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Knowledge and Skills of School Disaster Risk Reduction Management (DRRM) Coordinators in Irosin District I: A Mixed-Methods Analysis

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ABSTRACT : Natural disasters, including earthquakes, cyclones, and climate-related events, have escalated in frequency and intensity in the 21st century posing significant global challenges. The Philippines, located along the Pacific "Ring of Fire," is highly susceptible to typhoons, earthquakes, floods, volcanic eruptions, and landslides, all of which threaten educational continuity. As a result, the Department of Education (DepEd) has implemented the Comprehensive Framework for Disaster Risk Reduction and Management (DRRM) in Basic Education to address these challenges, with school DRRM coordinators playing a critical role in disaster preparedness, response, and recovery. This study investigates the knowledge and skills of School DRRM Coordinators in Irosin District 1, Irosin, Sorsogon, focusing on DRRM modules, psychological first aid, and school-based first aid. A mixed methods research design was employed, utilizing both quantitative and qualitative data to assess participants' knowledge and skills. A knowledge test design was used to measure the knowledge, while qualitative insights were gathered from unstructured interviews. Findings revealed that school DRRM Coordinators had varying levels of knowledge across modules. Inclusive and Child-Centered DRRM and Supplies and Logistics in Education in Emergencies were rated outstanding, while Education in Emergencies, Information Management, and Temporary Learning Space were very satisfactory. Modules such as PFA and RA 10821 were satisfactory, but Philippine Basic Education System, Conflict Sensitive Education, Alternative Delivery Modes, and Camp Coordination and Camp Management were fairly satisfactory. Modules including School-Based DRRM, DRRM-CCA Terminologies, International and National Foundations of DRRM on Basic Education, Resource Mobilization and Partnership, Contingency Planning for Education, and Introduction to Peace and Conflict did not meet expectations. The qualitative data identified challenges met that possibly caused the low scores such as (1) Lack of Initial Training; (2) Unexpected role assignments; and (3)Uncertainty and Concern About Responsibility. and Resources. While, skills demonstrations showed average performance, there were challenges identified in (1) Role uncertainty; (2) Poor coordination (3) Reliance on external support and online resources; (4) Emotional impact; (6) Training gaps in practical first aid knowledge; and (7) outdated DRRM resources. These findings emphasize the need for a focused training program and updated DRRM resources to enhance emergency preparedness in school settings.

Keywords - Disaster Preparedness, Disaster Risk Reduction and Management, Knowledge and Skills, School DRRM Coordinators, Training Program

I.   INTRODUCTION

The 21st century has seen a notable rise in both the frequency and severity of natural disasters, including earthquakes, cyclones, and climate-related events, posing substantial global challenges. The Philippines, due to its geographic location along the Pacific "Ring of Fire," is especially vulnerable to hazards like typhoons, earthquakes, floods, volcanic eruptions, and landslides, which threaten the safety and continuity of education (Center for Excellence in Disaster Management and Humanitarian Assistance, 2015). These disasters disrupt schools, hinder children's education, and cause severe economic consequences, particularly in low-income regions. According to Ritchie, Rosado, and Roser, natural disasters like earthquakes and storms claim an average of 40,000 to 50,000 lives annually, while extreme events have resulted in death tolls reaching tens or even hundreds of thousands.

To mitigate these risks, the Department of Education (DepEd) in the Philippines developed the Comprehensive Framework for Disaster Risk Reduction and Management (DRRM) in Basic Education, which focuses on three primary pillars: ensuring safe learning facilities, enhancing school disaster management, and integrating DRR in education (DepEd, 2015). School DRRM coordinators are essential in this framework, coordinating disaster preparedness, response, and recovery efforts. They play a critical role in managing communication, facilitating risk identification, and leading multi-hazard drills. DepEd Order No. 21, Series of 2015, outlines their duties, emphasizing the importance of effective coordination to minimize disaster impact.

The DepEd MATATAG program, as noted by Babaran (2023), focuses on optimizing learner well-being, promoting inclusive education, and creating safe learning environments. Similarly, initiatives like "THE VILLAGE INC" in Sorsogon Province aim to build community resilience and empower future generations to proactively engage in disaster preparedness (Division Memorandum No. 262, s. 2023).

A study by Estera (2023) highlighted that while teachers in Juban District reported higher awareness of DRRM measures, students had lower perceptions of their availability. The study aimed to assess the knowledge and skills of School DRRM Coordinators to inform the development of an intervention, such as a tailored training program. This initiative seeks to enhance their disaster preparedness and response capabilities, ultimately strengthening the resilience of schools and communities during crises.

Objectives of the Study

Generally, this study aimed to assess the knowledge and DRRM skills of School DRRM Coordinators, focusing on standardized DRRM modules, psychological first aid, and school-based first aid, as well as their practical disaster management skills.

II.   METHODOLOGY

This study employed a mixed method research design to assess the knowledge and skills of School DRRM Coordinators in Irosin District 1. A total of 16 coordinators from 14 elementary schools, one integrated school, and one secondary school in Irosin District 1, Sorsogon, participated in the study. Participants were purposefully selected to ensure a diverse representation of DRRM knowledge and skills across different school types and sizes, enabling a comprehensive understanding of the district's DRRM practices.

Data collection involved a knowledge test composed of objective-type questions covering standardized DRRM modules, psychological first aid, and school-based first aid. Skills were assessed through practical demonstrations, evaluated using researcher-designed rubrics. These methods facilitated the identification of participants' baseline knowledge, strengths, and areas needing improvement. Ethical considerations were upheld by obtaining informed consent and necessary approvals from relevant authorities.

Quantitative data were analyzed using mean percentage scores (MPS) to evaluate participants' knowledge and skills levels. Skills demonstrations were rated with a 4-point rubric, providing an objective measure of competency. Qualitative data, gathered through pre-intervention unstructured interviews, were analyzed using thematic analysis. This method identified, analyzed, and reported recurring patterns and themes, offering rich insights into the participants' experiences and perspectives regarding Disaster Risk Reduction and Management (DRRM). Thematic analysis was utilized to reveal key themes, including variability in participants' prior knowledge of DRRM concepts, and assess the need for training in psychological first aid and emergency response, as well as prove the importance of hands-on, practical exercises.

The findings were used as these highlighted the need for a targeted intervention to address these gaps. As a response, a Learning and Development Training Program was proposed, aimed at enhancing coordinators' disaster preparedness and response capabilities. This program is expected to strengthen the resilience of schools and their communities in times of crisis.

III.   RESULTS AND DISCUSSION

1)   Knowledge of School DRRM Coordinators on the Standardized School Disaster Risk Reduction Management Modules, Psychological First Aid and School-based First Aid

Table 1A presents the percentage scores of the Pretest on the 17 standardized modules, psychological first aid and school-based first aid in the pretest. The data in these variable and sub-variables were gathered prior to the school DRRM training and the descriptions were based on DepEd Memorandum No. 08 s. 2015.

As shown in the table, along the Standardized Modules, Inclusive and Child-centered DRRM as well as Supplies and Logistics in Education in Emergencies, both have Percentage Scores (PS) of 90 which are described as Outstanding. Education in Emergencies (EiE) got 79, Information Management and RADaR Reporting and Temporary Learning Space (TLS) both got 78 Percentage which are all described as Very Satisfactory. While the module on RA 10821 – Rights of Children During Emergency Relief is described as Satisfactory with a percentage score of 81. Additionally, the modules on the Philippine Basic Education System,

Conflict Sensitive Education, Alternative Delivery Modes, and Camp Coordination and Camp Management are described as Fairly Satisfactory with a percentage score of 79, 78, 78, 76, respectively.

Table 1. Knowledge of School DRRM Coordinators

Categories	Pretest	
	Percentage Score	Description
Standardized DRRM Modules		
Module 1: The Philippine Basic Education System	79	Fairly Satisfactory
Module 2: DRRM-CCA Terminologies	68	Did not meet Expectation
Module 3: International and National Foundations of DRRM on Basic Education;	61	Did not meet Expectation
Module 4: The Comprehensive Basic Education Framework	45	Did not meet Expectation
Module 5: Introduction to Peace and Conflict;	54	Did not meet Expectation
Module 6: Conflict Sensitive Education;	78	Fairly Satisfactory
Module 7: Inclusive and Child-Centered DRRM;	90	Outstanding
Module 8: Education in Emergencies (EiE)	89	Very Satisfactory
Module 9: Alternative Delivery Modes;	78	Fairly Satisfactory
Module 10: Information Management and RADaR Reporting;	88	Very Satisfactory
Module 11: School-Based DRRM;	69	Did not meet Expectation
Module 12: Camp Coordination and Camp Management;	76	Fairly Satisfactory
Module 13: RA 10821 – Rights of Children During Emergency Relief;	81	Satisfactory
Module 14: Temporary Learning Space (TLS);	85	Very Satisfactory
Module 15: Supplies and Logistics in Education in Emergencies;	90	Outstanding
Module 16: Resource Mobilization and Partnership;	59	Did not meet Expectation
Module 17: Contingency Planning for Education	59	Did not meet Expectation
Psychological First Aid (PFA)	83	Satisfactory
Standard First Aid	37	Did not meet Expectation

However, the remaining standardized modules on School-Based DRRM has PS of 69, DRRM-CCA Terminologies got 68, International and National Foundations of DRRM on Basic Education has 61, Resource Mobilization and Partnership and Contingency Planning for Education both got 59, Introduction to Peace and Conflict has 54, and The Comprehensive Basic Education Framework got a percentage score of 45 which are all described as DNME or Did not meet expectation. Furthermore, the percentage score of 83 on the pretest in Psychological First Aid (PFA) means the participants have satisfactory knowledge. While the result on school-based First Aid did not meet expectations with a percentage score of 37.

The pre-test score for PFA reflects that participants have satisfactory knowledge, though they a considerably lower pre-test score with regard to School-based First Aid, pointing to a gap in understanding. This may imply that not all school DRRM coordinators are properly trained. Perhaps this could be attributed to some limitations, such as lack of time available for teachers, noting that they may already have numerous tasks added to their daily routine. With so many teachers have to accomplish, they may fail to allocate enough time to undergo training and capacity-building. Hence, a reasons such as stress that result to burn out, mood swings and change of personality in the DRRM coordinator can be observed, often due to factors such as too many workloads and lack of specialized training. This disrupts continuity and consistency in DRRM efforts within any given school because each new coordinator would need some time to acquaint themselves with the details of the job. Ultimately, remedies to this—particularly improving their work-life balance and on time and resources spent on this type of training—can help better equip school DRRM coordinators for this crucial role in promoting safety and resilience within educational institutions.

These ideas are also supported by the study of Bello et al. (2022) who extensively explored the concept and impact of work-life balance in modern organizations. They emphasized that prioritizing work-life balance is crucial for employee well-being and job satisfaction, despite challenges like resistance from traditional structures and diverse employee preferences. However, successful work-life balance initiatives can lead to increased employee engagement, reduced burnout rates, and enhanced organizational reputation as a supportive employer.

In contrast, along the knowledge, the result of the study of Dimalanta and Salcedo (2018) on Disaster Risk Reduction and Management Capability of Coordinators in Schools Division Office of San Carlos City, Pangasinan are knowledgeable both in prevention and mitigation, preparedness, response, and rehabilitation and recovery.

Moreover, the idea of Hornbuckle (2022), supports the perceptions that pretests are non-graded assessments that determines each student's knowledge and proficiency in the subject matter that is employed to

evaluate a learner's existing knowledge or comprehension of a specific subject before embarking on a learning initiative. Therefore, this approach aided the development of the learning and development training program in gaining deeper insights into participants' existing understanding of the subject matter and pinpointing areas where knowledge may be lacking.

Additionally, participants shared feedback through unstructured interviews, providing meaningful insights into their experiences. And the responses from the interview were systematically analyzed to present the qualitative data. Three key themes and patterns emerged from the participants' statements:

1. Lack of Initial Training Upon Assignment. Multiple participants express that they were assigned roles or responsibilities without prior training or adequate preparation. Several participants expressed a lack of training upon assuming their roles: P3 shared that they were designated as SDRRM Coordinator following the death of the previous coordinator, without any prior preparation or support. P12 and P14 similarly stated that they inherited the responsibility after their predecessor was promoted, leaving them unprepared for the role. This suggests a gap in formal preparation for the positions they hold.

2. Unexpected Role Assignments. The data suggests that the participants were given roles due to unforeseen circumstances, such as the departure or promotion of the previous role holders. Some participants were given roles after someone else left or got promoted, but they had little to no understanding of the job's requirements.

3. Uncertainty and Concern About Responsibility. The participants highlight their discomfort or lack of confidence in the responsibilities they were assigned, specifically regarding the roles of SDRRM Coordinator and First Aid. Some participants were assigned roles (such as SDRRM Coordinator) without prior training, which left them feeling unprepared or unaware of the scope of their responsibilities.

The qualitative data indicates that participants were often placed in positions of responsibility without adequate preparation or training. They express a sense of being unqualified for the roles, which could impact their confidence and effectiveness in carrying out their duties. There appears to be a need for better training and clearer transition processes when assigning important roles, particularly in emergency response and disaster risk reduction management.

This is supported by the study conducted by Lopez et al. (2018), which examined disaster preparedness in schools and concluded that it was generally satisfactory. However, the authors highlighted concerns regarding non-compliance with certain issues, such as the inadequacy of training materials and the lack of training among School Disaster Risk Reduction Management Teams.

2)   DRRM Skills of School DRRM Coordinators

This portion discusses the DRRM skills of school DRRM coordinators along ten (10) skills such as Camp Coordination and Camp Management, Psychological First Aid and school-based First Aid such as, Life-Threatening Bleeding, Dressings and Bandaging – Open Wounds, Splinting Upper Extremity/Lower Extremity Fractures, Airway Obstruction, Three-Person Log Roll, Immobilization – Long Spine Board (Backboard), and Burns.

Skills on Camp Coordination and Camp Management

This section focused on the coordination of camps and the management thereof. It dealt with establishing and organizing temporary shelter in camps, managing resources in a camp setting, ensuring camp residents are safe and well, coordinating efforts regarding relief between stakeholders.

Table 2A. Skills on Camp Coordination and Camp Management

	Group 1		Group 2	
	Score	Description	Score	Description
Scenario Accuracy	2	Average	2	Average
Roles	2	Average	2	Average
Knowledge in camp management	3	Average	2	Average
Required Elements	2	Average	2	Average

As shown in Table 2A, both Groups 1 and 2 have average performances in terms of scenario accuracy, roles, and required elements, with corresponding scores of 2. However, Group 1 still has a slight advantage over camp management knowledge with a score of 3, while that of Group 2 is only 2.

It means that despite the very similar performances of both groups, Group 1 still has a relatively better notion regarding camp management. To this effect, Group 1 might have a more definite knowledge regarding camp management standards. That is important to deal with concerns in a better way where the best practices could be applied much easier, and changes are more easily adopted. Hence, Group 1 proves to excel at the

challenges by processing and fine-tuning their operations within the camp to a high standard of task, proving detailed knowledge and refined problem-solving skills.

Briselli (2023) stated that understanding the kinds of domains within which one is working helps in improving on effectiveness and results. A better grasp of these specific contexts means that strategies and approaches can be developed to a more attuned and adapted appropriately, applied best practices with more finesse, and higher performance-driven standards. Keen awareness also promotes innovation, enhances problem-solving, and eventually leads to successful outcomes that are more sustainable.

After the presentation of one group, a member presented what transpired on their simulation. The key themes identified from the participants' responses were:

1. **Role Ambiguity and Uncertainty.** Participants expressed confusion about who was responsible for managing the evacuation center—the school or the local government unit (LGU), leading to disorganization.
2. **Disorganization and Chaos.** The lack of clear roles and responsibilities contributed to chaotic and disorganized situations during evacuations, making it difficult to manage evacuees effectively.
3. **Lack of Communication and Coordination.** There was poor communication and coordination between the school staff and the LGU, which further exacerbated the confusion during the emergency response.
4. **Inadequate Preparedness and Training.** Participants noted their lack of preparation and training for handling evacuation responsibilities, highlighting a gap in their readiness to manage such situations.
5. **Overwhelmed and Underprepared Staff.** School staff felt overwhelmed by their responsibilities and unprepared to handle the demands of managing an evacuation, leading to inefficiencies.

These themes collectively emphasize the need for clearer roles, better communication, and improved training for school staff to handle emergencies more effectively. This is supported by Oro and Benavides (2021) who examined the improvement of school-level DRRM practices in Sorsogon's Second Congressional District from 2016 to 2019. Their study outlined pre-disaster activities like simulations, orientations, and planning; disaster-time protocols such as class suspensions and coordination with authorities; and post-disaster actions including damage assessment, reporting, infrastructure evaluation, and collaboration with government agencies. Recommendations focused on enhancing disaster preparedness, response capabilities, and ongoing risk assessment.

In addition, Herrity (2024) further supports the result of this study as his study emphasizes the importance of training, stating that it provides a clear path for enhancing knowledge and job skills, leading to better effectiveness. Although training may incur short-term costs, its long-term benefits outweigh these drawbacks. Employers are encouraged to implement training programs as they help employees acquire the skills and knowledge needed to adapt to industry developments and improve productivity. Additionally, training addresses areas identified in performance appraisals, fulfilling improvement needs, and prepares workers for greater responsibilities, boosting their sense of value within the organization.

Skills on Psychological First Aid

This section presented the relevance of PFA in a school setting. It articulated the role PFA plays in addressing the psychological and emotional needs of the learners, teaching, and other staff in the schools during and after emergencies or crises.

Table 2B. Skills on Psychological First Aid

Category	Group 1		Group 2	
	Score	Description	Score	Description
Introduction	1	No Improvement	2	Average
Scenario	2	Average	3	Very Good
Communication skills/Use of effective communication	2	Average	2	Average
PFA Skills (Approach)	3	Very Good	2	Average

This describes the strengths and areas in the performance of PFA skills for both groups. Group 1 has to improve the introduction part of PFA but possesses good PFA skills, whereas they seemed reasonably capable of performing PFA in scenarios and is ready to take up actual practice. However, both groups need further training in communication and establishment of training evaluation and feedback. This enables recognition of differences between these groups and therefore interventions to increase introductory skills in Group 1 and provide links to practical application in Group 2, thus developing a comprehensive approach to PFA in both groups.

This is partially supported by the previous study of Wang et al. (2021) in relation to the effectiveness of PFA in reducing distress and enhancing self-efficacy. Their study detailed a protocol to assess the feasibility and acceptability of a locally tailored training program on PFA adapted to the local cultural and health care context,

including systematic evaluations. This informed future large-scale trials or sustained training efforts to close the mental health promotion strategies implementation gap and further support employees to assist in their mental well-being management in crises.

Along PFA-relevant topics, when asked about their prior learning, and the sharing of experiences during emergency situation, several key themes emerge related to the challenges and limitations faced by teachers and school staff in providing first aid such as:

1. **Lack of Knowledge and Preparedness.** Several participants expressed that they faced challenges in responding to emergencies due to insufficient knowledge of first aid. Some mentioned difficulty providing first aid to students experiencing panic attacks, as teachers often do not know the correct response or what to say in such situations. Similarly, it was highlighted how the staff of some small school lacked the necessary first aid equipment and knowledge when a student fell from a tree. They had to rely on the Municipal Disaster Risk Reduction and Management Office (MDRRMO) for assistance due to the lack of preparedness.

2. **Inadequate Resources and Training.** Participants noted that the lack of first aid resources and formal training exacerbated their ability to handle emergencies effectively. Some experience in a small school with limited resources emphasized the difficulties faced in emergency situations when essential tools were unavailable, leading them to call for external help. In one's experience, the lack of first aid expertise in the school meant that, when a student was burned by an oven, they had no immediate remedy and had to take the student to the hospital for further care.

3. **Real-Life Experiences of Handling Injuries.** Some participants shared simple injury experiences, such as minor falls, which were easier to handle due to their less severe nature. Three participants all described a situation where the injury was a small and shallow wound, making it easy to treat. These incidents contrast with more serious emergency situations where the lack of resources and knowledge made the response more difficult and uncertain.

4. **Emergency Response and Support from External Authorities**. In cases of more serious injuries or panic attacks, participants highlighted the reliance on external authorities for assistance, such as the MDRRMO in one's experience, or the hospital in some cases when the student was burned. This points to a gap in the schools' ability to independently handle severe emergencies and underscores the need for better training and resources.

5. **Emotional and Psychological Impact.** The experience of dealing with students who experience panic attacks or high anxiety levels in emergency situations also emerged as a significant challenge for teachers, as noted by one participant. Teachers may struggle with how to address emotional or psychological needs while managing physical injuries, which requires specialized training in both first aid and mental health care.

The data suggests that a common theme among the participants is the struggle to respond effectively to emergencies due to insufficient training, lack of first aid resources, and the challenges of managing both physical and emotional aspects of students' health. Despite these challenges, some minor injuries were easier to manage, but more severe cases often led to reliance on external help. This highlights a need for enhanced disaster preparedness and first aid training, as well as the provision of necessary resources in schools to handle emergency situations more effectively.

The result was supported by the study of Hodson (2023) that explores educational materials provided to schools in England to enhance preparedness for extreme events, which can have significant physical, emotional, and psychological impacts, particularly on children and young people. Also, the study of Oduntan (2022) focuses on the emergency preparedness of early childhood educators, particularly in light of the COVID-19 pandemic, which has severely impacted early childhood education. It emphasizes the importance of assessing teachers' ability to handle emergency situations. The chapter discusses the rationale for early childhood disaster education and the skills needed by educators to manage emergencies effectively. It also highlights the impact of COVID-19 on Nigerian children and the need for an educational response to emergencies. Recommendations include the development of an ecosystem to support early childhood education during emergencies, such as providing uninterrupted power supply, subsidized internet access, computer-assisted learning, and training teachers to use modern educational technology.

Skills on Life-Threatening Bleeding

This portion consisted of training in first aid skills, equipped with identification and acting on life-threatening bleeding, to enable one to proactively respond to such cases with confidence and efficiency. Table 2D shows the knowledge and performance gaps concerning life-threatening bleeding situations that underscore the need for training interventions in support of life-saving skills. Another unique finding is the expression of empathy that remains constant toward the victim.

Table 2C. Skills on Life-Threatening Bleeding

Category	Pair 1	Pair 2	Pair 3	Pair 4	Pair 5	Pair 6	Pair 7	Pair 8
Knowledge	1 (No Improvement)	2 (Average)	2 (Average)	2 (Average)	3 (Average)	2 (Average)	2 (Average)	3 (Average)
Safety Practices	2 (Average)	2 (Average)	2 (Average)	2 (Average)	2 (Average)	2 (Average)	2 (Average)	2 (Average)
Identifying the situation	2 (Average)	2 (Average)	2 (Average)	2 (Average)	2 (Average)	2 (Average)	2 (Average)	2 (Average)
Performance	1 (No Improvement)	2 (Average)	2 (No Improvement)	2 (Average)	3 (Very Good)	1 (No Improvement)	2 (Average)	2 (Average)
Empathy to Victim	2 (Very Good)	3 (Very Good)	3 (Very Good)	3 (Very Good)	3 (Very Good)	2 (Average)	2 (Average)	3 (Very Good)
Language	1 (Average)	2 (Average)	2 (Very Good)	2 (Average)	3 (Average)	2 (Average)	2 (Average)	3 (Very Good)

This evidence shows that compassion is one of the key components of emergency response. Enhanced empathy and language skills are crucial in managing communication in high-stress situations. By focusing on the deficiency in knowledge through DRRM education and making use of the already acquired strengths, optimizes the response capabilities for better outcomes in the management of life-threatening bleeding situations.

The participants asserted that managing bleeding is an essential skill to school DRRM coordinators. The key themes from the qualitative data were:

1.   Essential First Aid Knowledge for School Personnel. Both participants emphasized the critical need for school DRRM coordinators, and in fact all teachers, to have basic first aid knowledge to respond to accidents and injuries among students.

2.   Frequent Accidents in Elementary Schools. The data highlights that elementary schools, due to the high activity and playfulness of young children, are more prone to accidents, making first aid skills even more important in such environments.

3.   Lack of Immediate Medical Support. The absence of a school nurse in many elementary schools, particularly in smaller ones, was pointed out as a reason why teachers and DRRM coordinators must be equipped to handle medical emergencies like heavy bleeding until professional help can be accessed.

These themes emphasize the need for practical first aid training and preparedness to effectively manage common accidents in schools. As has been previously reported in the study of Torani et al. (2019), disaster education is a pragmatic, operational, and cost-effective measure toward the management of a number of risks that come with emergencies. Evidence indicates that it is important to educate vulnerable groups on disasters. Though there are many methods to educate these groups, none is superior compared to others. However, the people trained are in a better position to protect themselves and other people during emergencies. Therefore, it is important to conceptualize and develop disaster education programs that are aimed at empowering members of the public to confront disasters effectively.

Skills on Dressings and Bandaging – Open Wounds

Table 2D provided an in-depth assessment of skills concerning Dressings and Bandaging for Open Wounds. The demonstration was done by 8 pairs. Noticeably, there were knowledge and performance deficits for Pair 1 and knowledge weakness on both Pair 1 and 4, with ratings of 1. Pair 5 went well and had a very good rating in performance. Empathy towards the victim is strong across almost all pairs, as many have very good ratings on this one. Although, Pairs 3 and 6 used very good language during the demonstration.

Table 2D. Skills on Dressings and Bandaging – Open Wounds

	Pair 1	Pair 2	Pair 3	Pair 4	Pair 5	Pair 6	Pair 7	Pair 8
Knowledge	1 (No Improvement)	2 (Average)	2 (Average)	2 (Average)	2 (Average)	2 (Average)	2 (Average)	3 (Average)
Safety Practices	2 (Average)	2 (Average)	2 (Average)	2 (Average)	2 (Average)	2 (Average)	2 (Average)	2 (Average)
Identifying the Situation	2 (Average)	2 (Average)	2 (Average)	2 (Average)	2 (Average)	2 (Average)	2 (Average)	2 (Average)
Performance	1 (No Improvement)	2 (Average)	2 (No improvement)	2 (Average)	3 (Very Good)	1 (No improvement)	2 (Average)	2 (Average)
Empathy to Victim	3 (Very Good)	3 (Very Good)	3 (Very Good)	3 (Very Good)	3 (Very Good)	2 (Average)	2 (Average)	3 (Very Good)
Language	1 (Average)	2 (Average)	2 (Very Good)	3 (Average)	2 (Average)	2 (Average)	2 (Average)	3 (Very Good)

These findings underline the significance of the training intervention in covering knowledge gaps and improving performances in the management of open wounds. It may on because of previously identified strengths like empathy and language skills as a means toward achieving the best possible response from every pair. Indeed, the fact that most pairs elicited empathy for the victim indicates that first aid care is incomplete without compassion. The strengths in empathy and advanced language skills can be built on to improve communication for a much better care.

The idea is partially enlightened by the following study of Moudatso et al. (2020). Professionals who can sustain high levels of empathy elicit therapeutic change. "Empathy" has been described as the central communication skill for healthcare professionals, with emotion, cognition, and behavior dimensions. Professionals appreciate, understand patients' experience, making them feel comfortable enough to freely express themselves, hence meeting the healthcare needs adequately. This interfaces with the idea that issues of empathy belong at the very foundation of health and social care undergraduate education but should continue as a focus for professional development throughout their careers.

Skills on Splinting Upper Extremity/Lower Extremity

Table 2E compared Group 1 and Group 2 on the skills in the area of Splinting Upper Extremity/Lower Extremity Fractures, focusing on school settings. Group 1 has significant weaknesses in knowledge and performance, scoring 1 in both. On the other hand, group 2 gives up an average performance in most categories, which proves that these are students with good bases but with ways to improve. In all groups, performance concerning questions on safety practices, identification of the situation, showing empathy to the victim, and language skills was average.

Table 2E. Skills on Splinting Upper Extremity/Lower Extremity Fracture

Category	Group 1		Group 2	
	Score	Description	Score	Description
Knowledge	1	No Improvement	2	Average
Safety Practices	2	Average	2	Average
Identifying the situation	2	Average	2	Average
Performance	1	No Improvement	2	Average
Empathy to Victim	2	Average	2	Average
Language	2	Average	2	Average

The implication from Table 2F is that there is some strong foundation which could be further refined. While these data show baseline proficiency in the skills or knowledge areas that were assessed, there has been a bit short of mastery attained.

Some participants mentioned that experiences as the school DRRM coordinator will made one realize how important first aid for fractures in schools are. The key themes from the data shared by the participants were:

1.   **Importance of First Aid for Serious Injuries.** The incident of the pupil falling from a coconut tree highlights the necessity for school DRRM coordinators to have first aid knowledge, particularly in dealing with fractures and other serious injuries, to provide immediate care before professional help arrives.

2.   **Anxiety and Inability to Respond in Emergencies.** The participant's experience reflects the anxiety and helplessness that can occur when school personnel are unprepared to handle emergencies. This emphasizes the need for proper training and preparedness to reduce stress and enhance response capabilities.

3.   **Reliance on External Support.** The participant's decision to call the MDRRMO due to the lack of first aid knowledge illustrates the dependence on external emergency services in schools without sufficient in-house medical preparedness, further highlighting the gap in readiness.

These themes stress the importance of comprehensive first aid training for school staff to ensure effective management of serious injuries and reduce the dependency on external resources in urgent situations. Hurell (2024) has illustrated, simulation-based learning maximizes a wide variety of advantages for training. This would expose learners to realistic, firsthand experiences on different scenarios and even developments of practical skills. Moreover, the interactive attribute keeps the learner's interest and is an advantage in that aspect, since a high level of knowledge can be retained. In addition, simulations can be replicated by some style of learning, making them a cost-effective learning process in the long run while providing a training ground necessary for the enhancement of confidence competence and performance for tracking areas indicating the need for training.

Skills on Airway Obstruction

First aid for airway obstruction entailed a swift action to clear the blocked airway and the restore the breathing of a victim. In most cases, it may be helpful in saving a life from airway obstruction. Table 2F evaluates competence in Airway Obstruction management. About this skill, there was poor knowledge and performance by Pair 1 and Pair 4; each received a score of 1 for knowledge and performance. On the other hand, Pair 5 scored very good for performance, hence advanced proficiency in the management of cases of airway obstruction.

Table 2F. Skills on Airway Obstruction

Category	Pair 1	Pair 2	Pair 3	Pair 4	Pair 5	Pair 6	Pair 7	Pair 8
Knowledge	1 (No Improvement)	2 (Average)	2 (Average)	2 (Average)	2 (Average)	2 (Average)	2 (Average)	3 (Average)
Safety Practices	2 (Average)	2 (Average)	2 (Average)	2 (Average)	2 (Average)	2 (Average)	2 (Average)	2 (Average)
Identifying the Situation	2 (Average)	2 (Average)	2 (Average)	2 (Average)	2 (Average)	2 (Average)	2 (Average)	2 (Average)
Performance	1 (No Improvement)	2 (Average)	2 (No Improvement)	2 (Average)	2 (Very Good)	1 (No mprovement)	2 (Average)	2 (Average)
Empathy to Victim	3 (Very Good)	3 (Very Good)	3 (Very Good)	3 (Very Good)	3 (Very Good)	2 (Average)	2 (Average)	(Very Good)
Language	1 (Average)	2 (Average)	3 (Very Good)	2 (Average)	3 (Average)	2 (Average)	2 (Average)	(Very Good)

Results show strength in advanced language skills. Communication and having high impact on much better care can now be enhanced. This allowed for relaying information clearer and more empathetic to the victim It further, developed a degree of trust and understanding as they communicate effectively to ensures the needs expressed by the victims were understood and attended to. More so, communications involved in responders were supportive of coordination in giving care and therefore better patient outcomes.

According to Rathore (2023), trust and communication have been the biggest building blocks of a team because it has meant improved collaboration, openness, decision-making process, and relationship. Trust sustains collaboration, sharing ideas that give way to the finer solving of issues and generation of ideas. This enhances openness such that each member is free to air their opinions, thereby opening up space for transparency and constructive feedback in their concerns. This helps in decision-making by allowing open discussions and making informed choices. This is the case because high-quality, trusting relationships will bring a more sustained, cohesive work environment where workers are more likely to help one another and collaborate on projects.

During the pre-intervention skills demonstration, some participants shared their experiences regarding first aid. The key themes from the participant's (P7) statement are:

1. **Reliance on Online Resources for Emergency Situations**. The participant's use of a YouTube video to learn how to perform first aid in a choking incident highlights the growing reliance on online resources for emergency preparedness, especially when formal training is lacking.

2. **Uncertainty and Lack of Confidence in First Aid.** The participant expressed uncertainty about whether they performed the correct first aid technique, pointing to a lack of confidence in their skills due to insufficient training.

3. **Importance of First Aid Knowledge in Emergencies.** Despite the uncertainty, the participant was able to successfully assist the choking student, demonstrating that even basic knowledge or self-taught skills can make a difference in emergency situations, though formal training is still necessary.

These themes emphasize the need for accessible first aid training and the potential benefits and limitations of learning from online sources in critical situations. Dasci, Sonmez, and Gokmenoglu (2022) investigated teachers' beliefs about disaster preparedness, focusing on perceived benefits, self-efficacy, challenges, severity, and susceptibility. The study found strong beliefs in disaster preparation and identified key influencing factors, including age, disaster education experience, and gender, while the place of residence had no significant impact. The findings highlight the need for targeted teacher training programs to enhance national disaster preparedness.

Skills on Three-Person Log Roll

The three-person log roll is a first aid skill used to roll an injured person onto their side or into a stretcher. In this rescue, the roller needs coordinated movements so that the injured person's head and neck are supported throughout the rolling process in order to keep the victim aligned to prevent more injury as possible.

Skill Evaluation of implementation of Three-Person Log Roll Group 1 shows that the group scores very poorly in terms of knowledge and performance overall. Similarly, the group scores 1s in both Knowledge and

Performance. Group 2 The overall performance of the group is fair overall in most areas. However, group scores 3 in all areas and 2 in terms of safety procedures, recognizing the situation, empathy towards the victim and language proficiency.

Table 2G. Skills on Three-Person Log Roll

	Group 1		Group 2	
	Score	Description	Score	Description
Knowledge	1	No Improvement	2	Average
Safety Practices	2	Average	2	Average
Identifying the situation	2	Average	2	Average
Performance	1	No Improvement	2	Average
Empathy to Victim	2	Average	2	Average
Language	1	No Improvement	2	Average

This theme has become imperative in light of the findings concerning the assessment of the proficiency of the two groups in executing this essential skill of transporting patients during emergencies. The highlighted inadequacies, therefore, need to urgently be attended to through specific training programs coupled with regular practice sessions. Feedback mechanisms and simulation exercises, if incorporated, can further help in making the learning be more efficient and performance in Real Life Situations better.

Some literature including Dill's (2019) suggests that the combination of deliberate practice and field education has the power to set up interaction in learning. The participants of his study gradually built competence by allowing themselves to receive constructive feedback wholeheartedly. Deliberate practice served on its own; it satisfies the basis of lifelong learning by setting a person on the road to relentless pursuit of vital feedback toward enhancing skills throughout their professional life.

Skills on Immobilization – Long Spine Board (Backboard)

Table 2H reflected skills on immobilizing a patient's Long Spine Board (Backboard). Skills demonstration was done between Group 1 and Group 2.

Table 2H. Skills on Immobilization – Long Spine Board (Backboard)

	Group 1		Group 2	
	Score	Description	Score	Description
Knowledge	1	No Improvement	2	Average
Safety Practices	2	Average	2	Average
Identifying the situation	2	Average	2	Average
Performance	1	No Improvement	2	Average
Empathy to Victim	2	Average	2	Average
Language	1	No Improvement	2	Average

In Group 1, the members have both conceptual and performance deficiencies, as is indicated with a score of 1 for all concepts and performance indices. Group 2, however, demonstrates an average performance in most indices, with only a few lower indices. Average proficiency is observed in both groups for the aspects of safety practices, identifying the situation, empathy with the victim, and language.

This implies that the key to doing this effectively is to establish the right training and education for both the first responders and the healthcare professionals. It would be important to develop the skills of first responders and healthcare providers in the immobilization of patients on Long Spine Boards so that this could be achieved through adherence to guidelines from reputable sources and implementation of comprehensive training programs on the subject for the attainment of improved patient outcomes and reduced chances of further injury.

Based on a literature written by Milland and Al-Dhahir (2023), the assessment of patients involved in cases of blunt force trauma, healthcare professionals should be informed about the indications, contraindications, associated complications, and the correct procedures for executing spinal motion restriction. Knowledge of the indications and contraindications enhances further the management of potential complications such as pain, pressure ulcers, and respiratory compromise in the patient's health.

Skills on Burns

Burn management skills entailed assessing the severity of the burn, first aid measures, and immediate care. These skills were important in ensuring burn patients receive appropriate care and treatment for burn injuries.

Table 2I. Skills on Burns

	Pair 1	Pair 2	Pair 3	Pair 4	Pair 5	Pair 6	Pair 7	Pair 8
Knowledge	1 (No Improvement)	2 (Average)	2 (Average)	2 (Average)	3 (Average)	2 (Average)	2 (Average)	3 (Average)
Safety Practices	2 (Average)	2 (Average)	2 (Average)	2 (Average)	2 (Average)	2 (Average)	2 (Average)	2 (Average)
Identifying the Situation	2 (Average)	2 (Average)	2 (Average)	2 (Average)	2 (Average)	2 (Average)	2 (Average)	2 (Average)
Performance	1 (No Improvement)	2 (Average)	2 (No Improvement)	2 (Average)	3 (Very Good)	1 (No Improvement)	2 (Average)	2 (Average)
Empathy to Victim	2 (Very Good)	3 (Very Good)	3 (Very Good)	3 (Very Good)	3 (Very Good)	2 (Average)	2 (Average)	3 (Very Good)
Language	1 (Average)	2 (Average)	2 (Very Good)	2 (Average)	3 (Average)	2 (Average)	2 (Average)	3 (Very Good)

Table 2I presents an assessment of skills in the management of burns among different pairs. Pair 1 and Pair 4 presented critical failures in knowledge and performance, and hence their grades for these categories are 1. In contrast, Pair 5 showed outstanding performance and obtained very good in performance. Empathy to the victim was the strong point for most of the pairs, and many scored very good in this regard. Only Pair 6 demonstrated very good and advanced language skills, which added up to communicating effectively while giving care.

Table 2I projected findings strongly call for the enhancement of response capabilities in the management of burns. This makes it very important for participants to develop skills that are peculiar to burn care and treatment. Besides appropriately guiding management and outcome predictions, such skills would make effective communication and collaboration possible when healthcare providers treat patients with burns.

According to Schaefer and Lopez (2023), the multidisciplinary approach that composes each of the members of the burn team is very important in the optimization of care and results for patients. By integrating professionals from different specialties. This collaborative approach allows each dimension of healthcare, such as treatment, rehabilitation, and psychosocial interventions, to be very well coordinated based on the special situation and needs of the circumstances for that individual.

IV.　　CONCLUSION

Based on the findings of the study, several conclusions were drawn. The school DRRM Coordinators demonstrated varying levels of knowledge across different modules. The modules on Inclusive and Child-Centered DRRM, as well as Supplies and Logistics in Education in Emergencies, were rated outstanding. Education in Emergencies, Information Management, and Temporary Learning Space were deemed very satisfactory. Modules such as PFA and RA 10821 received satisfactory ratings, while the Philippine Basic Education System, Conflict Sensitive Education, Alternative Delivery Modes, and Camp Coordination and Camp Management were rated fairly satisfactory. However, modules like School-Based DRRM, DRRM-CCA Terminologies, International and National Foundations of DRRM on Basic Education, Resource Mobilization and Partnership, Contingency Planning for Education, and Introduction to Peace and Conflict did not meet expectations. The qualitative data revealed three key themes: (1) Lack of Initial Training; (2) Unexpected role assignments; and (3)Uncertainty and Concern About the Responsibility.

Additionally, the skills demonstration conducted by the school DRRM Coordinators, both in groups and pairs on the ten identified DRRM skills, showed an average performance. Qualitative data highlighted several challenges faced by the school DRRM coordinators during emergencies. These challenges included: (1) Role Uncertainty; (2) Poor Coordination and Communication; (3) Reliance on External Support; (4) Emotional and Psychological Impact; (5) Real-Life Experience vs. Training Gaps; (6) Importance of Practical and Immediate First Aid Knowledge; and (7) Use of Online Resources for Emergency Situations. These findings provide valuable insights into the strengths and challenges faced by school DRRM coordinators, emphasizing the need for more targeted training and updated resources to improve preparedness for emergency situations. Based on the study, school DRRM Coordinators demonstrated varying levels of knowledge and skills, with modules like Inclusive and Child-Centered DRRM receiving high ratings, while others, such as School-Based DRRM and Contingency Planning, fell short of expectations. The findings highlight the need for targeted training, updated resources, and practical support to address key challenges like role uncertainty, outdated materials, and gaps in real-life preparedness.

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