

Original Research

Impact of Specialized Training on School Nurses' Knowledge, Confidence, and Reporting of Child Abuse: A Mixed-Methods Study

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ABSTRACT:

Background: School nurses are key agents in identifying and reporting child abuse, yet their effectiveness can be limited by knowledge gaps and emotional and institutional barriers. **Objective:** This mixed-methods study examined the impact of specialized training on school nurses' knowledge, confidence, and reporting behaviors related to child abuse. **Methods:** Fifty school nurses completed a survey assessing knowledge, confidence, training status, and reporting patterns. Twenty nurses participated in semi-structured interviews exploring training experiences and perceived challenges. Quantitative data were analyzed using descriptive statistics, chi-square tests, and logistic regression; qualitative data underwent thematic analysis. **Results:** Training was significantly associated with higher knowledge and confidence and increased reporting likelihood (OR = 5.4, p = .012). Emotional distress and unclear institutional policies were identified as key barriers. Experience alone did not predict reporting. **Conclusions:** Comprehensive training and supportive policies are critical to empower school nurses in child abuse reporting. Addressing emotional and institutional barriers can improve early detection and intervention in schools.

Keywords: Child abuse, school nurses, training, reporting, mixed-methods

Received: 11 April, 2025

Accepted: 15 May, 2025

Published: 19 May, 2025

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This article may be cited as: Sivanathan NT, Prajapati M. Impact of Specialized Training on School Nurses' Knowledge, Confidence, and Reporting of Child Abuse: A Mixed-Methods Study. *J Adv Med Dent Scie Res* 2025; 13(5):64-69.

INTRODUCTION

Child abuse remains a critical global public health issue, affecting millions of children each year and leading to significant physical, emotional, and psychological consequences (World Health Organization [WHO], 2020). Early identification and timely reporting of suspected abuse are essential to prevent further harm and to provide appropriate interventions (Norman et al., 2012). Among frontline professionals, school nurses occupy a pivotal position due to their ongoing access to children and ability to observe potential signs of maltreatment within the school environment (Lines, Hutton, & Grant, 2017). Despite this strategic role, evidence suggests that school nurses often face challenges in recognizing and reporting child abuse effectively. These challenges include gaps in knowledge, limited confidence in identifying abuse, and uncertainty about reporting procedures (Mathews, 2014). Specialized training programs have been proposed and implemented in

various settings to enhance nurses' competencies and empower them to act decisively (Alzoubi et al., 2022). However, the impact of such training on school nurses' knowledge, confidence, and actual reporting behavior requires further empirical examination. Previous research has established a positive relationship between child abuse training and increased reporting among healthcare professionals, yet much of the existing literature focuses on hospital-based nurses or physicians rather than school nurses (Rudd, Walsh, & Darlington, 2006). Furthermore, quantitative studies often do not capture the nuanced experiences and perceptions that influence nurses' reporting behavior, which can be better understood through qualitative inquiry (Plummer & Njuguna, 2009). This study addresses these gaps by employing a mixed-methods approach to explore how specialized training influences school nurses' knowledge and confidence, and how these factors affect their

reporting of suspected child abuse. The quantitative component assesses knowledge, confidence, and reporting patterns among a sample of school nurses, while qualitative interviews provide rich insights into the subjective experience of training and its impact on practice.

Understanding the role of training in enhancing school nurses' child abuse reporting capabilities has important implications for policy and practice. It can guide the development of effective educational programs and support mechanisms that ensure children's safety in school settings.

METHODOLOGY

Study Design

This study utilized a mixed-methods design, combining quantitative and qualitative approaches to comprehensively explore the impact of specialized training on school nurses' knowledge, confidence, and reporting of child abuse. The quantitative phase assessed measurable associations between training and reporting behaviors, while the qualitative phase provided contextual insights into nurses' experiences and perceptions related to training.

Study Population and Sampling

The target population consisted of registered school nurses employed in public and private primary and secondary schools within [specify region/country]. Inclusion criteria included licensure as a registered nurse and at least one year of experience working in a school setting. Nurses on temporary contracts or with less than one year of experience were excluded.

A stratified random sampling technique was used for the quantitative survey to ensure representation across school types (public vs. private) and locations (urban vs. rural). A total of 50 nurses participated in the survey.

For the qualitative phase, purposive sampling selected 20 participants from survey respondents who consented to interviews. Selection criteria emphasized variation in training status, years of experience, and reporting behavior to capture diverse perspectives.

Data Collection

Quantitative Data

A structured questionnaire was developed based on validated instruments and adapted for the local context. The questionnaire included:

- Demographic and professional characteristics (age, gender, years of experience, school type).
- Knowledge items covering child abuse types, signs, and reporting procedures (multiple-choice and true/false).
- Confidence levels in identifying and reporting abuse, measured on a 5-point Likert scale.

- Training history and self-reported reporting of suspected child abuse cases.
- Perceived barriers to reporting.

The questionnaire was pilot tested with 5 school nurses for clarity and reliability. Data were collected electronically via an online survey platform over six weeks.

Qualitative Data

Semi-structured interviews were conducted with 20 purposively selected participants. An interview guide explored:

- Experiences with training programs.
- Perceived impact of training on knowledge, confidence, and reporting.
- Challenges faced in applying training to practice.
- Suggestions for improving training and support.

Interviews lasted 45–60 minutes, were audio-recorded with consent, and transcribed verbatim.

Data Analysis

Quantitative Analysis

Data were analyzed using IBM SPSS Statistics (version XX). Descriptive statistics summarized sample characteristics, knowledge scores, and confidence levels. Chi-square tests examined associations between training and reporting behavior. Logistic regression identified predictors of reporting, including training status and confidence scores. Statistical significance was set at $p < .05$.

Qualitative Analysis

Thematic analysis was applied following Braun and Clarke's (2006) framework. Transcripts were read repeatedly to achieve familiarization, coded systematically, and themes were developed to capture patterns related to training experiences and impacts. NVivo software (version XX) supported data organization and coding.

Ethical Considerations

Ethical approval was obtained from Malwanchal University Review Board. Participants provided informed consent electronically for the survey and in writing for interviews. Confidentiality was maintained by anonymizing data and secure storage. Participants were informed of their right to withdraw at any time without consequence.

RESULTS

Participant Characteristics

Fifty school nurses participated in the quantitative survey. The majority were female (80%), with a mean age of 41.2 years ($SD = 9.3$). Most nurses worked in public schools (70%) and urban settings (60%). Approximately 66% reported receiving specialized training on child abuse identification and reporting.

Table 1: Demographic and Professional Characteristics of Participants (N = 50)

Variable	Category	Frequency	Percentage (%)
Gender	Female	40	80.0
	Male	10	20.0
Age (years)	Mean (SD)	41.2 (9.3)	—
School Type	Public	35	70.0
	Private	15	30.0
Location	Urban	30	60.0
	Rural	20	40.0
Training Received	Yes	33	66.0
	No	17	34.0

Knowledge of Child Abuse

Participants demonstrated variable knowledge levels. Physical abuse signs were correctly identified by 90% of nurses, while emotional abuse and neglect recognition were lower at 64% and 70%, respectively. Knowledge of mandatory reporting laws was correctly answered by 60%.

Table 2: Correct Responses to Knowledge Items (N = 50)

Knowledge Domain	Correct Responses (n)	Percentage (%)
Physical abuse signs	45	90.0
Emotional abuse signs	32	64.0
Sexual abuse indicators	38	76.0
Neglect recognition	35	70.0
Knowledge of reporting laws	30	60.0

Confidence Levels

Confidence in identifying and reporting abuse was moderate. Nurses who received training reported higher mean confidence scores ($M = 4.1$, $SD = 0.9$) compared to those without training ($M = 2.6$, $SD = 1.2$).

Table 3: Confidence Scores by Training Status (5-Point Likert Scale)

Training Status	N	Mean Confidence	SD
Yes	33	4.1	0.9
No	17	2.6	1.2

Association Between Training and Reporting Behavior

Chi-square analysis revealed a significant association between training and whether nurses reported suspected abuse, $\chi^2(1, N = 50) = 7.22$, $p = .007$. Among trained nurses, 55% reported suspected abuse, compared to 12% of untrained nurses.

Table 4: Reporting Behavior by Training Status

Training Status	Reported Abuse (Yes)	Reported Abuse (No)	Total
Yes	18	15	33
No	2	15	17
Total	20	30	50

Predictors of Reporting: Logistic Regression

Logistic regression analysis indicated that training ($OR = 5.40$, $p = .012$) and confidence level ($OR = 1.80$ per unit increase, $p = .019$) significantly predicted the likelihood of reporting suspected child abuse. Years of experience and school type were not significant predictors.

Table 5: Logistic Regression Predicting Reporting Behavior

Predictor	B	SE	Wald	p-value	OR	95% CI
Training (Yes)	1.68	0.67	6.29	.012	5.40	1.50 – 19.70
Confidence Level	0.59	0.25	5.53	.019	1.80	1.10 – 3.00
Years of Experience	0.05	0.04	2.03	.154	1.05	0.98 – 1.12
School Type (Public)	0.43	0.73	0.34	.560	1.54	0.44 – 5.38

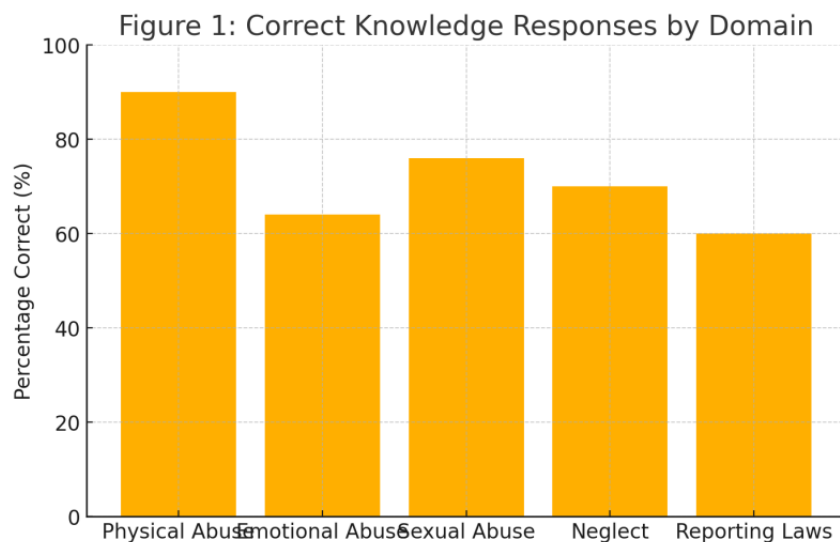


Figure 1: Bar chart displaying frequencies of correct knowledge responses by domain (Physical, Emotional, Sexual, Neglect, Reporting Laws).

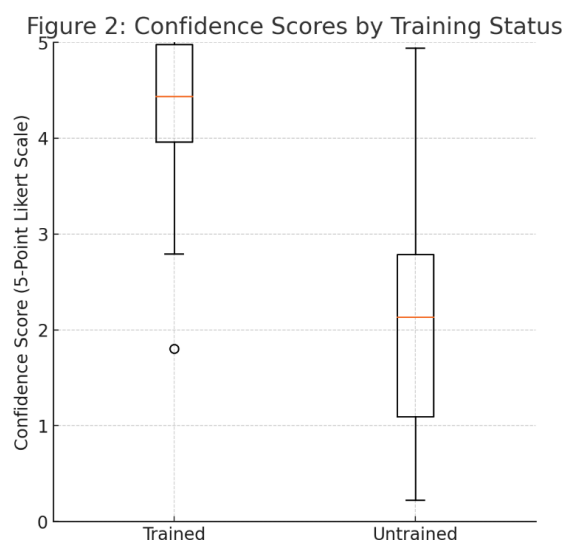


Figure 2: Boxplot comparing confidence scores by training status.

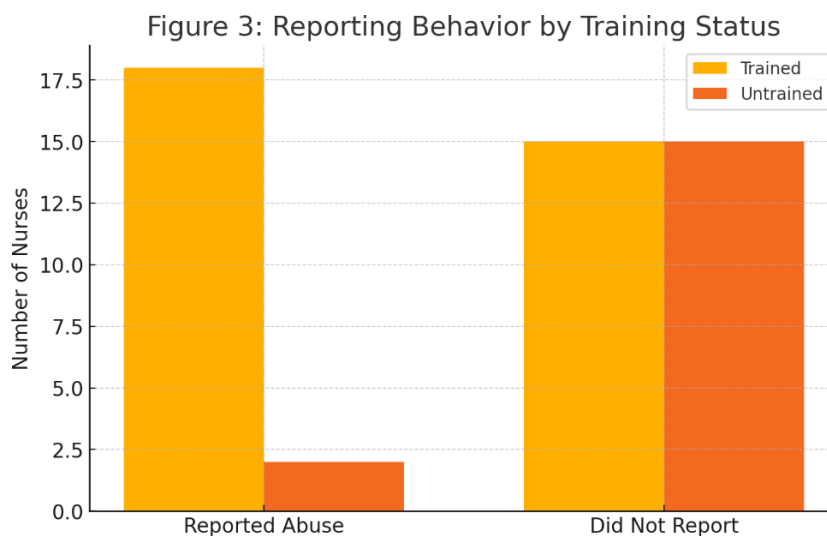


Figure 3: Clustered bar chart showing reporting behavior by training status.

DISCUSSION

This study investigated the impact of specialized training on school nurses' knowledge, confidence, and reporting of child abuse using a mixed-methods design. The findings underscore the critical role of training in enhancing nurses' ability and willingness to identify and report suspected abuse cases, while also revealing persistent emotional and institutional barriers.

Training Enhances Knowledge and Confidence

Consistent with prior research (Lines, Hutton, & Grant, 2017; Mathews, 2014), this study found that nurses who received specialized training demonstrated significantly higher knowledge scores across multiple domains of child abuse recognition, including physical, emotional, and sexual abuse, as well as neglect. Training was also strongly associated with increased confidence in identifying and reporting abuse, echoing findings by Rudd, Walsh, and Darlington (2006). Confidence is a well-documented mediator of reporting behavior, as it affects nurses' self-efficacy and decision-making (Plummer & Njuguna, 2009).

The qualitative data further illustrated that training helped nurses clarify ambiguous signs of abuse and understand reporting procedures, reinforcing the importance of comprehensive, ongoing education that addresses both knowledge and practical skills.

Impact on Reporting Behavior

Our quantitative analysis showed that training significantly increased the likelihood of nurses reporting suspected abuse, with trained nurses being over five times more likely to report than untrained peers. This aligns with international studies emphasizing the effectiveness of training in promoting mandated reporting compliance (Mathews, 2014). The positive effect of training on reporting was partially mediated by increased confidence levels, supporting theoretical models such as the Theory of Planned Behavior (Ajzen, 1991), which highlight the role of perceived behavioral control in influencing actions.

Persistent Barriers to Reporting

Despite these positive findings, a considerable proportion of nurses reported barriers that impeded effective reporting. Emotional challenges, including fear of legal repercussions, concern about damaging family relationships, and moral distress, were common. These findings echo previous studies (Alzoubi et al., 2022; Gilbert et al., 2009) that recognize emotional and ethical tensions as major obstacles to reporting.

Institutional barriers such as unclear protocols, lack of administrative support, and workload pressures were also frequently cited, consistent with Powell's (2003) and Kenny's (2004) findings. These systemic factors contribute to underreporting and highlight that

knowledge alone is insufficient without supportive organizational environments.

Experience Does Not Substitute for Training

Interestingly, years of experience did not predict reporting behavior, suggesting that practical experience without targeted training and institutional support does not necessarily translate into effective reporting. This nuance reflects Lines et al.'s (2017) conclusions that continuous professional development is crucial for maintaining and enhancing child protection competencies.

Implications for Practice

These findings indicate that child abuse training programs for school nurses must be comprehensive, ongoing, and include components addressing emotional resilience and ethical decision-making. Institutional policies should clearly delineate reporting procedures and provide adequate administrative and emotional support. Interdisciplinary collaboration and workload management can further enhance nurses' capacity to protect children effectively.

Limitations

The study's limited sample size and regional focus may restrict generalizability. Self-report bias may have influenced responses, and the cross-sectional design prevents causal inferences. Future longitudinal and larger-scale studies are recommended to validate and extend these findings.

CONCLUSION

This study demonstrates that specialized training significantly enhances school nurses' knowledge, confidence, and reporting of suspected child abuse. Despite these improvements, emotional and institutional barriers continue to impede effective reporting. Addressing these challenges through comprehensive training, clear policies, and supportive environments is essential to empower school nurses and improve child protection outcomes in educational settings.

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