eruptions, and typhoons have plagued the Philippines, along with other problems and a developing concern like this global COVID-19 pandemic that impairs students' education. According to Joanino and Vargas (2021), a study completed by Selected DRRM Organizations and CSO Coordination in April 2016 ranked the Philippines as the third-most disaster-prone country in the world. (Republic Act No. 10121) Philippine Disaster Risk Reduction and Management Act of 2010, passed due to the government's recognition of the need to be more disaster-resilient and prepared, led to the establishment Disaster Risk Reduction Management Agency known as NDRRMC or National Disaster Risk Reduction Management Council. Disaster risk reduction

has been incorporated into the Philippine educational system since 2007 (Ocampo & Esplado, 2020). The Department of Education has prioritized integrating disaster risk reduction into the educational system under DepEd Order No. 55, section 3. 2017. Each institution under the Department of Education has a specific role and duty in DRRM implementation, as stated in DepEd Order No. 21, Section. 2015. Schools would serve as the primary data source because they are DepEd's frontline service providers for students, who are the most significant stakeholders.

The frequency and severity of disasters worldwide are undeniably increasing, which is why the Department of Education has given the integration of disaster risk reduction into the educational system a top priority under DepEd Order No. 55, section 3. 2017. The Disaster risk reduction management program has been long implemented in the Philippines. However, there has yet to be evidence of proper implementation and disaster preparedness because the program has yet to be evaluated. In light of this premise, the researchers felt the necessity to conduct a study in this field to assess the program's implementation level and disaster preparedness in the context among Junior High School Students in one of the School Districts of Davao de Oro. This study aimed to help inform and provide beneficial information for educational stakeholders, policymakers, and researchers interested in promoting a hazard-ready institution, safety, awareness, and preparedness among international, national, and local students. Moreover, the findings of this research will be used to provide suggestions and incite the related agencies to examine the program for better implementation, make recommendations for effective disaster preparedness, and develop a safety culture among students.

2. Statement of the Problem

This study aims to assess the level of Disaster Risk Reduction Management implementation and disaster preparedness as perceived by Junior High School Students in one of the Davao de Oro School Districts. The following research questions guided the objectives of this study:

- 1) What is the demographic profile of the students in terms of:
 - 1.1 Age
 - 1.2 Sex
 - 1.3 Ethnicity
- 2) What is the level of implementation of the Disaster Risk Reduction Management Program as perceived by JHS in terms of:
 - 2.1 School Disaster Risk Reduction Management
 - 2.3 Disaster Risk Reduction Management Integration in the Curriculum
- 3) What is the level of disaster preparedness as perceived by Junior High School in terms of:
 - 3.1 Person Involvement
 - 3.2 School Facilities
 - 3.3 Disaster Preparedness Activities
- 4) Is there a significant relationship between the level of Disaster Risk Reduction Management implementation and disaster preparedness perceived by Junior High School Students?
- 5) Is there a significant difference in the level of DRRM implementation and disaster preparedness perceived by JHS when analyzed according to demographic profile?

2.1) Null Hypothesis

1. There is no significant relationship between the Disaster Risk Reduction Management implementation level and disaster preparedness as perceived by Junior High School Students.
2. There is no significant difference in the level of DRRM implementation and disaster preparedness as perceived by JHS when analyzed according to demographic profile.

3. Review of Related Literature

The Department of Education envisions safeguarding and fostering the right of every citizen, primarily learners, through providing a gender-sensitive, safe, conducive, and motivating learning environment for effective learning to take place. Besides, education is a noble association which deeply rooted when it comes to disaster awareness. It enables cascading information of updated disaster-related information and human capacity building. In this account, most countries have nurtured Disaster Risk Reduction (DRR) integration in the education curriculum so to ensure that every individual is equipped whenever unprecedented calamities happen, Astuti, N. M. W., Werdhiana, I. K., & Wahyono, U. (2021).

The Disaster Risk Reduction in the Philippines highly prioritizes strengthening local institutions' capability to DRR through a hands-on provision of technical support from national agencies, academe, and DRR Professionals from the Local Government Units. These are the tangible and leading factors that could eventually strengthen the support given at the local level (UN Office for Risk Reduction, 2018). This further means that schools should work with others on this prevention and control program for the learners and society. Hence, this must work hand in hand with the various related sectors that can highly contribute to reducing hazardous impacts brought by calamities.

According to the study conducted by Raza et al., 2022, the World Risk Report sighted the Philippines as the third among all nations with the highest risk globally in terms of disaster risk, with an index value of 25.14% of the total population wherein 74% of the population is at risk from the consequences of the several hazards, which will sadly affect the 60% of the total land area. This happened partly because of the country's geographical setting, which put the place in possible coastal hazards and caused severe damages that even cost lives. This includes typhoons and storm surges, earthquakes, and other biological hazards because the country is situated within the "Pacific Ring of Fire," which puts considerable risk to human lives in the area.

DRRM Integration in the Curriculum. Nowadays, with highly advanced technologies, people worldwide can significantly contribute to the nation's development. Albeit, amidst the boon brought by technological advancement, disasters, and emergencies have also been increasing worldwide. Disaster education is an effective tool at all stages of the crisis, but its impact is even more preparation. Consequently, more educational planning and curriculum integration must be considered at this stage, Torani S. et al., (2019). As stated in the study, disaster education is functional, operational, and cost-effective for risk management for vulnerable people. To note that responsibility given to education on disaster education can be served to improve the level of education through a series of training. Even in Indonesia, educational institutions focus on disaster risk reduction so that the learning environment and school community are safe. The construct of school-based disaster risk reduction was instigated after the disaster brought about by Aceh Tsunami in 2004, Kamil et al. (2021).

In the Philippines, a study conducted by Mamon, Suban, and Son (2017) assessed Grade 11 students on disaster-related knowledge, preparedness, readiness, adaptation, awareness, and risk perception. The study found that the majority of the students were able to comprehend some disaster-related constructs. Apart from this, students are aware of the hazards caused by disasters and are aware of how to respond to them. However, there was a low perception of the risk of disaster among students. It has been noted that this was the result of disaster education integration into the curriculum. Differing from Santos (2019), lots of factors need to be considered in cultivating Philippine disaster education; these include awareness of students and teachers among disaster-related education, suitable training of teachers on DRRM, and sufficient resources and materials in incorporating DRR into the curriculum. This will eventually lead to strengthening DRRM Implementation in DRR education in the country.

Person Involvement. According to Jasojaso of 2020, the utmost priority of the schools is to provide safety and healthy learning environment to the students who are vulnerable to accidents and casualties, and the school principals should bear this responsibility. Thus, school administrators must dedicate equally significant time and resources to SDRRM overview, preparation, and drills. In contrast, Comighud (2019) opposed that disaster risk reduction management (DRRM) in public schools is well-implemented. In fact, in times of disaster, public schools are well-equipped to respond to hazards. The state of DRRM implementation and the amount of expertise among public school administrators are related. Thus, it is substantial that the elementary and public school administrators fathom and justify the practice of the implementation and adherence to the provision of the SDRRM.

Disaster Preparedness. Disaster preparedness can be achieved by considering the underlying factors that determine it. It has to do with the significant difference between objective disaster and subjective preparedness. The first entails "structural" preparedness, for instance, people taking preventive measures by preparing supplies against the happening of the event. On the other hand, the latter is the ability to prepare people's feeling about how prepared they are with its impact – their perception and capabilities of preparedness). Sandanam et al. (2018) claimed that it is critical to internalize how people perceive their preparation both physically and psychologically, especially when we talk about sustainable development and the long-term view of the DRRM system.

Students' Perception of DRRM. The study conducted by Tanner & Doberstein in 2015 found that students are more vulnerable to disasters than any groups of the community, and unfortunately, students are most ignored when it comes to planning emergency preparedness. They also learned that students are the least prepared group due to a lack of knowledge of disaster preparedness. In addition, the risk of disasters can be significantly reduced through hazard awareness gained by students, disaster education, and rescue skills. Preparedness entails preparing students mentally for disaster occurrence, engaging them to collaborate with expert responders, increasing confidence in handling emergencies, and instilling the importance of personal safety, Nepa et al. (2019).

Although recent studies on DRR education and program implementation have pointed out the impact it brings to students and the community, however when instructors implement DRR education with students, it does not necessarily lead to behavioral change in learners or lead them to proactively engage in DRR activities, despite the stated objective of shaping proactive attitudes on the part of learners. Also, another loophole seen is the insufficiency of funding given to DRR, which resulted in needing more facilities and equipment provided to every school that will be utilized to realize the DRR education goals Cruz & Ormilla, 2022. This is elaborated in the research conducted by Johnson et al. when they reviewed 35 types of research, revealing that although the evaluation of DRR is the density of the learner's knowledge as it increases, there is not enough research assessing learners' awareness of DRR and that they behaved proactively.

Furthermore, according to the study of Wright et al. in 2016, local risk mitigation and monitoring, essential public services, and other forms of support to enhance community well-being were gradually dismantled, especially in the most vulnerable and remote regions, where maintaining such services was not considered efficient or politically convenient. As a result, despite the many United Nations declarations, there are still gaps in capacity, knowledge, and financing that undermine DRR and resilience outcomes, especially at the local level (United Nations Office for Disaster Risk Reduction, 2017).

The studies mentioned above highlight the concept of Disaster Risk Reduction Management programs and the importance of evaluating the program. Schools are an influential provider of truth, knowledge, and actions to the students, parents, and internal and external stakeholders. Moreover, it is necessary to evaluate the level of implementation and the extent of preparedness of Disaster Risk Reduction Management programs, not just in the community but specifically within the school to promote hazard-ready stakeholders as well as a safe space for our students.

4. Methods

4.1 Research Respondents.

The study consisted of 100 Junior High School students who were selected using a technique called probability sampling, which is also known as random sampling. The researcher adopted the simple random sampling method, which ensures that every member of the population has an equal chance of being chosen for the sample. As explained by West (2016), this approach guarantees that any potential sample of a particular size has an equal likelihood of being selected.

4.2 Research Design.

This study utilized a non-experimental quantitative design. Trochim (2006) introduced that this method aims to examine relationships or associations between variables without intervention or treatment. This method is helpful for researching developmental trajectories, evaluating the effectiveness of interventions, or monitoring changes in variables across time. Thus, the design is the best for this study since it aims to find out the level of implementation of the "Disaster Risk Reduction Management" program and disaster preparedness as perceived by the students.

4.3 Research Instrument

In this study, the researchers adopted and modified a questionnaire developed by Dela Cruz and Ormilla (2022) to comprehensively gather essential information about Disaster Risk Reduction Management. The questionnaire has been carefully structured into distinct parts, each serving a specific purpose. The instrument used in this study underwent a reliability test. The result was computed using Cronbach's Alpha. Consequently, the independent variable obtained a result of 0.950 which means that it is highly reliable. Further, the dependent variable acquired a result of 0.922 which implies that it is highly reliable. The first part of the checklist is the Implementation Level of the Disaster Risk Reduction Management Program in terms of school Disaster Risk Reduction Management with eleven subdomains. The second part of the checklist is the Implementation Level of the DRRM Program in the school in terms of Disaster Risk Reduction Management integration into the curriculum with six subdomains, and this is to evaluate curriculum alignment, measure the depth and breadth of Disaster Risk Reduction Management content, assess teaching and learning approaches, identify resource availability and inform curriculum development. The third part of the checklist is the Extent of disaster preparedness in terms of the number of people involved with eight subdomains. The fourth part of the checklist is the Extent of disaster preparedness in terms of school facilities with nine subdomains—lastly, the Extent of disaster preparedness in terms of Preparedness Activities. The questionnaire's overall goal is to gather comprehensive and meaningful data, provide a thorough evaluation of the Disaster Risk Reduction Management Program's implementation in schools and disaster preparedness, identify areas for improvement, and support decision-making processes to ensure the safety and well-being of students, teachers, and staff in the face of potential emergencies and disasters.

4.4 Data Gathering Procedure

The data-gathering procedure in this study followed a rigorous process to ensure the collection of accurate and reliable information. The questionnaire was administered in a controlled environment, such as a classroom setting, to minimize external influences and distractions. The researcher provided clear instructions to the participants and ensured that they understood the purpose and significance of their responses. Furthermore, the researcher took measures to maintain the confidentiality and anonymity of the participants. The collected data were treated with strict confidentiality and used solely for research purposes.

5. Results and Discussion

5.1 Demographic Profile of Students

Presented in Table 1 is the Demographic Profile of Junior High School Students in one of the Schools in the Division of Davao de Oro.

As shown in Table 1, there are 86 (64.2%) respondents are between 15-17 old, and 14 (10.4%) respondents are between 18 – 21 years old. This shows that most of the respondents are 15-17 years old. Moreover, there are 52 (38.8%) male students and 48 (35.8%) female students of sample respondents, giving a total of 100 respondents. The majority of the respondents are male students. This also shows that 82(61.2%) of the students belong to Non -IP group, and 18 (13.4%) of the students belong to the IP group. This implies that the majority of the respondents are Non-IP students.

Table 1. Demographic Profile of Students

	Profile	Count	Percentage
AGE	15-17	86	64.2
	18-21	14	10.4
	Total	100	74.6
SEX	Male	52	38.8
	Female	48	35.8
	Total	100	74.6
ETHNICITY	NON-IP	82	61.2
	IP	18	13.4

5.2 Implementation Level of Disaster Risk Reduction Management in Terms of School Disaster Risk Reduction Management and the Disaster Risk Reduction Management Integration in the Curriculum

Table 2. Summary Level of Implementation of Disaster Risk Reduction Management

Statement	Mean	Sd	Descriptive level
1. School Disaster Risk Management	4.43	0.71	Strongly Implemented
2. DRRM Integration in the Curriculum	4.30	0.72	Strongly Implemented
Overall	4.37	0.72	Strongly Implemented

Presented in Table 2 is the result of the descriptive analysis of the level of implementation of the Disaster Risk Reduction Management program as perceived by Junior High School students with an overall population of $N = 100$ in terms of School Disaster Risk Reduction Management and Disaster Risk Reduction Management Integration in the Curriculum. The results reveal that the implementation of DRRM is vigorously implemented with a mean of 4.37 and a standard deviation of 0.72 which means that the responses of students are clustered to the mean and are not dispersed from each other. Notably, all domains of implementation of disaster risk reduction management are at high levels and revealed as follows school disaster risk management ($M=4.43$, $SD=0.71$); DRRM integration in the curriculum ($M=4.30$, $SD=0.72$); Further, the result of the standard deviation signifies that the responses of students towards the domains of implementation of are clustered to the mean and are not dispersed from each other.

The findings are supported by Urban Research Institute (2008). The most important venue to convey the message of DRRM to students is through the Integration of DRRM into the curriculum. Students are the most vulnerable to disasters. If DRRM is not taught to the students, then a substantial number of potential targets are missed. Moreover, Grant (2012) claims that disaster preparedness in schools can be incorporated into the institution through thoughtful posting of safety regulations, putting in firefighting tools and evacuation building upkeep, disaster preparedness workshops, and exits, including awareness and peer education between children, the utilization of music, print and electronic media, action learning, and introducing studies of using science education to crisis potential. Accordingly, Kanyasan et al.'s (2018) study revealed that schools integrating DRRM into the curriculum must conduct evaluations to improve implementation over time. Hence, regular evaluation of the DRRM in the work plan is necessary to make sure that the implementation is carried out with the proper timeliness, quality, and quantity.

5.3 The Extent of Disaster Preparedness in Terms of Person Involvement, School Facilities, and Preparedness in Activities

Table 3. The Extent of Disaster Preparedness

Statement	Mean	Sd	Descriptive Level
1. Person Involvement	4.59	0.6	Fully Prepared
2. School Facilities	4.28	0.64	Fully Prepared
3. Disaster Preparedness Activities	3.17	0.38	Partially Prepared
Overall	4.01	0.54	Prepared

Presented in Table 3 is the result of the descriptive analysis of the level of preparedness of the Disaster Risk Reduction Management program as perceived by Junior High School students with an overall population of $N = 100$ in terms of person involvement, school facilities, and disaster preparedness activities. The results reveal that the mean of preparedness of DRRM is 4.01, which means "prepared," with a standard deviation of 0.54, which means that the responses of students are clustered to the mean and are not dispersed from each other. Notably, not all domains of disaster preparedness are at high levels; as a result, follows: person involvement ($M=4.59$, $SD=0.60$); school facilities ($M=4.28$, $SD=0.64$); disaster preparedness activities ($M=3.17$, $SD=0.38$) with the lowest mean. Additionally, the findings suggest that the perceived level of preparedness of the Disaster Risk Reduction Management (DRRM) program among Junior High School students is at a moderate level, indicating the need for program improvements. This underscores the importance of evaluating and addressing any shortcomings in the current DRRM strategies and activities to enhance the preparedness of students and the school community.

The findings are supported by Espinas (2013) and Bueza (2014) as they both put emphasis on stakeholders, and organized DRRM teams must support the implementation of every topic area of disaster risk reduction and management to promote disaster preparedness, prevention, and mitigation. To know how prepared the stakeholders are in disaster, UNESCO (2010) stressed that preparedness plans are dynamic ventures that must be reviewed, modified, updated, and tested regularly. Active disaster preparedness includes developing comprehensive response plans, monitoring hazard threats, training emergency personnel, and training members of the communities at risk "to ensure the timely appropriate and effective delivery of relief." As stated in the DRRM Manual, DepEd, as the agency responsible for schools, acknowledges that aside from providing primary education, the department is also responsible for providing safe teaching-learning facilities. It also makes a hazard-free environment for the students (DepEd, 2008; DepEd nos. 87 and 120, 2015; DepEd nos.50, 2011). Merchant (2015) also stressed that school disaster awareness and preparedness could be incorporated into the institution by strategically posting safety rules, installing firefighting equipment, having evacuation exits, and maintaining

buildings. It is incumbent to have the entire school community directly engaged in learning about disaster preparedness and identifying solutions to protect the schools (Kay, 2013).

5.4 Significant Relationship on the Level of Implementation of DRRM and the Extent of Disaster Preparedness of one of the Schools District of Davao de Oro

Table 4. Correlation Analysis Between the Implementation of Disaster Risk Reduction Management and Disaster Preparedness.

		Disaster Preparedness			
		(r = value)	(p = value)	Decision on Ho	Interpretation
Implementation of Disaster Risk Reduction Management		0.865**	< 0.01	Rejected	Significant

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

Table 4 shows the significant positive relationship between the level of implementation of DRRM in one of the Schools District of Davao de Oro and the Extent of Disaster Preparedness ($r = 0.865$, $p < 0.01$); deductively, there is a strong association between these two variables. As the level of DRRM implementation increases in schools, the level of disaster preparedness also tends to increase. This suggests that schools with higher levels of DRRM implementation are more likely to be prepared for disasters. The correlation coefficient of 0.865 indicates a relatively strong positive linear relationship between the variables manifesting the acceptance of the hypothesis. This means that as the level of DRRM implementation increases, there is a corresponding increase in the level of disaster preparedness. The high statistical significance ($p < 0.01$) suggests that the observed relationship is unlikely to be due to random chance. These results underline how critical it is to implement DRRM in schools in a way that improves disaster preparedness. Schools are better prepared to handle and lessen the effects of disasters when DRRM initiatives are prioritized. This material underlines the need to concentrate on DRRM implementation to ensure the safety and resilience of schools in the face of future disasters, making it useful for policymakers, school administrators, and stakeholders involved in disaster management. This result was supported by Twigg (2015), as he mentioned that by incorporating DRRM into the curriculum, educational institutions could contribute to building a culture of safety and resilience among students and the broader community. It can involve teaching students about various hazards, their causes, and effects, as well as ways to mitigate risks and respond effectively during emergencies which imply that the level of implementation of DRRM is high withal disaster preparedness.

5.5 Significant Difference in the Level of Disaster Risk Reduction Management Implementation and the Extent of Disaster Preparedness when Analyzed by Respondents' Demographic Profile

Table 5. Test of Difference on the Implementation of Disaster Risk Reduction Management and Disaster Preparedness of one of the Schools Division of Davao de Oro when analyzed by demographic profile

		Male	Female	t-value	p-value	Remarks
Sex	Implementation of Disaster Risk Reduction Management	3.77	4.95	-12.881*	0.000	Significant
	Disaster Preparedness	3.82	4.5	-13.661*	0.000	Significant
		15-17	18 Above			
Age	Implementation of Disaster Risk Reduction Management	4.56	2.94	7.972*	0.000	Significant
	Disaster Preparedness	4.26	3.47	16.418*	0.000	Significant
		Non-IP	IP		0.000	
Ethnicity	Implementation of Disaster Risk Reduction Management	4.60	3.13	8.158*	0.000	Significant
	Disaster Preparedness	4.30	3.45	20.309*	0.000	Significant

Table 5 shows the analysis of the significant difference in the implementation of disaster risk reduction management and disaster preparedness of one of the schools' divisions of Davao de Oro when analyzed by respondents' demographic profiles. In terms of sex, male respondents showed a mean score of 3.77, indicating a high level, while female respondents garnered 4.95, showing a very high level. The computed t-value yielded -12.881 while the p-value disclosed 0.000, which is lesser when compared to the level of significance of 0.05, indicating a significant difference, thereby rejecting the null hypothesis. This shows that males and females displayed disparity in their assessment of the implementation of disaster risk reduction management. Also, for disaster preparedness, male respondents showed a mean score of 3.82, indicating a high level, while female respondents garnered 4.50, indicating a very high level. The computed t-value yielded a result of -13.661. At the same time, the p-value disclosed 0.000, which is lesser once compared with the level of significance of 0.05, indicating a significant difference, thereby rejecting the null hypothesis. This shows that males and females disclosed disparity in their assessment of disaster preparedness. These findings show that sex significantly affects the implementation of disaster risk reduction management and disaster preparedness.

In terms of age, respondents within the age bracket of 15-17 disclosed a mean score of 4.56, indicating a very high level. In contrast, those within the age bracket of 18 and above manifested a mean score of 2.94, showing a moderate level. The computation yielded a t-value of 7.972 and a p-value of 0.000, wherein once compared to 0.05 level of significance was disclosed to be lesser, manifesting a significant difference and the rejection of the null hypothesis. This means that respondents within the age bracket of 15-17 and those within the age bracket of 18 and above exhibited differing assessments of the implementation of disaster risk reduction management. Also, for disaster preparedness, respondents within the age bracket of 15-17 showed a mean score of 4.26, described as a very high level, while those within the age bracket of 18 and above displayed a mean score of 3.47, labeled as a high level. The computation yielded a t-value of 16.418 and a p-value of 0.000, which is lesser when compared to a 0.05 level of significance, manifesting a significant difference and the rejection of the null hypothesis. This means that respondents within the age bracket of 15-17 as well as those within the age bracket of 18 and above, displayed differing assessments of the disaster, which also suggests that age significantly affects the implementation of disaster risk reduction management and disaster preparedness.

It also reveals that there was a significant difference in mean scores across ethnicity; non-ip respondents garnered a mean score of 4.60 or a very high level, while IP respondents disclosed a mean score of 3.13 or a moderate level. The computation disclosed a t-value of 8.158 and a p-value of 0.000, which is lesser than the level of significance of 0.05, manifesting a significant difference resulting in the rejection of the null hypothesis. Data disclosed that Non-IP and IP respondents showed contrasting perspectives concerning the implementation of disaster risk reduction management. Also, non-IP respondents acquired a mean score of 4.30, or a very high level for disaster preparedness, while IP respondents disclosed a mean score of 3.45, or a high level. The computation yielded a t-value of 20.309 and a p-value of 0.000, which is lesser than the significance level of 0.05, showing a significant difference resulting in the rejection of the null hypothesis. Data disclosed that Non-IP and IP respondents showed a disparity of perspectives concerning disaster preparedness. It could be surmised, that ethnicity significantly affects the implementation of disaster risk reduction management and disaster preparedness of one of the schools in the Division of Davao de Oro.

The results were supported by Lindell (2003); according to him, the findings relating to the influence of demographic characteristics on preparedness activities are mixed. Characteristics such as age, gender, race/ethnicity, number of dependents, and educational level are significant in some studies and not in others. Cannon (1994) argues that "there are no generalized opportunities and risks in nature, but instead there are sets of unequal access to opportunities and unequal exposures to risks which are a consequence of the socio-economic system." In other words, implementation of DRR, disaster preparedness, and capacity to cope with risks systematically attributed to people across space and time, which, together with other attributes such as age, ethnicity, or class, are often functions of an individual's gender. Increasingly, even physical geographers and public health scholars acknowledge that better mitigation of negative disaster impacts is contingent on a better understanding of the socially constructed vulnerabilities of specific groups of affected people Alcántara-Ayala (2002). According to Anderson (1994), engaging and empowering women are beneficial means of strengthening resilience to disaster risks. Just as gender roles and relations shape vulnerability to disaster, conversely, they also shape people's capacity to prepare, withstand, and recover. Women have particular experience and skills to contribute to disaster risk management due to their role as primary caregivers within the family and often in the broader community.

6. Conclusions

Based on the analyses made on the available data, these were the conclusions:

- The people involved in implementing the DRRM program are fully prepared for the readiness of the school facilities, and disaster preparedness activities are still improving.
- The school personnel are aware of and do understand the DRRM program and activities.
- The extent of disaster preparedness is significantly associated with the level of their DRRM implementation in terms of school risk reduction management and DRRM integration into learners' curricula.
- The implementation of DRRM is directly and significantly associated with the level of implementation and disaster preparedness as perceived by Junior High School Students.
- The results reveal that there is a significant difference between Disaster Risk Reduction Implementation and Disaster Preparedness when analyzed by age, ethnicity, and sex.
- The findings reveal that Non-IP respondents exhibit a higher level of preparedness than the IP respondents.
- The findings conclude that disaster preparedness needs to be thoroughly practiced and evaluated.

7. Recommendations

Based on the findings of this study, the following were recommended for further consideration in future studies:

- All implemented DRRM programs and activities should have a regular or annual evaluation to study needed improvements to attain full implementation for each parameter.
- Install SDRRM Corner within the school, all classrooms, and offices bearing all information regarding implementation and preparedness programs, projects, and activities.
- Install signages and markers like evacuation site, parking area, waiting area, holding area, evacuation map and routes, and depth gauge.
- Intensify the student-gained knowledge through quarterly earthquake drills, including flood and fire drills or even unannounced drills, to see to it that they are aware and that they will proactively engage in disaster preparedness.
- Students must have full knowledge of the evacuation sites and be oriented to the Temporary Learning Spaces (TLS) site if needed.
- While to enhance the preparedness of the facilities and activities being conducted, linkage with other government agencies for training and upgrading of the facilities is needed.
- Foster community resilience by promoting the establishment and strengthening of local networks and support systems in both non-indigenous and indigenous communities.
- Encourage further research and collaboration between government agencies, NGOs, and indigenous communities to deepen the understanding of specific challenges and opportunities related to disaster preparedness.
- Ensure that disaster management policies and practices are inclusive of the cultural values, traditions, and beliefs of indigenous communities.

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