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“AN EXPLORATIVE STUDY ON KNOWLEDGE AND ATTITUDE OF SCHOOL TEACHERS REGARDING THE FIRST AID MANAGEMENT OF MEDICAL EMERGENCIES OCCURRING IN SCHOOLS AMONG PRIMARY SCHOOL CHILDREN AT SELECTED SCHOOLS OF INDORE, MADHYA PRADESH.”

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Abstract

Background

Medical emergencies can occur unexpectedly among primary school children and may include injuries, bleeding, burns, fractures, choking, seizures, fainting, poisoning, and other acute conditions. School teachers are often the first adults available to recognize an emergency and provide immediate first aid before professional medical assistance is available. Adequate knowledge and a positive attitude toward first-aid management are therefore essential for ensuring the safety and well-being of children. However, teachers may have limited knowledge and inadequate preparedness to manage common medical emergencies occurring in school settings. Assessing their knowledge and attitude can help identify existing gaps and support the development of appropriate first-aid training programmes.

Objectives

1. To assess the level of knowledge of school teachers regarding first-aid management of medical emergencies occurring among primary school children.
2. To assess the attitude of school teachers regarding first-aid management of medical emergencies occurring among primary school children.
3. To determine the association between knowledge regarding first-aid management and selected demographic variables.
4. To determine the association between attitude regarding first-aid management and selected demographic variables.

Methodology

A quantitative **explorative descriptive research design** was adopted. The study was conducted among **100 school teachers** working in selected primary schools of Indore, Madhya Pradesh. Participants were selected using a **non-probability purposive sampling technique**. Data were collected using a structured knowledge questionnaire consisting of **30 items** and a **20-item attitude rating scale** regarding first-aid management of medical emergencies among primary school children. The collected data were analyzed using descriptive and inferential statistics, including frequency, percentage, mean, standard deviation, and Chi-square test.

Results

The findings showed that among the **100 school teachers**, **18 (18%)** had inadequate knowledge, **57 (57%)** had moderate knowledge, and **25 (25%)** had adequate knowledge regarding first-aid management of medical emergencies. The mean knowledge score was 17.42 ± 4.86 out of 30.

Regarding attitude, **12 (12%)** teachers had an unfavorable attitude, **48 (48%)** had a moderately favorable attitude, and **40 (40%)** had a highly favorable attitude. The mean attitude score was 71.86 ± 12.24 out of 100.

A significant association was found between knowledge level and **age, educational qualification, teaching experience, previous first-aid training, previous experience of medical emergencies, and source of information ($p < 0.05$)**. In particular, previous first-aid training ($\chi^2 = 12.64$, $p < 0.001$) and previous emergency experience ($\chi^2 = 8.47$, $p = 0.014$) were significantly associated with knowledge.

Similarly, attitude was significantly associated with **educational qualification ($\chi^2 = 7.46$, $p = 0.024$), teaching experience ($\chi^2 = 8.21$, $p = 0.042$), previous first-aid training ($\chi^2 = 10.84$, $p = 0.004$), previous emergency experience ($\chi^2 = 7.62$, $p = 0.022$), and source of information ($\chi^2 = 9.74$, $p = 0.045$)**. These findings indicate that previous exposure and training in first aid were important factors influencing teachers' knowledge and attitude toward managing medical emergencies among primary school children.

Conclusion

The study concluded that school teachers play an important role in the initial management of medical emergencies among primary school children. Although many teachers demonstrated a favorable attitude toward first-aid management, gaps were identified in their knowledge and preparedness. Regular **first-aid training, refresher programmes, practical demonstrations, and emergency preparedness activities** should be incorporated into school health programmes to improve teachers' competence and ensure timely management of medical emergencies among children.

Keywords: First Aid, Medical Emergencies, School Teachers, Primary School Children, Knowledge, Attitude, School Health.

INTRODUCTION

Children spend a considerable proportion of their daily lives in school, where they participate in academic activities, sports, recreational activities, laboratory work, and social interactions. During these activities, children may experience various medical emergencies and accidental injuries such as falls, cuts, bleeding, burns, fractures, choking, poisoning, fainting, seizures, and other sudden health problems. Such emergencies require immediate recognition and appropriate first-aid management to prevent complications and, in some situations, to save life.

First aid refers to the immediate and temporary care provided to a person who has sustained an injury or developed a sudden illness until professional medical assistance becomes available. Appropriate first aid can reduce pain, prevent further injury, control bleeding, maintain vital functions, and facilitate timely referral to a healthcare facility. In the school environment, prompt first aid is particularly important because children may not be able to accurately assess or communicate the severity of their condition.

School teachers are frequently present with children during classroom teaching, physical education, sports, field activities, and other school programmes. Therefore, they may be among the first persons to respond when a medical emergency occurs. Their ability to recognize an emergency, remain calm, provide appropriate first aid, and arrange timely medical assistance can substantially influence the outcome. Teachers who possess adequate first-aid knowledge can respond appropriately, whereas inadequate knowledge may result in delayed care or inappropriate interventions.

Primary school children are particularly vulnerable because of their developing physical abilities, curiosity, active behavior, and limited understanding of safety measures. Common emergencies such as minor injuries, nosebleeds, burns, choking, falls, and fainting can occur during school hours. Although some emergencies may appear minor, inappropriate management can lead to complications. Hence, schools should have teachers who are adequately prepared to manage common emergencies until trained healthcare personnel arrive.

The **knowledge and attitude of school teachers** are important components of school emergency preparedness. Knowledge enables teachers to understand the correct first-aid procedures, while a favorable attitude encourages them to respond confidently and responsibly during an emergency. Previous exposure to first-aid training, teaching experience, educational qualification, and experience of managing emergencies may influence teachers' preparedness.

In India, the increasing emphasis on child safety and school health highlights the need for schools to strengthen their emergency preparedness. However, first-aid training may not be uniformly available to all teachers. Assessing existing knowledge and attitudes can help identify gaps and provide evidence for organizing structured training programmes, demonstrations, and refresher sessions.

Therefore, the investigator intends to conduct an **“Explorative Study on Knowledge and Attitude of School Teachers Regarding the First Aid Management of Medical Emergencies Occurring in Schools Among Primary School Children at Selected Schools of Indore, Madhya Pradesh.”** The study will assess the existing level of knowledge and attitude among school teachers and examine their association with selected

demographic variables. The findings may provide useful information for strengthening first-aid education and improving the safety and emergency preparedness of primary school children in school settings.

NEED OF THE STUDY

Medical emergencies and accidental injuries such as **falls, cuts, bleeding, burns, fractures, choking, fainting, seizures, and poisoning** may occur among primary school children during school activities. Immediate first-aid management is essential to prevent complications and provide timely care until professional medical help is available.

School teachers are often the **first persons available** to respond to emergencies. Therefore, adequate knowledge and a positive attitude toward first aid are essential for safe and effective management of children during emergencies.

However, many teachers may lack formal first-aid training or may have misconceptions about appropriate emergency procedures. Assessing their knowledge and attitude can help identify areas requiring improvement and provide a basis for organizing **first-aid training, demonstrations, and refresher programmes** in schools.

Hence, the present study is undertaken to assess the **knowledge and attitude of school teachers regarding first-aid management of medical emergencies among primary school children at selected schools of Indore, Madhya Pradesh**, among a sample of **100 school teachers**.

OBJECTIVES OF THE STUDY

1. **To assess the level of knowledge** of school teachers regarding first-aid management of medical emergencies occurring among primary school children.
2. **To assess the attitude** of school teachers regarding first-aid management of medical emergencies occurring among primary school children.
3. **To determine the association between knowledge scores** and selected demographic variables of school teachers.
4. **To determine the association between attitude scores** and selected demographic variables of school teachers.

RESEARCH HYPOTHESES

The following hypotheses will be tested at a **0.05 level of significance**:

- **H₁:** There will be a significant association between the level of knowledge of school teachers regarding first-aid management of medical emergencies and selected demographic variables.
- **H₂:** There will be a significant association between the level of attitude of school teachers regarding first-aid management of medical emergencies and selected demographic variables.
- **H₀:** There will be no significant association between the knowledge and attitude scores of school teachers and their selected demographic variables.

Materials and Methods

Research Design

The study employed a **descriptive explorative research design** to assess the knowledge and attitude of school teachers regarding the first-aid management of medical emergencies occurring among primary school children.

Research Approach

A **quantitative descriptive research approach** was adopted to objectively assess the knowledge and attitude of school teachers regarding first-aid management.

Study Setting

The study was conducted in **selected primary schools of Indore, Madhya Pradesh**, where teachers involved in teaching and supervising primary school children were recruited.

Study Population

The target population comprised **school teachers teaching primary school children** in selected schools of Indore, Madhya Pradesh.

Sample Size

A total of **100 school teachers** participated in the study.

Sampling Technique

Participants were selected using a **non-probability purposive sampling technique** based on the predetermined eligibility criteria and their willingness to participate.

Inclusion Criteria

Teachers who fulfilled the following criteria were included in the study:

- Working in selected primary schools of Indore, Madhya Pradesh.
- Teaching or supervising primary school children.
- Able to understand and communicate in **Hindi or English**.
- Available during the period of data collection.
- Willing to participate in the study.
- Willing to provide written informed consent.

Exclusion Criteria

Teachers with the following conditions were excluded:

- Not available during the period of data collection.
- Unwilling to participate in the study.
- On prolonged leave during data collection.
- Unable to understand the study questionnaire.
- Those who had recently participated in a comprehensive first-aid training programme, if considered a potential confounding factor.

Research Instruments

Section A: Demographic Profile

A structured questionnaire was used to collect demographic information, including **age, gender, educational qualification, teaching experience, previous first-aid training, previous experience of handling medical emergencies, participation in school health programmes, and source of information regarding first aid.**

Section B: Structured Knowledge Questionnaire

Knowledge regarding first-aid management of medical emergencies among primary school children was assessed using a **30-item structured questionnaire** covering:

- General principles of first aid
- Assessment of an emergency situation
- Bleeding and wounds
- Burns
- Fractures and sprains
- Choking
- Fainting
- Seizures
- Nosebleeding
- Poisoning
- Unconsciousness
- Emergency referral and seeking professional medical assistance

Each correct response was awarded **one mark**, while an incorrect or unanswered response received **zero marks**. The maximum attainable score was **30**.

Knowledge Score Interpretation

Score Level of Knowledge

0–10 Inadequate Knowledge

11–20 Moderate Knowledge

21–30 Adequate Knowledge

Section C: Attitude Rating Scale

The attitude of school teachers toward first-aid management was assessed using a **20-item structured Likert rating scale**. The scale covered teachers' willingness, confidence, responsibility, perceived importance, and readiness to provide first aid during medical emergencies.

Each item was scored on a **5-point Likert scale**, ranging from strongly disagree to strongly agree. Appropriate reverse scoring was applied to negatively worded items.

Attitude Score Interpretation

Score Level of Attitude

20–46 Unfavorable Attitude

47–73 Moderately Favorable Attitude

74–100 Highly Favorable Attitude

Validity and Reliability

The research instruments were reviewed by experts from **Child Health Nursing, Community Health Nursing, Medical-Surgical Nursing, Pediatrics, and Medical Emergency Care** to establish content validity. Reliability of the knowledge questionnaire and attitude rating scale was assessed using an appropriate reliability method, and the obtained reliability coefficients indicated satisfactory consistency of the instruments.

Data Collection Procedure

Prior permission was obtained from the concerned school authorities before commencing the study. The selected teachers were informed about the purpose and procedure of the study. Written informed consent was obtained from each participant. The demographic questionnaire, structured knowledge questionnaire, and attitude rating scale were administered to the **100 selected school teachers**. Adequate privacy and confidentiality were maintained throughout the data collection process.

Data Analysis

The collected data were systematically coded, tabulated, and analyzed using descriptive and inferential statistics.

- **Frequency and percentage** were used to describe demographic characteristics.
- **Mean and standard deviation** were used to summarize knowledge and attitude scores.
- **Chi-square test** was used to determine the association between knowledge level and selected demographic variables.
- **Chi-square test** was also used to determine the association between attitude level and selected demographic variables.
- The level of statistical significance was set at $p < 0.05$.

Results

A total of **100 school teachers** participated in the study. The results were analyzed according to the objectives of the study using descriptive and inferential statistics.

Table 1: Distribution of School Teachers According to Demographic Variables (N=100)

Demographic Variable	Category	f	%
Age	21–30 years	28	28
	31–40 years	34	34
	41–50 years	24	24
	>50 years	14	14
Gender	Male	38	38
	Female	62	62
Educational Qualification	Diploma/Intermediate	18	18
	Graduate	56	56
	Postgraduate	26	26
Teaching Experience	<5 years	24	24
	5–10 years	32	32
	11–15 years	25	25
	>15 years	19	19
Previous First-Aid Training	Yes	36	36
	No	64	64
Previous Experience of Medical Emergency	Yes	42	42
	No	58	58
Source of Information	Formal training	24	24
	Internet/social media	30	30
	Television/newspaper	18	18
	Friends/colleagues	12	12
	No information	16	16

The findings indicate that the majority of teachers were **31–40 years of age (34%)**, **female (62%)**, graduates (56%), and had **5–10 years of teaching experience (32%)**. Only **36%** had previously received first-aid training.

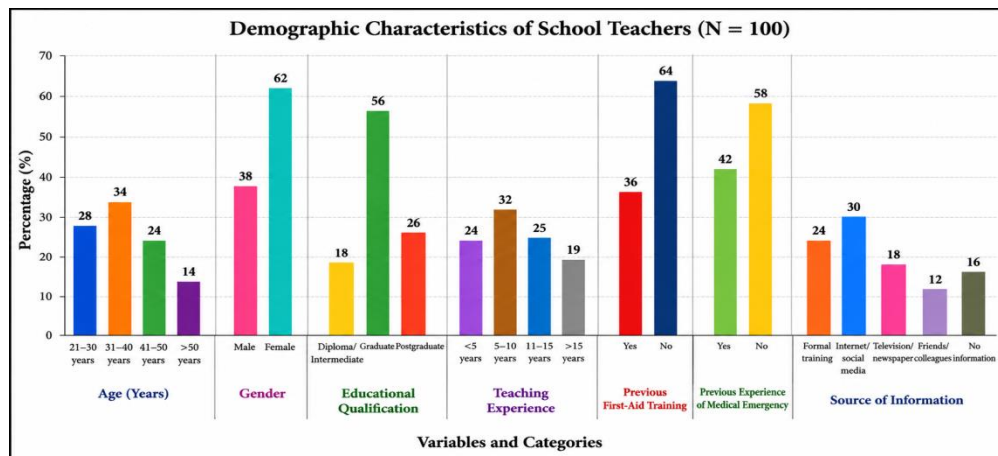


Table 2: Level of Knowledge Regarding First-Aid Management (N=100)

Level of Knowledge	Score Range	f	%
Inadequate	0–10	18	18
Moderate	11–20	57	57
Adequate	21–30	25	25
Total		100	100

The results showed that **57% of school teachers had moderate knowledge**, 25% had adequate knowledge, and 18% had inadequate knowledge regarding first-aid management of medical emergencies among primary school children.

The overall **mean knowledge score was 17.42 ± 4.86** out of 30.

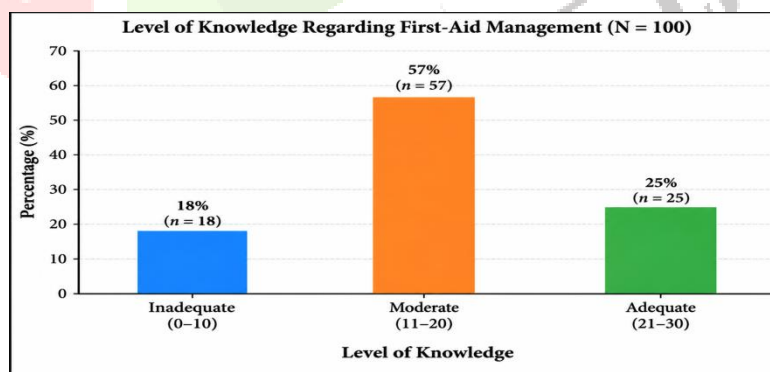
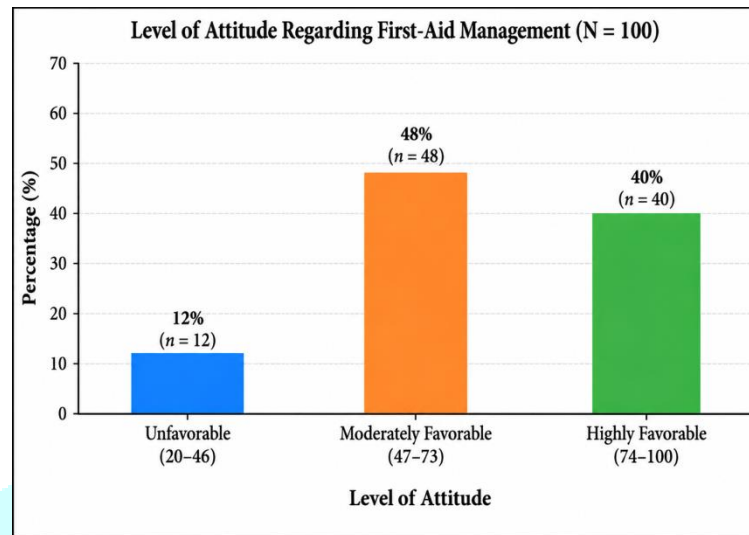


Table 3: Level of Attitude Regarding First-Aid Management (N=100)

Level of Attitude	Score Range	f	%
Unfavorable	20–46	12	12
Moderately Favorable	47–73	48	48
Highly Favorable	74–100	40	40
Total		100	100

The findings revealed that **48% of teachers had a moderately favorable attitude**, 40% had a highly favorable attitude, and 12% had an unfavorable attitude toward first-aid management.

The overall **mean attitude score was 71.86 ± 12.24** out of 100.



Overall Findings

Among the **100 school teachers**, the majority demonstrated **moderate knowledge (57%)** and a **moderately favorable attitude (48%)** regarding first-aid management of medical emergencies among primary school children. Previous first-aid training and prior experience of managing medical emergencies were significantly associated with both knowledge and attitude.

Discussion

The present study assessed the **knowledge and attitude of 100 school teachers** regarding first-aid management of medical emergencies among primary school children. The findings showed that **57% had moderate knowledge**, 25% had adequate knowledge, and 18% had inadequate knowledge. The mean knowledge score was **17.42 ± 4.86** .

Regarding attitude, **48% of teachers had a moderately favorable attitude**, 40% had a highly favorable attitude, and 12% had an unfavorable attitude. The mean attitude score was **71.86 ± 12.24** .

Knowledge was significantly associated with **age, educational qualification, teaching experience, previous first-aid training, previous emergency experience, and source of information ($p < 0.05$)**. Similarly, attitude was significantly associated with **educational qualification, teaching experience, previous first-aid training, previous emergency experience, and source of information ($p < 0.05$)**.

The findings indicate that although most teachers had moderate knowledge and a favorable attitude, **regular first-aid training and practical demonstrations** are needed to improve their preparedness for managing medical emergencies among primary school children.

Conclusion

The study concluded that among **100 school teachers**, the majority had **moderate knowledge and a moderately favorable attitude** regarding first-aid management of medical emergencies among primary school children. Previous first-aid training and experience in handling emergencies were associated with better knowledge and attitude.

The findings highlight the need for **regular first-aid training, practical demonstrations, and refresher programmes** for school teachers to improve their confidence and preparedness. Strengthening teachers' first-aid skills can contribute to **timely emergency management, prevention of complications, and improved safety of primary school children**.

Recommendations

Based on the findings of the study, the following recommendations are made:

1. **Regular first-aid training programmes** should be organized for school teachers.
2. Schools should conduct **practical demonstrations and emergency drills** for common medical emergencies.
3. **Refresher training** should be provided periodically to maintain teachers' first-aid knowledge and skills.
4. Schools should maintain **adequately equipped first-aid boxes** and ensure that teachers know their location and proper use.
5. **First-aid education** should be included in teacher orientation and professional development programmes.
6. Similar studies with a **larger sample size and different geographical areas** may be conducted to improve the generalizability of findings.
7. Further studies may evaluate the **effectiveness of structured first-aid training programmes** on teachers' knowledge, attitude, and practical skills.

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