

Prepared to Respond: Evaluating the First Aid Readiness of Public School Teachers

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Abstract

This study evaluated the first aid readiness of public school teachers at Paliparan II Integrated High School in Dasmariñas, Cavite, with a focus on their knowledge, confidence, and preparedness in responding to school-based emergencies. Using a descriptive quantitative design, the study employed a structured questionnaire distributed to 50 full-time teaching personnel. The instrument assessed demographic profiles, first aid knowledge through a 10-item test, and confidence through a 10-item Likert scale.

Findings revealed that teachers demonstrated strong foundational knowledge, particularly in handling minor injuries, fainting, and choking incidents. However, there were evident gaps in more complex emergency procedures such as cardiopulmonary resuscitation (CPR), seizure management, and response leadership. Confidence levels mirrored this trend, with higher ratings for basic first aid tasks and lower ratings for critical interventions. These results align with the Social Cognitive Theory (Bandura, 1997), suggesting that preparedness is influenced not only by knowledge but also by self-efficacy and prior experience. The study also resonates with the call for regular training embedded in DepEd Order No. 33, s. 2021.

Based on the findings, the study recommends regular simulation-based training, targeted refresher courses, and the formation of a teacher-led safety committee. These measures aim to close the gap between awareness and application, fostering a more responsive and resilient school environment.

Keywords: First Aid Knowledge, Teacher Preparedness, Emergency Response, Public School Teachers, Confidence Scale, Simulation-Based Training, CPR and Seizure Management, Self-Efficacy, Educational Safety, First Aid Training Programs, School-Based Emergencies, Scenario-Based Learning, DepEd Order No. 33, s. 2021, Peer Learning and Safety Committees, Knowledge Assessment, Philippine Education Context, Quantitative Descriptive Design

I. Introduction

Teachers are often the first adults in schools to respond when a student experiences a medical emergency. Whether it is a minor injury or a more serious situation, their ability to provide immediate and effective first aid can significantly affect outcomes. Despite this critical role, many teachers may not feel confident or adequately trained to handle such emergencies. This study examines the preparedness of public school teachers to respond with first aid, aiming to understand their level of knowledge, training, and confidence in emergencies. While recent research has explored the educational impacts of the COVID-19 pandemic, empirical studies on teacher mental health during this period remain limited. Using a large national dataset, one study compared mental health outcomes during the pandemic between pre-K to Grade 12 teachers and professionals in other occupations (Smith & Johnson, 2022).

In the Philippine context, the Department of Education (DepEd) has mandated the implementation of safety programs through its Disaster Risk Reduction and Management (DRRM) framework, as outlined in DepEd Order No. 33, s. 2021. Despite these policies, gaps persist in the actual readiness of public school teachers to respond effectively to emergencies.

First aid is the provision of limited care for an illness or injury until definitive medical treatment can be accessed, or until the illness or injury is dealt with. Accidents can occur even within schools, which requires teachers to be knowledgeable in performing first aid. The purpose of this study was to find out the competency of the teachers in first aid measures (Dela Cruz, 2021). This study responds to the need for a closer evaluation of teachers' first aid preparedness, focusing on their knowledge, confidence, and the availability of emergency resources within a specific public high school context.

A. Background of the Study

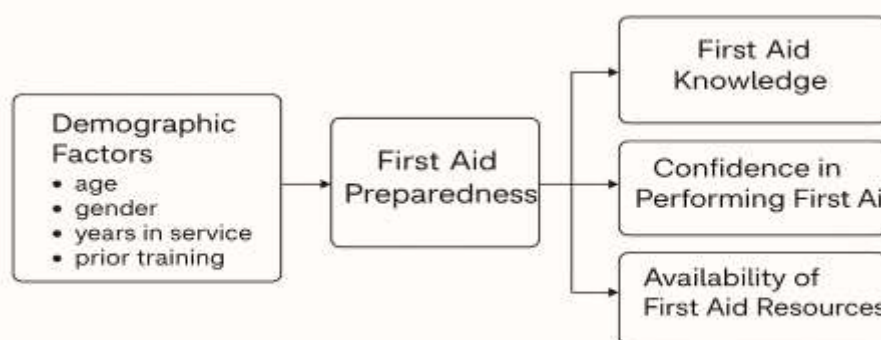
In the context of public schools, teachers are educators and guardians of student safety during school hours. Teachers must be equipped with basic first aid knowledge and skills, especially with children prone to accidents and health issues. Still, in many educational systems, first aid training is not consistently provided or required for teachers. This gap raises concerns about the readiness of school personnel to respond effectively when emergencies occur. In the Philippines, where public schools often face resource limitations, the issue of first aid preparedness becomes even more pressing (DepEd, 2021; Garcia & Ramos, 2020).

Although the Department of Education (DepEd) in the Philippines has implemented safety measures under the Disaster Risk Reduction and Management (DRRM) policy (DepEd Order No. 33, s. 2021), many public schools still suffer due to a lack of first aid resources and updated training (Garcia & Ramos, 2020). This study aims to assess the first aid readiness of teachers at Paliparan II Integrated High School in Dasmariñas, Cavite, particularly in terms of their knowledge, confidence, and access to emergency equipment.

B. Theoretical Framework

The study is grounded in the theory that preparedness in emergency response is influenced by knowledge, training, and available resources. It aligns with the educational preparedness models, which suggest that regular training and resource accessibility enhance confidence and actual performance during emergencies.

C. Conceptual Framework



(Adapted from Bandura, 1997; Rosenstock, 1974; Chen & Lee, 2020; DepEd Order No. 33, s. 2021)

The theoretical foundation of this study is grounded in the idea that preparedness in emergency response—such as first aid—depends significantly on an individual's knowledge, training, and access to resources. This aligns with educational preparedness models, which stress that regular exposure to training and available tools enhances emergency performance. Bandura's (1997) Social Cognitive Theory supports this concept by asserting that self-efficacy, or one's belief in their ability to succeed, is crucial in influencing behavior and decision-making, particularly under pressure. When teachers are knowledgeable and well-trained, they are more confident in their ability to act during emergencies, thus increasing their chances of providing effective first aid.

The conceptual framework of the study illustrates how demographic factors—such as age, gender, years of service, and prior training—can influence teachers' level of first aid preparedness. Preparedness itself is broken down into three key components: knowledge of first aid procedures, confidence in performing first aid, and the availability of necessary resources. This model draws from the Health Belief Model (Rosenstock, 1974), which posits that individuals' actions are influenced by perceived benefits, barriers, and self-efficacy. In the context of this study, demographic background may shape a teacher's access to prior training and resources, which in turn affects their readiness and confidence during emergency situations.

Moreover, this framework is contextualized within the Philippine educational setting, guided by DeEd Order No. 33, s. 2021, which mandates schools to maintain adequate first aid resources and conduct emergency preparedness drills. The inclusion of Chen and Lee's (2020) findings further validates the framework, as their research confirmed that mandatory first aid training significantly enhances both knowledge retention and practical application. Altogether, this integrated framework not only provides a structured way to evaluate first aid preparedness among teachers but also highlights the importance of systemic support through policy, training programs, and resource allocation.

D. Statement of the Problem

This study aims to evaluate the current level of first aid readiness of teachers at Paliparan II Integrated High School by addressing the following questions:

1. What are the respondents' profiles in terms of:
 - 1.1. Age
 - 1.2. Gender
 - 1.3. Years in service
 - 1.4. Grade level taught
 - 1.5. Knowledge from prior training
2. What is their level of knowledge regarding basic first aid?
3. What is their level of confidence in performing first aid?
4. What intervention scheme can be proposed based on the findings?

E. Objectives of the Study

1. To define the profile of the respondents in terms of:
 - Age
 - Gender
 - Years in service
 - Grade level taught
 - Knowledge gained from prior first aid training

2. To assess the level of knowledge of public-school teachers regarding basic first aid procedures.
3. To determine the level of confidence of public-school teachers in performing first aid during emergencies.
4. To recommend an appropriate intervention scheme based on the findings of the study to enhance first aid readiness among teachers.

F. Scope and Limitations

This study focuses on evaluating the first aid readiness of public-school teachers at Paliparan II Integrated High School. It aims to assess their demographic profiles, level of knowledge regarding basic first aid, confidence in performing first aid, and the availability of emergency resources within the school. The study also seeks to propose an intervention scheme based on the findings to enhance first aid preparedness among teachers.

The scope is limited to full-time teaching personnel within the school during the academic year 2024–2025. It does not include non-teaching staff, students, or personnel from other schools. The data collection relies on self-reported responses through structured questionnaires, which may be subject to personal bias or inaccuracies in recall. Additionally, the study does not include practical assessments of first aid skills, focusing instead on theoretical knowledge and self-perceived confidence.

While the findings may provide valuable insights into the current state of first aid readiness in the school, they may not be generalizable to all public schools in the Philippines due to differences in resources, training programs, and school environments.

G. Significance of the Study

This research is valuable for:

- **Teachers** help them identify their strengths and gaps in first aid preparedness.
- **School administrators and policymakers** by provide data to support targeted training programs.
- **The educational sector** contributes to improved school safety protocols and first aid readiness.
- **Future researchers**, as it lays the groundwork for broader studies on emergency preparedness in schools.

II. Methods of Research

A. Research Design

This study will use a descriptive quantitative research design. This approach is appropriate for gathering measurable data on the current level of first aid readiness among teachers, including their knowledge, confidence, and access to resources, to evaluate the first aid readiness of public-school teachers at Paliparan II Integrated High School in Dasmariñas, Cavite (Salaria, 2021). Descriptive research is appropriate for this study as it aims to systematically describe the current conditions, perceptions, and practices related to teachers' first aid knowledge, confidence, and access to emergency resources (McCombes, 2022). Data were gathered using a structured survey questionnaire and analyzed using descriptive statistics, including frequency, percentage, and mean, to identify trends and patterns in the respondents' readiness to respond to school emergencies.

B. Sampling Design

The study will use **purposive sampling**, a non-probability sampling method. Since the research focuses specifically on teachers at Paliparan II Integrated High School, participants will be selected from the full-time teaching staff at the school. **(The data should be at least 30 to 50)**

C. Research Instrument

A structured questionnaire will be utilized as the primary data collection instrument for this study. It will be divided into several sections to comprehensively assess the first aid readiness of teachers. The first section will gather demographic information, including age, gender, years in service, grade level taught, and prior first aid training. The second section will focus on knowledge assessment through multiple-choice or true/false questions related to basic first aid procedures. The third section will evaluate the respondents' confidence in performing first aid using a Likert scale, ranging from 1 (Not confident at all) to 5 (Very confident).

Scale	Verbal Interpretation
5	Very Confident
4	Confident
3	Moderately Confident
2	Slightly Confident
1	Not Confident at All

D. Statistical Design

For data analysis, descriptive statistics will be utilized to interpret the data collected. Specifically, frequency and percentage will be used to summarize demographic data such as age, gender, years in service, grade level taught, and prior first aid training. These statistics provide a clear overview of the characteristics of the respondents

Formulas:

Frequency (f) – This refers to the number of respondents who selected a particular category.

Percentage (%):

$$\text{Percentage} = \left(\frac{f}{n} \right) \times 100$$

Where:

f = frequency of a category

n = total number of respondents

Use in the study:

The use of frequency and percentage will help the researchers describe the distribution of demographic characteristics of the participants. For example, it will show what percentage of teachers have received prior first aid training or how many have been in service for more than 10 years. This helps contextualize the levels of preparedness observed.

For evaluating knowledge and confidence levels, the study will use the mean and standard deviation to measure the average scores and the variability of responses.

Formulas:

- Mean (\bar{x}):
$$\bar{x} = \frac{\sum x}{n}$$

Where:

x = individual scores

n = total number of respondents

- **Standard Deviation (SD):**

$$SD = \sqrt{\frac{\sum (x - \bar{x})^2}{n}}$$

Use in the study:

The mean will determine the overall level of knowledge or confidence among teachers. For example, a higher mean in confidence scores indicates that most teachers feel prepared to give first aid. The standard deviation will show how much variation exists among the respondents. A low SD would indicate consistent confidence or knowledge levels, while a high SD would suggest varied responses, which might need further investigation

(McCombes, S. (2022). Descriptive statistics: Definition, types, and examples. Scribbr. <https://www.scribbr.com/statistics/descriptive-statistics/>)

Inferential Statistics: T-Test

In this study, the researcher includes t-tests to compare knowledge and confidence levels across different groups of teachers, such as those with varying years of service or different first aid training backgrounds. The independent samples t-test is appropriate when comparing the means of two independent groups to determine whether a statistically significant difference exists.

T-Test Formula:

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}}$$

Where:

- \bar{x}_1 and \bar{x}_2 = sample means of the two groups
- s_1^2 and s_2^2 = variances of the two groups
- n_1 and n_2 = sample sizes of the two groups
- t = t-value (used to determine statistical significance)

Use in the Study:

The t-test will help determine whether differences in first aid knowledge or confidence levels are significant between groups of teachers. For instance, it can reveal whether teachers who received formal first aid training perform significantly better or feel more confident compared to those who did not. Similarly, it can compare newer versus more experienced teachers to assess the effect of teaching tenure on emergency preparedness. This statistical approach provides deeper insight into which factors may influence first aid readiness, allowing for more targeted recommendations.

Additionally, correlation analysis may be conducted to explore potential relationships between teachers' knowledge and their confidence in administering first aid. The Pearson Product-Moment Correlation Coefficient is appropriate for this purpose, as it measures the strength and direction of the linear relationship between two continuous variables, such as test scores on first aid knowledge and self-reported confidence levels (McCombes, 2022).

Formula:

$$r = \frac{n(\sum xy) - (\sum x)(\sum y)}{\sqrt{[n \sum x^2 - (\sum x)^2][n \sum y^2 - (\sum y)^2]}}$$

Where:

- r = correlation coefficient
- x and y = individual values of the two variables (knowledge and confidence)
- n = number of paired scores

A value of r close to +1 indicates a strong positive correlation, while a value close to -1 indicates a strong negative correlation. A value near 0 suggests no linear relationship. In this study, correlation analysis will help determine whether teachers with higher knowledge scores also report higher confidence levels. Understanding this relationship can inform training programs by highlighting whether improving knowledge alone is likely to enhance confidence in emergencies (Laerd Statistics, 2021).

III. RESULTS AND DISCUSSIONS

Teachers self-assessed their knowledge in providing first aid. The results are presented in Tables 1 and 2, reflecting their readiness across both aspects

Table 1 – First Aid Knowledge Test

Knowledge Statement	Mean	Knowledge Scale Interpretation
1. Knowledge of basic wound care	4.20	Very knowledgeable
2. Recognizing signs of choking	4.10	Very knowledgeable
3. Immediate steps during fainting	4.25	Very knowledgeable
4. Managing minor bleeding	3.80	Very knowledgeable
5. Identifying symptoms of shock	3.60	Very knowledgeable
6. Handling fractures	3.40	Moderately knowledgeable
7. CPR knowledge basics	3.00	Moderately knowledgeable
8. Managing seizures	2.85	Moderately knowledgeable
9. Steps when encountering unconscious casualty	2.70	Moderately knowledgeable
10. Emergency steps for burns	2.95	Moderately knowledgeable
TOTAL	3.59	Moderately knowledgeable

The table reveals that teachers at Paliparan II Integrated High School generally demonstrated a high level of knowledge in basic first aid principles. Five out of ten items received mean scores ranging from 3.60 to 4.25, which fall within the "Very knowledgeable" category. This indicates strong familiarity with common first aid tasks such as wound care, managing fainting, recognizing choking, minor bleeding control, and identifying signs of shock.

However, the remaining five items scored between 2.70 and 3.40, placing them under "Moderately knowledgeable." These included more complex or high-stakes procedures such as CPR, managing seizures, dealing with unconscious individuals, and emergency response for burns. The overall mean of 3.59 suggests that while teachers possess a sound foundational understanding of first aid, their expertise is more limited when it comes to emergency procedures that demand rapid decision-making and physical intervention.

This distribution of knowledge underscores the importance of enhancing training in specialized areas to elevate performance to the "Very knowledgeable" or "Extremely knowledgeable" range. It reinforces the value of practice-based learning, as emphasized by Chen and Lee (2020), to ensure preparedness in situations that go beyond routine incidents.

Table 2 – First Aid Confidence Scale

Confidence Statement	Mean	Confidence Scale Interpretation
1. I feel confident responding to minor injuries.	4.45	Very Confident
2. I can remain calm in emergency situations.	4.10	Confident
3. I know how to alert appropriate authorities.	3.90	Confident
4. I am confident performing CPR.	3.20	Moderately Confident
5. I can assist a choking student.	3.75	Confident
6. I can recognize a medical emergency when it occurs.	3.80	Confident
7. I can manage a bleeding wound effectively.	3.60	Confident
8. I can safely move an injured student.	3.15	Moderately Confident
9. I can take charge until help arrives.	2.85	Moderately Confident
10. I feel prepared to lead emergency response if needed.	2.70	Moderately Confident
TOTAL	3.55	Confident

As shown in Table 2, teachers express high confidence in managing minor injuries and contacting help, falling between the “Confident” to “Very Confident” levels. However, confidence decreases when more intensive actions are needed, such as CPR or emergency leadership. This aligns with findings by Garcia and Ramos (2020), who concluded that many educators require additional training to build the necessary self-assurance for high-stakes interventions. This also reflects Bandura’s (1997) framework, which links confidence with both knowledge and experience through real-world application.

Conclusions

The findings of this study reveal that teachers at Paliparan II Integrated High School possess a solid foundation in basic first aid knowledge and demonstrate moderate to high levels of confidence in responding to common emergencies. High mean scores in simple first aid concepts such as wound care, fainting response, and recognizing choking reflect commendable awareness. However, a notable decline in both knowledge and confidence was observed in more complex interventions—such as CPR, managing seizures, and taking charge during emergencies.

This gap between foundational readiness and applied competence aligns with Chen and Lee’s (2020) observation that while basic training builds awareness, sustained preparedness requires regular, scenario-based reinforcement. Similarly, Garcia and Ramos (2020) emphasized the need for continuous skill development among educators, as real-life emergency decision-making often involves situational complexity and emotional pressure. Bandura’s (1997) concept of self-efficacy further reinforces that confidence is built not only through knowledge but through repeated practice and exposure.

Thus, while the overall readiness level among respondents is promising, key areas still require attention to ensure that teachers can respond effectively across all levels of emergency intensity.

Recommendations

To enhance the first aid readiness of public school teachers, it is recommended that the school institutionalize regular, scenario-based training sessions at least twice per academic year. These trainings should include simulation exercises designed to reinforce both theoretical knowledge and practical application of skills, particularly for more complex interventions such as CPR or managing unconscious individuals (Chen & Lee, 2020; DepEd, 2021). In addition, developing modular refresher courses focused on specific areas of weakness—such as seizure response, emergency leadership, and trauma management—can help address the observed gaps. These modules could be delivered through blended learning formats to ensure accessibility and flexibility for educators (World Health Organization, 2018; American Red Cross, 2020).

Creating a teacher-led safety committee is also encouraged, as this promotes peer learning, accountability, and sustainable capacity-building within the school. Research by Kose et al. (2019) supports the idea that peer-facilitated first aid instruction can be as effective as professional-led training when supported by structured resources. Furthermore, readiness assessment should be institutionalized through annual evaluations that consider both knowledge and confidence indicators, ensuring that improvements can be monitored over time and supported by relevant data (Garcia & Ramos, 2020).

Lastly, ensuring that each classroom is equipped with updated first aid kits and that emergency exits and contact information are visibly posted will reinforce not just preparedness but also the visibility of a safety culture, in line with DepEd Order No. 33, s. 2021. These efforts, when combined, will help cultivate a

responsive, competent, and confident teaching workforce capable of managing school-based emergencies effectively.

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