RESEARCH ARTICLE

Education in Emergency-The School Managers’ Practices on Risk Reduction and Management of Disaster

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Abstract
This descriptive-correlation study established the relationship between the profile as to the level of practice of the school managers on the five thematic areas of the School Disaster Risk Reduction and Management (SDRRM) program of the Department of Education (DepEd). The study involved 30 respondents through a stratified random sampling technique and adopted a survey questionnaire from Campilla (2016). It has four components, the profile of the school managers, self-assessment checklist for the SDRRM level of practice, problems encountered, and suggested solutions. SPSS was the tool in generating statistical data. The majority of the respondents are in the middle age group, mostly female, married status, pursued higher studies, old hand in school management, and attended training/seminars on SDRRM. Their disaster preparedness, management, and mitigation are on highly practiced level. While the disaster response and recovery are at the practiced level. In general, the overall level of practice on SDRRM is at a practiced level. The study further revealed that there is no significant relationship between the profile and level of practice of the respondents. However, age shows a significant relationship in the thematic areas of SDRRM. A significant difference in the level of practice of elementary school managers to that of the secondary school managers. Lack and unavailability of funds and other resources are the common problems encountered by respondents in the implementation of the program while the topmost suggested solution is the provision of appropriate and relevant training to SDRRM.

KEYWORDS:
Schools Managers, Disaster Preparedness, Disaster Management, Risk Reduction

1 | INTRODUCTION

The Philippines is an archipelago and is located in the Pacific Ring of Fire, an area marked by regular volcanic movement. In this geographical location, the country is always experiencing catastrophic disasters. These disasters caused societal disruption particularly in education, whereas classes were interrupted, and the destruction of school infrastructures. Hence, the government through its attached agencies is working hand in hand to build a resilient nation from disasters. At the school level, school managers are being capacitated to implement risk reduction and management of disaster in their respective schools for the provision of a safe learning environment to Filipino learners.
Natural disasters kill an estimated 90,000 people per year and impact over 160 million people worldwide. They have an immediate impact on human lives and often result in the degradation of the affected people’s physical, biological, and social environments, resulting in long-term effects on their health, well-being, and survival. (WHO, 2020), due to its scale and vulnerability, the Asian Pacific region suffered the most natural disasters. Natural disasters strike almost every country on the planet. Due to the earthquakes and tsunami that hit Indonesia in September, the country saw the highest number of deaths in the world in 2018.

The Philippines ranked 3rd among all countries with the highest risks worldwide, according to the World Risk Report 2018, with an index value of 25.14%, according to the United Nations Office of Disaster Risk Reduction (2019). At least 60% of the country’s total land area is vulnerable to multiple hazards, and 74% of the population is affected. (GFDRR, 2017). In light of this, with each catastrophe that the country has faced, the country’s approach to disaster reduction has evolved and become more comprehensive. Focusing on the four main aspects of disaster management: institutional infrastructure, a legal framework for disaster prevention and response, national disaster management policy, and civil society response to disasters (Capistrano, n.d). The Philippine Risk reduction and management of disaster Act of 2010 improved the country’s risk reduction and management of disaster mechanism by creating a national risk reduction and management of disaster structure and institutionalizing a national risk reduction and management of disaster strategy, as well as allocating funds.

Moving on to the education sector, the Department of Education (DepEd) released D.O. No. 37, S. 2015 – The Comprehensive Risk reduction and management of disaster (DRRM) in Basic Education System to direct DRRM efforts in the basic education sector toward resilience-building in offices and schools, as well as to ensure that quality education is continuously provided and prioritized. This institutionalizes DRRM, processes, procedures, and activities. Also, provide a shared language and understanding for the introduction of DRRM in basic education at all stages. Schools, according to Lim et al. (2018), are the main source of data since they are the DepEd’s frontline service provider to students. These are responsible for supplying critical information before, during, and after a disaster, under the direction of the School Heads. The formation of a School DRRM Team, led by a designated coordinator, is needed. The SDRRM Coordinator is in charge of ensuring that DRRM is integrated into the School Improvement Plan.

On the seen role of school managers in providing a safe learning environment through the implementation of SDRRM, several studies were conducted to determine the response of school managers to this duty. Campilla (2016) discovered that school administrators attended appropriate SDRRM training at all levels when it came to disaster risk reduction management activities. School administrators earned a “Practiced” rating on the basis of disaster risk mitigation management activities. This information, which depicts the current state of practice among school administrators, will be used to improve the program and train the staff involved. According to Corpuz (2019), owing to a larger land area, private schools have a higher level of disaster risk management activities for earthquakes, fires, and floods, as well as a higher level of disaster preparation than public schools. The higher the school’s level of disaster risk management practice implementation, the higher the school’s level of disaster preparedness. Indeed, a review of public and private schools’ implementation of the SDRRM is a criterion for finding deficiencies and areas for change. Overseas, the effect of school managers’ disaster risk management training among public secondary schools in Nairobi City County, Kenya, was investigated. School managers were not trained in disaster risk management. The school administrators received school safety training from the Red Cross, as well as in-service and work-shop services. 71.3% of school administrators said disaster risk management preparation had a negative impact on DRM. (Munyiri, et.al 2019). Exposure of school leaders to various training and workshops would enable them to perform and practice risk reduction and management of disaster.

School principals, according to Jasojaso (2020), should bear the responsibility for addressing the need for properly practiced DRR management in order to build a healthy learning environment. Elementary school pupils should be assured a safe and secure learning atmosphere because they are vulnerable to accidents and casualties because they are unable to handle their own affairs. As a result, public elementary school administrators must devote a significant amount of time and resources to the introduction and practice of SDRRM. On the other hand, Comighud (2019) the disaster risk reduction management (DRRM) program in public schools is well-executed. In the event of a catastrophe, public schools are also well-equipped to respond to hazards. It was found that the status of DRRM implementation and the level of capabilities among public-school administrators have a significant relationship. It is quite significant to analyse whether public elementary and secondary school managers on their practice on the implementation and adherence to the provision of the SDRRM.

Based on the studies and literature gathered by the researchers, it is possible to conclude that school administrators play an essential role in leading the school community in providing a safe and sound learning environment for students by adhering to the provisions of the SDRRM. It is observable that some school managers were not exposed to various seminars and training.
related to risk reduction and management of disasters. This aspect would contribute to realizing the objective of SDRRM for learners. Another notable part is that the profile of the school manager affects their practice of risk reduction and management of disasters. Furthermore, some studies determined and established the description level of practice and implementation of SDRRM without analysing the relationship of independent and dependent variables that could help policy and program makers for program enhancement and development.

Hence, this study intended to determine the profile of the school managers in the two provinces of Central Luzon, along with their level of practice in different areas of School Risk reduction and management of disaster. The researcher established a relationship between the respondents’ profile towards their level of practice on SDRRM. Furthermore, the study examined differences in the level of practice of public elementary school managers from that of secondary school managers. On the latter, this study served as a basis in enhancing and developing the school managers’ implementation of SDRRM to adhere to the DepEd’s mission of providing a safe learning environment to learners.

The study described the school managers’ profile and level of practice on SDRRM, also established relationship among these variables. In addition, the significant difference in the level of practice on SDRRM among public elementary school managers to that of the secondary school managers was established. School managers encountered problems in the program that hamper their level of practice. Suggested solutions were analyzed in order to enhance the level of practice in SDRRM.

2 | METHODOLOGY

This study employed descriptive-correlational research wherein the researcher described the relationship between the profiles of the school managers to their level of practice in the different thematic areas of SDRRM. The main instrument utilized in this study was the adopted survey–questionnaire from the study of Campilla (2016). The study involved 30 school managers from the two provinces in Central Luzon. The data collection was employed through the use of Google Forms and generated using Google Sheets. Frequency and percentage scores were used to statistically describe the profile of the school managers. Mean scores were generated from the perceived level of practice on the different thematic areas of SDRRM. A Likert scale was used to indicate their verbal interpretation. Spearman rank-order correlation was utilized to examine the strength of association between respondents’ profile and the level of practice in SDRRM at 0.05 level test of significance. Also, these collected data from the respondents were analyzed through SPSS software.

To examine the difference in the level of practice in SDRRM between public elementary and high school managers, an independent T-test was utilized at 0.05 level test of significance. In addition, the problems encountered by school managers in the implementation of the SDRRM and the suggested solution to address these problems were presented through ranking and tally. The study adhered to the ethical consideration parallel to the policy and guidelines of the Data Privacy Law of 2012 that safeguards individuals from the illegal dispensation of personal information that is confidential.

3 | RESULTS AND DISCUSSION

3.0.1 | School Managers’ Profile

This includes the age, sex, marital status, highest educational attainment, years in service as school managers, and the training/seminars attended related to SDRRM. Table [ ] shows the generated data from the respondents.

3.1 | Age

The study found that the majority of school managers (7 or 23.33%) were between the ages of 40 and 44, while those between the ages of 60 and 64 were in the minority (1 or 3.33%). Similarly, Campilla (2016) noted that at this point, pertaining to age, in the field of study, there are more experienced teachers. As a result, they should be more knowledgeable and professional in risk reduction and management of disasters. Moreover, professional and managerial maturity will contribute meaningfully to the implementation of the program.
### TABLE 1 School Managers’ Profile.

<table>
<thead>
<tr>
<th>Age</th>
<th>Frequency</th>
<th>Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 yrs. -34 yrs.</td>
<td>4</td>
<td>13.33%</td>
</tr>
<tr>
<td>35 yrs. -39 yrs.</td>
<td>2</td>
<td>6.67%</td>
</tr>
<tr>
<td>40 yrs. -44 yrs.</td>
<td>7</td>
<td>23.33%</td>
</tr>
<tr>
<td>45 yrs. -49 yrs.</td>
<td>5</td>
<td>16.67%</td>
</tr>
<tr>
<td>50 yrs. -54 yrs.</td>
<td>5</td>
<td>16.67%</td>
</tr>
<tr>
<td>55 yrs. -59 yrs.</td>
<td>6</td>
<td>20%</td>
</tr>
<tr>
<td>60 yrs. -64 yrs.</td>
<td>1</td>
<td>3.33%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>30</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sex</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>13</td>
<td>43.3%</td>
</tr>
<tr>
<td>Female</td>
<td>17</td>
<td>56.7%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>30</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Civil Status</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single</td>
<td>6</td>
<td>20%</td>
</tr>
<tr>
<td>Married</td>
<td>22</td>
<td>73.3%</td>
</tr>
<tr>
<td>Widow/Widower</td>
<td>2</td>
<td>6.7%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>30</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Highest Educational Attainment</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>BS/BA/BSed/BEEd</td>
<td>2</td>
<td>6.7%</td>
</tr>
<tr>
<td>MS/MA Units</td>
<td>7</td>
<td>23.3%</td>
</tr>
<tr>
<td>MS/MA Degree</td>
<td>7</td>
<td>23.3%</td>
</tr>
<tr>
<td>Doctorate Units</td>
<td>9</td>
<td>30%</td>
</tr>
<tr>
<td>Doctorate Degree</td>
<td>6</td>
<td>16.7%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>30</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Experience as School Manager</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-5 yrs.</td>
<td>10</td>
<td>33.33%</td>
</tr>
<tr>
<td>6-10 yrs.</td>
<td>12</td>
<td>40%</td>
</tr>
<tr>
<td>11-15 yrs.</td>
<td>1</td>
<td>3%</td>
</tr>
<tr>
<td>16-20 yrs.</td>
<td>7</td>
<td>23.3%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>30</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Level of Trainings/Seminars</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>1</td>
<td>3.33%</td>
</tr>
<tr>
<td>School</td>
<td>5</td>
<td>16.67%</td>
</tr>
<tr>
<td>District</td>
<td>4</td>
<td>13.33%</td>
</tr>
<tr>
<td>Division</td>
<td>17</td>
<td>56.67%</td>
</tr>
<tr>
<td>Regional</td>
<td>2</td>
<td>6.67%</td>
</tr>
<tr>
<td>National</td>
<td>1</td>
<td>3.33%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>30</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>
3.2 | Sex

Findings revealed that the majority of the school managers are female (17 or 56.7%), while male school managers (13 or 43.3%) are less in number. According to Cvetković (2018), males appeared to have a greater confidence in their capabilities in dealing with floods, whereas household and personal preparedness is higher. Women, on the other hand, demonstrated greater comprehension of these events. Women showed more household-caring attitudes and activities and were more likely to report a willingness to support flood victims at reception centers, presumably due to a deeper level of awareness. Furthermore, because both sexes have different strengths and weaknesses, a collaboration between these sexes will strengthen SDRRM thematic area implementation.

3.3 | Civil Status

The majority of them are married (22 or 73.3%), which means that they have already established and served as head of their family. While few are single and not in a marital relationship (6 or 20%) and some (2 or 6.7%) are widows/widowers. According to Cvetković (2018), citizens who are in relationships would engage in detention centers to provide help to disaster victims. This may be related to the fact that married school administrators may expend more effort in the implementation of SDRRM as learners and school stakeholders in order to care for their respective families.

3.4 | Highest Educational Attainment

Findings revealed that the majority of the school managers have Doctoral Units (9 or 30.0%) and few were doctorate degree holders (5 or 16.7%), while some have already obtained their master’s degree (7 or 23.3%) and are currently enrolled in the master’s program (7 or 23.3%). As supported by Mutarrak et., al (2013), the results indicate that structured education can help people plan for disasters and reduce their vulnerability to natural disasters. These findings can also be suggested to higher learning institutions to include risk reduction and management of disasters in the educational programs to further enhance one’s capability in dealing with types of disasters.

3.5 | Years of Experience as a School Manager

Results show that the majority of the school managers’ length of experience is between 6 yrs to 10 yrs (12 or 40%) while some of them are in the position between 11 yrs to 15 yrs (2 or 3.3%). Similarly, Chung (2016), The higher the participants’ disaster management literacy, means the longer they served as school managers or teachers. This indicates that school managers over time were able to determine the best strategies to be implemented in various schools in different times and spaces.

3.6 | Level of Trainings/Seminars attended related to SDRRM by School Managers

The study reveals that school managers attended training/seminars in relation to SDRRM at the division level (17 or 56.67%), while some of them had the opportunity to attend at the National level (1 or 3.33%) and did not have the chance to attend at any level of SDRRM training (1 or 3.33%). According to Mutarrak et. al (2013), individuals with the highest educational attainment profit the most from disaster-related preparation. Indeed, training and other related activities on SDRRM must be available for school managers as they are the ones who lead the program, maintaining and providing a safe learning environment for learners.

3.7 | School Managers’ Level of Practice in SDRRM

Table 2 reveals that school managers both highly practiced (4.43) the development of communication plans in school. On the other hand, school managers practiced (4.13) the creation of a no-cost or low-cost disaster kit. Generally, the level of practice on disaster preparedness among the school managers is highly practiced (4.32). This means that they are placing effort into preparation to lessen the impacts of disasters on the learners and the school environment. According to Campilla (2016), school administrators are experts in emergency preparedness, including disaster communication strategies, whole-school health and safety approaches, defining available service agencies and a list of directives during a disaster, and holding preparation meetings to assess school needs.
### TABLE 2 Level of Practice of School Managers on Disaster Preparedness

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Mean</th>
<th>VD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. make outline plans for disaster management that can be used as a framework</td>
<td>4.27</td>
<td>Highly Practiced</td>
</tr>
<tr>
<td>2. identify potential critical incidents</td>
<td>4.37</td>
<td>Highly Practiced</td>
</tr>
<tr>
<td>3. create a no cost or low-cost disaster kit</td>
<td>4.13</td>
<td>Practiced</td>
</tr>
<tr>
<td>4. develop communication plan on disaster risk reduction management</td>
<td>4.43</td>
<td>Highly Practiced</td>
</tr>
<tr>
<td>5. develop whole school approaches to health and safety</td>
<td>4.4</td>
<td>Highly Practiced</td>
</tr>
<tr>
<td>6. make plans on disaster preparedness in the school</td>
<td>4.43</td>
<td>Highly Practiced</td>
</tr>
<tr>
<td>7. devise measures which can prevent tragedies to happen</td>
<td>4.27</td>
<td>Highly Practiced</td>
</tr>
<tr>
<td>8. establish personnel support and network</td>
<td>4.37</td>
<td>Highly Practiced</td>
</tr>
<tr>
<td>9. identify places which serve as evacuation centers</td>
<td>4.4</td>
<td>Highly Practiced</td>
</tr>
<tr>
<td>10. identify available support agencies</td>
<td>4.23</td>
<td>Practiced</td>
</tr>
<tr>
<td>11. conduct planning meeting to determine school needs</td>
<td>4.43</td>
<td>Highly Practiced</td>
</tr>
<tr>
<td>12. identify list of directives during disaster</td>
<td>4.37</td>
<td>Highly Practiced</td>
</tr>
<tr>
<td>13. prepare pre-disaster risk assessment</td>
<td>4.33</td>
<td>Highly Practiced</td>
</tr>
<tr>
<td>14. identify possible evacuation centers</td>
<td>4.27</td>
<td>Highly Practiced</td>
</tr>
<tr>
<td>15. check local hazards and vulnerability maps</td>
<td>4.17</td>
<td>Practiced</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>4.32</td>
<td>Highly Practiced</td>
</tr>
</tbody>
</table>

Table 2 shows that among the indicators in disaster management, school managers highly practiced (4.43) improving procedures to provide a safe environment among personnel. While helping in the management of the distribution of relief goods is practiced (3.97). In general, the school managers’ level of practice in disaster management is highly practiced (4.23). This is a justification that the managerial skills of school managers are notable and appropriate to the needs of the school community. Principals are seen as community leaders as well as school leaders because schools are located within communities. (Nicholas, 2015). The role of school administrators extends beyond the school and into the community.

### TABLE 3 Level of Practice of School Managers on Disaster Management

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Mean</th>
<th>VD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. manage health and safety training education on disaster</td>
<td>4.23</td>
<td>Highly Practiced</td>
</tr>
<tr>
<td>2. improve procedures leading to greater levels of health and safety</td>
<td>4.43</td>
<td>Highly Practiced</td>
</tr>
<tr>
<td>3. help contain the incident and minimize the extent of damage</td>
<td>4.27</td>
<td>Highly Practiced</td>
</tr>
<tr>
<td>4. enable the teaching staff to meet obligations under various health and safety</td>
<td>4.43</td>
<td>Highly Practiced</td>
</tr>
<tr>
<td>5. lea to an awareness of possibilities of preventing disasters from happening in the place</td>
<td>4.17</td>
<td>Practiced</td>
</tr>
<tr>
<td>6. involve school staff in managing potential problems during disaster</td>
<td>4.33</td>
<td>Highly Practiced</td>
</tr>
<tr>
<td>7. manage personnel to handle their roles and responsibilities in the school in case of disaster</td>
<td>4.4</td>
<td>Highly Practiced</td>
</tr>
<tr>
<td>8. enhance capacities among multi-hazard and integrate local needs</td>
<td>4.13</td>
<td>Practiced</td>
</tr>
<tr>
<td>9. implement simple risk reduction measures</td>
<td>4.37</td>
<td>Highly Practiced</td>
</tr>
<tr>
<td>10. manage property the distribution of the resources intended for the victims of disaster</td>
<td>4.17</td>
<td>Practiced</td>
</tr>
<tr>
<td>11. manage the preparation of logistical support</td>
<td>4.2</td>
<td>Practiced</td>
</tr>
<tr>
<td>12. manage resources needed by the affected areas</td>
<td>4.07</td>
<td>Practiced</td>
</tr>
<tr>
<td>13. help manage in the distribution of relief goods</td>
<td>3.97</td>
<td>Practiced</td>
</tr>
<tr>
<td>14. manage in the distribution of relief goods</td>
<td>4</td>
<td>Practiced</td>
</tr>
<tr>
<td>15. spearhead the implementation of school preparedness guide</td>
<td>4.23</td>
<td>Highly Practiced</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>4.23</td>
<td>Highly Practiced</td>
</tr>
</tbody>
</table>

Table 3 shows that among the indicators in disaster management, school managers highly practiced (4.43) improving procedures to provide a safe environment among personnel. While helping in the management of the distribution of relief goods is practiced (3.97). In general, the school managers’ level of practice in disaster management is highly practiced (4.23). This is a justification that the managerial skills of school managers are notable and appropriate to the needs of the school community. Principals are seen as community leaders as well as school leaders because schools are located within communities. (Nicholas, 2015). The role of school administrators extends beyond the school and into the community.
### TABLE 4 Level of Practice of School Managers on Disaster Mitigation.

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Mean</th>
<th>VD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. reinforce hazard mapping in the school</td>
<td>4.43</td>
<td>Highly Practiced</td>
</tr>
<tr>
<td>2. conduct information dissemination on disaster mitigation awareness program</td>
<td>4.43</td>
<td>Highly Practiced</td>
</tr>
<tr>
<td>3. improve communities resilience to disaster by enforcing building codes</td>
<td>4.07</td>
<td>Practiced</td>
</tr>
<tr>
<td>4. encourage flood plain mapping in the communities</td>
<td>3.93</td>
<td>Practiced</td>
</tr>
<tr>
<td>5. organize emergency task force to tackle earthquake and other disaster in the school</td>
<td>4.37</td>
<td>Highly Practiced</td>
</tr>
<tr>
<td>6. the disaster plan on mitigation divide into generic sections that are applicable to all disaster and hazard generic zones</td>
<td>4.3</td>
<td>Highly Practiced</td>
</tr>
<tr>
<td>7. create an enabling environment to cope with natural calamities</td>
<td>4.3</td>
<td>Highly Practiced</td>
</tr>
<tr>
<td>8. develop proactive mechanism to reduce economic cost and impact of disasters</td>
<td>4.17</td>
<td>Practiced</td>
</tr>
<tr>
<td>9. craft a disaster mitigation plan which contribute coping mechanism during disaster</td>
<td>4.17</td>
<td>Practiced</td>
</tr>
<tr>
<td>10. monitor typhoon path and its intensity</td>
<td>4.27</td>
<td>Highly Practiced</td>
</tr>
<tr>
<td>11. to inform the LGU the need of appropriate and sufficient resources to deal with different types of disaster</td>
<td>4.37</td>
<td>Highly Practiced</td>
</tr>
<tr>
<td>12. coordinate with local government agencies on local risk profiling</td>
<td>4.33</td>
<td>Highly Practiced</td>
</tr>
<tr>
<td>13. assists in the conduct of risk profiling</td>
<td>4.33</td>
<td>Highly Practiced</td>
</tr>
<tr>
<td>14. mobilize assistance for LGU for disaster mitigation</td>
<td>4.07</td>
<td>Practiced</td>
</tr>
<tr>
<td>15. mobilize local assistance to support disaster mitigation</td>
<td>4.1</td>
<td>Practiced</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>4.24</td>
<td>Highly Practiced</td>
</tr>
</tbody>
</table>

Table 4 results show the school managers’ level of practice in disaster mitigation are highly practiced (4.24). In particular, they highly practiced (4.43) in the reinforcement of hazard mapping. However, in this thematic area, school managers practiced (3.93) encouraging flood plain mapping in the communities. Parallel to the findings of Campilla (2016). It can be deduced that public-school administrators place a high value on public education about disaster preparedness. School administrators are unfamiliar with the community, which makes flood plain mapping difficult for them.

Table 5 shows that among the disaster response indicators, school managers are highly practiced (4.53) in one protective action on warnings. Moreover, school managers practiced (3.80) the provision of potable water to the evacuation center. Overall, the level of practice among school managers’ disaster response is practiced (4.15) whereas school managers are aware of the needs of the victims and can respond appropriately in the present situation. The US Department of Education (2007) believes that school administrators’ participation is important in raising emergency response to a high priority at all levels of the school system, in every administrative department, and in every school building.

Table 6 on disaster recovery, school managers practiced (3.97) the consideration of site security for disaster victims while also conducting health training the victims of disaster (3.53) In summary, the level of practice of the school managers in this thematic area is practiced (3.80). According to Campilla (2016), the disaster recovery level of practice is 4.08, which is defined as a practice, meaning that school administrators have families to protect after a disaster, and school managers consider disaster recovery management as an integral aspect of their management in their respective field of assistance.
TABLE 5  Level of Practice of School Managers on Disaster Response.

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Mean</th>
<th>VD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. provide immediate assistance to maintain life</td>
<td>4.2</td>
<td>Practiced</td>
</tr>
<tr>
<td>2. support the moral of the affected</td>
<td>4.33</td>
<td>Highly Practiced</td>
</tr>
<tr>
<td>3. assist victims with transport, temporary shelter and food</td>
<td>3.87</td>
<td>Practiced</td>
</tr>
<tr>
<td>4. conduct evaluation drill in the school and the community</td>
<td>4.5</td>
<td>Highly Practiced</td>
</tr>
<tr>
<td>5. develop awareness on response management during disaster</td>
<td>4.43</td>
<td>Highly Practiced</td>
</tr>
<tr>
<td>6. educate people in ways that have positive effect to take protective actions when a warnings are given</td>
<td>4.53</td>
<td>Highly Practiced</td>
</tr>
<tr>
<td>7. cooperate and help victims cope with disasters</td>
<td>3.97</td>
<td>Practiced</td>
</tr>
<tr>
<td>8. coordinate with proper authorities for effective response</td>
<td>4.23</td>
<td>Highly Practiced</td>
</tr>
<tr>
<td>9. devise response plan to improve health victims</td>
<td>3.93</td>
<td>Practiced</td>
</tr>
<tr>
<td>10. report to authorities the areas greatly affected by disasters</td>
<td>4.2</td>
<td>Practiced</td>
</tr>
<tr>
<td>11. provide potable water to the evacuation center</td>
<td>4</td>
<td>Practiced</td>
</tr>
<tr>
<td>12. provide potable water to the evacuation center</td>
<td>3.8</td>
<td>Practiced</td>
</tr>
<tr>
<td>13. continue mobilizing volunteers in helping the victims</td>
<td>4.07</td>
<td>Practiced</td>
</tr>
<tr>
<td>14. ensure the safety or routes of the returning evacuee</td>
<td>4</td>
<td>Practiced</td>
</tr>
<tr>
<td>15. coordinate with electric and water cooperatives to repair damaged water and pipelines</td>
<td>4.13</td>
<td>Practiced</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>4.15</strong></td>
<td><strong>Practiced</strong></td>
</tr>
</tbody>
</table>

3.8 | Over-all Level of Practice of School Managers on SDRRM

Table shows the comparison between the level of practice of randomly selected respondents from Pampanga and Bulacan on the five thematic areas of SDRRM obtained from the weighted mean of each area. It reveals that disaster preparedness is highly practiced (4.32). Furthermore, the lowest mean among the thematic areas is disaster recovery (3.80) but still practiced by the school managers. In general, school managers’ level of practice on the implementation of SDRRM is at the practiced level (4.15). Comparable to the level of SDRRM practices of school managers in Pangasinan of Campilla (2016), respondents garnered a general mean of 4.20 indicating a descriptive mark of "Practiced". This only demonstrates that the respondents perform these skills comparably. This means that school managers continuously implement the SDRRM program with the existing resources, both material and non-material, to provide a safe learning environment for Filipino learners.

3.9 | Relationship between School Managers’ Profiles towards their Level of Practice in SDRRM

3.9.1 | Relationship between Age and Level of Practice on SDRRM

Table shows that age has a significant relationship with the extent of the practice of school managers. As to disaster management ($r$= 0.850, $p= 0.000$) among the four thematic areas, it has the lowest correlation coefficient but still indicates high relationship and significance. School managers’ level of practice revealed that age and disaster recovery have a very high relationship and show significance ($r$= 0.910, $p= 0.000$). Certain leadership endeavors, such as making difficult decisions, necessitate fast information processing, which has been shown to deteriorate with age. (Salthouse 2012). Aging can serve as a determinant for desirable leadership as individuals garner experience and exposure to situations but they are able to manage them. However, once a person reaches the prescribed age, they lose their leadership skills. In this research, school managers are still fit physically and mentally as they are still able to perform their duty and comply with the age limit of the service.
TABLE 6  Level of Practice of School Managers on Disaster Recovery.

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Mean</th>
<th>VD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. implement the disaster recovery program</td>
<td>3.87</td>
<td>Practiced</td>
</tr>
<tr>
<td>2. conduct recovery training for the victims of the disaster</td>
<td>3.8</td>
<td>Practiced</td>
</tr>
<tr>
<td>3. consider site security for the victims of disaster</td>
<td>3.97</td>
<td>Practiced</td>
</tr>
<tr>
<td>4. develop awareness of an out normal situation</td>
<td>3.9</td>
<td>Practiced</td>
</tr>
<tr>
<td>5. educate the victims of disaster to become productive</td>
<td>3.9</td>
<td>Practiced</td>
</tr>
<tr>
<td>6. report to proper authorities the victims of calamities for financial assistance</td>
<td>3.83</td>
<td>Practiced</td>
</tr>
<tr>
<td>7. conduct health training for the victims of disaster</td>
<td>3.53</td>
<td>Practiced</td>
</tr>
<tr>
<td>8. assist victims of calamities to necessary solutions to cope with disasters</td>
<td>3.67</td>
<td>Practiced</td>
</tr>
<tr>
<td>9. assist organizations in providing medical and feeding services to the victims</td>
<td>3.8</td>
<td>Practiced</td>
</tr>
<tr>
<td>10. give appropriate professional advice to protect the health and safety of the pupils</td>
<td>3.87</td>
<td>Practiced</td>
</tr>
<tr>
<td>11. provide support to speed up normal situation in the affected areas</td>
<td>3.87</td>
<td>Practiced</td>
</tr>
<tr>
<td>12. provide potable water to the evacuation center</td>
<td>3.67</td>
<td>Practiced</td>
</tr>
<tr>
<td>13. continue mobilizing volunteers in helping victims</td>
<td>3.83</td>
<td>Practiced</td>
</tr>
<tr>
<td>14. ensure the safety of routes of the returning evacuee</td>
<td>3.7</td>
<td>Practiced</td>
</tr>
<tr>
<td>15. coordinate water and pipe lines</td>
<td>3.73</td>
<td>Practiced</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>3.8</td>
<td>Practiced</td>
</tr>
</tbody>
</table>

TABLE 7 Over-all Level of Practice of School Managers on SDRRM.

<table>
<thead>
<tr>
<th>Thematic Areas</th>
<th>Average Mean</th>
<th>VD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disaster Preparedness</td>
<td>4.32</td>
<td>Highly Practiced</td>
</tr>
<tr>
<td>Disaster Management</td>
<td>4.23</td>
<td>Highly Practiced</td>
</tr>
<tr>
<td>Disaster Mitigation</td>
<td>4.24</td>
<td>Highly Practiced</td>
</tr>
<tr>
<td>Disaster Response</td>
<td>4.15</td>
<td>Practiced</td>
</tr>
<tr>
<td>Disaster Recovery</td>
<td>3.8</td>
<td>Practiced</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>4.15</td>
<td>Practiced</td>
</tr>
</tbody>
</table>

3.10 | Relationship between Sex and Level of Practice on SDRRM

Table 8 determines that, among the SDRRM thematic areas, school managers’ sex has a low relationship and is not significant with their level of practice in disaster preparedness ($rs = 0.283, p = 0.130$), whereas disaster mitigation has the highest correlation coefficient ($rs = 0.308, p = 0.098$) has a low relationship and is not significant with school managers’ sex. The disaster experience and the ability to recover are shaped by gender. It explains why some people are more vulnerable than others and why some people heal more slowly. Since gender plays an important role in assigning roles and responsibilities within groups, as well as for deciding access to and control of resources among groups, gender sensitivity and gender aspect become a valid and an important policy area throughout disasters and during the restoration, recovery, and reconstruction process (WBI, 2009).

3.11 | Relationship between Civil Status and Level of Practice on SDRRM

The study found that disaster mitigation has the highest value of correlation coefficient ($rs = -0.300, p = 0.108$) among the thematic areas, but it has a low level of relationship and shows no significance to school managers’ civil status. Moreover, disaster
### TABLE 8 Over-all Level of Practice of School Managers on SDRRM.

<table>
<thead>
<tr>
<th>Profile</th>
<th>Disaster Preparedness</th>
<th>Disaster Management</th>
<th>Thematic Areas</th>
<th>Disaster Mitigation</th>
<th>Disaster Response</th>
<th>Disaster Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>rₚ = 0.850</td>
<td>0.800</td>
<td>0.868</td>
<td>0.856</td>
<td>0.91</td>
<td></td>
</tr>
<tr>
<td>Sig. Level at 0.05</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td>rₚ = 0.283</td>
<td>0.294</td>
<td>0.308</td>
<td>0.294</td>
<td>0.306</td>
<td></td>
</tr>
<tr>
<td>Sig. Level at 0.05</td>
<td>0.13</td>
<td>0.115</td>
<td>0.098</td>
<td>0.115</td>
<td>0.1</td>
<td></td>
</tr>
<tr>
<td>Civil Status</td>
<td>rₚ = -0.204</td>
<td>-0.17</td>
<td>-0.3</td>
<td>-0.199</td>
<td>-0.133</td>
<td></td>
</tr>
<tr>
<td>Sig. Level at 0.05</td>
<td>0.278</td>
<td>0.37</td>
<td>0.108</td>
<td>0.291</td>
<td>484</td>
<td></td>
</tr>
<tr>
<td>Educational Attainment</td>
<td>rₚ = 0.17</td>
<td>0.128</td>
<td>0.153</td>
<td>0.156</td>
<td>0.194</td>
<td></td>
</tr>
<tr>
<td>Sig. Level at 0.05</td>
<td>0.37</td>
<td>0.501</td>
<td>0.419</td>
<td>0.41</td>
<td>0.31</td>
<td></td>
</tr>
<tr>
<td>Years of Experience as School Manager</td>
<td>rₚ = 0.083</td>
<td>0.073</td>
<td>0.117</td>
<td>0.1</td>
<td>0.1</td>
<td></td>
</tr>
<tr>
<td>Sig. Level at 0.05</td>
<td>0.663</td>
<td>0.703</td>
<td>0.537</td>
<td>0.6</td>
<td>0.6</td>
<td></td>
</tr>
<tr>
<td>Level of Trainings/Seminars attended related to SDRRM</td>
<td>rₚ = 0.083</td>
<td>0.073</td>
<td>0.117</td>
<td>0.1</td>
<td>0.1</td>
<td></td>
</tr>
<tr>
<td>Sig. Level at 0.05</td>
<td>0.663</td>
<td>0.703</td>
<td>0.537</td>
<td>0.6</td>
<td>0.6</td>
<td></td>
</tr>
</tbody>
</table>

management ($rₛ = -0.170, p = 0.370$) has a very low level of relationship to the school managers’ civil status shown on Table 8. This could only mean that civil status has no direct effect on the extent of the practice of school managers in the implementation of SDRRM. Furthermore, school managers proved their managerial skills in implementing various programs of the Department.
**3.12 | Relationship between Educational Attainment and Level of Practice on SDRRM**

The relationship between educational attainment and level of practice in SDRRM thematic areas reveals a very low level of relationship and no significance, particularly in disaster management ($rs= 0.128, p= 0.501$) portrayed on Table 8. In terms of disaster recovery ($rs= 0.194, p= 0.303$), though it has the highest correlation coefficient, it still indicates a very low level of relationship and has no significance to the educational attainment of the school managers. In line with the findings of Chung (2016), the highest level of education of the participants had no impact on disaster prevention experience, $F (2, 244) = 1.51, P > 0.05$, $\eta^2 = 0.01$, disaster prevention attitude, $F (2, 244) = 2.10, P > 0.05$, $\eta^2 = 0.02$, or disaster prevention skills, $F (2, 244) = 0.34, P > 0.05, \eta^2 = 0.003$. This implies that professional studies taken by school managers focus on theories and concepts in various fields of administration, not particularly on SDRRM.

**3.13 | Relationship between Years of Experience as School Manager and Level of Practice on SDRRM**

The study revealed that the thematic areas of SDRRM have a very low level of relationship as to the years of service as school manager of the respondents. Also, it also presents no significance in the level of practice on SDRRM to the number of years as school managers. Disaster management has the lowest correlation coefficient ($rs=0.073, p= 0.703$), while disaster response and recovery have the highest correlation coefficients ($rs= 0.100, p= 0.600$), indicating a very low level of relationship and no significance in the years as a school manager shown on Table 8. This implies that the number of years as school managers doesn’t guarantee to have a good level of practice on the implementation of the SDRRM.

**3.14 | Relationship between Level of Trainings/Seminars attended related to SDRRM and Level of Practice on SDRRM**

The relationship between the level of training/seminars attended by school managers related to SDRRM and their level of practice on the implementation of SDRRM shows a very low level of relationship and indicates no significance in all the thematic areas. Both disaster response and disaster recovery have the highest correlation coefficient values ($rs= 0.100, p= 0.600$), indicating a very low level of relationship and no significance in the level of SDRRM training attended by school managers shown on Table 8. Furthermore, disaster management also has a very low level of relationships and is not significant ($rs=0.073, p= 0.703$). This indicated that SDRRM training may not be appropriate or congruent to the needs of school administrators in SDRRM implementation.

**3.15 | SDRRM Level of Practice Elementary and High School Managers**

Table 9 on the test of significance between elementary school and secondary school managers on the thematic areas of SDRRM, whereas the two groups show a significant difference in the level of practice in disaster management ($t= 2.310 p= 0.028$). Meanwhile, the two groups have no significant difference in their level of practice in terms of disaster preparedness ($t=1.989, p= 0.057$), disaster mitigation ($t= 1.184, p= 0.247$), disaster response ($t=1.476, p= 0.151$) and disaster recovery ($t=1.712, p= 0.098$). The study conducted by Chung (2016) results revealed that the on-disaster prevention skills (4.25 vs. 4.02) and disaster prevention attitude, elementary school participants outperformed their middle school peers (4.38 vs. 4.18) This implies that elementary school managers give importance to disaster management as they are entrusted with young learners who still need serious assistance and properly attended in time of disaster since they couldn’t manage themselves. Whereas, at the secondary level, students are reinforced on disaster preparedness, management, mitigation, recovery, and response.

**3.16 | Problems encountered by School Managers on their practice in SDRRM**

Table 10 revealed that the most common issue encountered by school administrators in the implementation of SDRRM is a lack of funds/resources for DRRM (10 or Rank 1). Dizon (2019) discovered that insufficient funds were a problem in the program’s implementation. On the technical side, unmanageable emergency situations and the implementation of SDRRM are the least problems (1 or Rank 6.5) experienced by the school managers. This means that some school managers are not fully
TABLE 9  Test of Significance on the Level of Practice on SDRMM between Elementary and High School Managers.

<table>
<thead>
<tr>
<th>Thematic Areas</th>
<th>Computed t-value</th>
<th>df</th>
<th>Tabular t</th>
<th>Sig.level at 0.05</th>
<th>VD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disaster Preparedness</td>
<td>1.989</td>
<td>28</td>
<td>2.048</td>
<td>0.057</td>
<td>No Significance</td>
</tr>
<tr>
<td>Disaster Mitigation</td>
<td>1.184</td>
<td>28</td>
<td>2.048</td>
<td>0.247</td>
<td>No Significance</td>
</tr>
<tr>
<td>Disaster Response</td>
<td>1.476</td>
<td>28</td>
<td>2.048</td>
<td>0.151</td>
<td>No Significance</td>
</tr>
<tr>
<td>Disaster Recovery</td>
<td>1.712</td>
<td>28</td>
<td>2.048</td>
<td>0.098</td>
<td>No Significance</td>
</tr>
</tbody>
</table>

TABLE 10  Problems encountered by School Managers on their practice in SDRRM.

<table>
<thead>
<tr>
<th>Problems</th>
<th>Frequency</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limited and unavailability of funds/resources for DRRM</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>Lack of training in DRRM particularly on safety protocols and basic life support</td>
<td>3</td>
<td>3.5</td>
</tr>
<tr>
<td>The school site is a problem, there is limited open space for evacuation and venue for conducting various drill</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>lack of man power</td>
<td>3</td>
<td>3.5</td>
</tr>
<tr>
<td>Lack of parents’ engagement and community involvement on multi-hazard drills</td>
<td>1</td>
<td>6.5</td>
</tr>
<tr>
<td>Limited and lack of DRRM equipment and materials</td>
<td>2</td>
<td>4.5</td>
</tr>
<tr>
<td>Uncooperative in the conduct of multi-hazard drills</td>
<td>2</td>
<td>4.5</td>
</tr>
<tr>
<td>Unmanageable emergency situations</td>
<td>1</td>
<td>6.5</td>
</tr>
<tr>
<td>Implementation of the school risk reduction and management of disaster</td>
<td>1</td>
<td>6.5</td>
</tr>
</tbody>
</table>

capacitated of handling and responding to emergency situations. Also, in general, the implementation of SDRRM should be monitored in order to be provided with technical assistance by the respective Schools Division Office is the one that supervises the implementation of the program. Similarly, Garcia (2016 damaged school properties, a shortage of DRRM tools/equipment, and a clogged canal/drainage system on flood-prone schools are all issues experienced in DRRM. Similarly, the lack of equipment and tools in SDRRM are the present dilemmas of school managers on SDRRM.

3.17  Solutions to problems in the implementation of the SDRRM

School managers from Table 11 highly suggested that to improve the level of practice in SDRRM, there must be the provision of relevant and appropriate DRRM training (8 or Rank 1). Meanwhile, being flexible to cope with emergency situations and including in-school priority programs are both the least suggested solutions (1 or Rank 6.5) by the school managers. It is because school managers and SDRRM coordinators are already capacitated with the concept of disaster preparedness as it is already included in the planning stage of the program. Congruent to the findings of Dizon (2019), respondents suggested that the division and school should allot for budget on the full execution of the School Disaster Risk Reduction Management Program. Aside from
TABLE 11  Suggested solutions by School Managers to improve their practice in SDRRM.

<table>
<thead>
<tr>
<th>Suggested Solutions</th>
<th>Frequency</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provision of relevant and appropriate DRRM trainings</td>
<td>8</td>
<td>1</td>
</tr>
<tr>
<td>Allocation of enough funds for the implementation of SDRRM</td>
<td>3</td>
<td>4.5</td>
</tr>
<tr>
<td>Being flexible to cope up with emergency situations</td>
<td>1</td>
<td>6.5</td>
</tr>
<tr>
<td>Conduct of regular multi-hazard drills</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Provision of SDRRM materials and equipment</td>
<td>3</td>
<td>4.5</td>
</tr>
<tr>
<td>Coordination, collaboration and partnership with LGU and NGO</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>Include in school priority program</td>
<td>1</td>
<td>6.5</td>
</tr>
</tbody>
</table>

Theories and concepts, school managers, as well as SDRMM coordinators, should be capacitated with skills in responding to emergency situations, training that is developmental in nature, whereas it must start from concept down to the actual application.

4 | CONCLUSION

The school managers are from the ideal age group for school administration, which is dominated by females and married people. The major problem encountered by the school managers in implementing the SDRRM is the limited and unavailability of financial resources. The most suggested solution to some of the problems is the provision of developmentally appropriate pieces of training on SDRRM that is relevant to the community. The study also concluded that only age has a significant relationship with the level of practice in the program’s thematic areas.

Continuous monitoring and assessment may be done at the school, division, and regional levels to ensure that the program is properly implemented. School managers at the secondary level must extend more efforts to the implementation of the program as disaster victims and casualties exempt no one. External linkages should be established through Local Government Units, Non-Government Organizations, parents, and private individuals.

References


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