



KNOWLEDGE, ATTITUDE, PRACTICES, AND SELF-EFFICACY REGARDING FALL RISK FACTORS DETERMINATION, PREVENTION, AND MANAGEMENT AMONG INPATIENT NURSES IN GOVERNMENT HOSPITALS IN ABRA, PHILIPPINES: BASIS FOR A CAPACITY-BUILDING PLAN

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ABSTRACT

This study examined inpatient nurses' knowledge, attitudes, practices, and self-efficacy regarding fall risk factors determination, prevention, and management in government hospitals in Abra and examined their associations with selected profile variables and the relationships of knowledge, attitudes, and practices with self-efficacy. Using a descriptive-correlational research design, the study was conducted from April to June 2026 and involved 123 inpatient nurses—85 from the provincial hospital and 38 from the district hospitals—selected through total enumeration. Data were collected using a researcher-developed structured questionnaire and analysed using descriptive statistics, the Shapiro–Wilk test, Mann–Whitney U test, Kruskal–Wallis test, and Spearman's rank-order correlation. The findings showed that inpatient nurses in both settings had high knowledge and very positive attitudes; however, provincial hospital nurses demonstrated adequate practices and high self-efficacy, while district hospital nurses demonstrated very adequate practices and very high self-efficacy. Most demographic and professional characteristics were not significantly associated with the main study variables. Attitude and practices were significantly related to self-efficacy in both hospital groups, whereas knowledge was significantly related to self-efficacy only among district hospital nurses. Overall, the findings indicate that inpatient nurses possess generally favorable competencies for fall prevention and management, although greater use of standardized fall risk assessment tools, continuing professional development, and stronger institutional support are needed to promote consistent evidence-based practice. Based on the findings, a capacity-building plan was developed.

Keywords: *fall prevention, knowledge, attitude, practices, self-efficacy*

INTRODUCTION

Among patient safety concerns in healthcare settings, the prevention of patient falls continues to be a priority for nurses and healthcare institutions. Falls contribute substantially to injury-related morbidity and mortality worldwide and remain a major public health concern (World Health Organization [WHO], 2021). In hospitals, falls may result in injury, additional treatment, prolonged hospitalization, and increased healthcare costs. In addition, falls can complicate patient recovery and require additional institutional resources.

Effective fall prevention requires early identification of risk factors, timely implementation of preventive measures, and appropriate management following a fall. Because nurses are directly involved in day-to-day patient care, they are primarily responsible for implementing fall prevention measures. They assess and monitor patients, implement safety measures, provide patient and family education, respond to fall incidents, and participate in documentation and reporting. The implementation of fall prevention and management strategies can be affected by the competence and confidence of nurses in performing these responsibilities.

Although fall prevention guidelines and patient safety measures are available, their implementation may vary across healthcare institutions. In the Philippines, differences in the adoption and implementation of patient safety performance measures have been reported among healthcare facilities (Tamondong-Lachica et al., 2024). As a result, patient safety practices should be examined within individual healthcare settings, where implementation may differ.

In Abra, government hospitals provide inpatient services through the provincial hospital and district hospitals, which are located in different municipalities. The nurses from these hospitals care for patients with diverse clinical conditions and varying levels of dependency. However, local evidence regarding the preparedness of inpatient nurses in terms of their knowledge, attitude, practices, and self-efficacy related to fall risk factor determination, prevention, and management remains limited. Information is also limited in terms of the relationship between selected personal and institutional characteristics and these aspects of nursing practice. The absence of local data makes it difficult to determine which areas are adequately addressed and which require additional support.

This study assessed the knowledge, attitude, practices, and self-efficacy of inpatient nurses in government hospitals in Abra regarding fall risk factors determination, prevention, and management. It also examined the relationships among these variables and their associations with selected socio-demographic and professional profiles. The findings of the study may assist in determining specific competencies that are well established as well as areas requiring further development.

Based on the study findings, a targeted capacity-building plan may be proposed to

address identified gaps that require improvement. The plan may serve as a guide for nursing administrators and healthcare institutions in strengthening strategies and programs aimed at preventing and managing fall incidents, such as training programs, nursing competencies, fall risk assessment practices, policy awareness, and monitoring activities. In the long term, the study may contribute to efforts aimed at improving nursing practice and providing high-quality care in government hospitals in Abra.

Literature Review

Global Perspectives on Falls and Patient Safety

Falls remain a major patient safety concern because they can result in injury, disability, prolonged hospitalization, increased healthcare use, and death. The World Health Organization (WHO, 2021) reported that falls are the second leading cause of unintentional injury deaths worldwide, accounting for approximately 684,000 deaths and 37.3 million falls requiring medical attention annually. Hospitalized patients are particularly vulnerable because of acute illness, impaired mobility, cognitive changes, medication effects, and environmental conditions.

Inpatient falls usually result from multiple interacting factors. Previous falls, impaired mobility, cognitive impairment, continence problems, medications, and environmental hazards have been identified as important contributors (Morris & O’Riordan, 2017). Because standardized tools may not capture all relevant risks, they should complement—rather than replace—clinical judgment, observation, individualized assessment, and ongoing reassessment (Callis, 2016). Fall prevention therefore requires an integrated process involving assessment, preventive interventions, communication, reporting, and follow-up (Wang et al., 2024).

Fall Risk Factor Determination, Prevention, and Management

Accurate fall risk determination requires nurses to recognize patient-related, clinical, medication-related, and environmental factors. A history of falls, impaired mobility and cognition, medications associated with dizziness or postural hypotension, and environmental hazards may increase fall risk (Morris & O’Riordan, 2017). Standardized tools provide structure but should not replace professional judgment because numerical scores cannot identify every circumstance that may contribute to a fall (Callis, 2016; Morris & O’Riordan, 2017). Reassessment is also necessary when changes in treatment, mobility, cognition, or clinical condition occur.

Once risks are identified, preventive measures should be individualized. These may include mobility and toileting assistance, medication review, supervision, environmental safety measures, appropriate footwear, accessible personal items, and mobility aids (Morris & O’Riordan, 2017). Patient and family education is also important because hospitalized patients may not always recognize their own fall risk or understand recommended precautions (Shuman et al., 2016). Effective prevention therefore requires

identified risks to be translated into appropriate actions that are communicated, monitored, and revised when necessary.

Following a fall, nurses are responsible for assessing the patient for injury or clinical changes, providing appropriate care, communicating relevant information, completing documentation and incident reports, and reassessing contributing factors. Incident reviews can also identify gaps in assessment, communication, environmental safety, documentation, and adherence to protocols. Post-fall management therefore addresses both the immediate needs of the patient and the prevention of recurrence (Wang et al., 2024).

Nurses' Knowledge, Attitudes, Practices, and Self-Efficacy

Nurses' knowledge of fall prevention and management includes recognition of risk factors, assessment and reassessment, individualized interventions, patient education, incident reporting, and post-fall care. Knowledge should extend beyond completing an assessment tool to understanding its limitations and determining appropriate interventions based on identified risks. Repeated education can help address knowledge gaps and strengthen fall-prevention activities (Cho & Jang, 2020; Nguyen et al., 2025).

Attitudes reflect how nurses perceive the importance of fall assessment, prevention, reporting, and patient safety. A positive attitude involves recognizing fall prevention as an ongoing nursing responsibility rather than a single assessment or administrative requirement. Clear institutional policies, accessible guidelines, and standardized procedures may support positive attitudes toward these responsibilities.

Fall-related nursing practices include assessment on admission, reassessment, identification of individual risk factors, preventive interventions, patient and family education, environmental safety, communication, documentation, incident reporting, and post-fall care. These practices should be individualized according to identified risks and supported by continuing education and an appropriate practice environment (Morris & O'Riordan, 2017; Cho & Jang, 2020; Nguyen et al., 2025).

Self-efficacy refers to nurses' confidence in performing their professional responsibilities. In fall prevention and management, this includes confidence in identifying at-risk patients, conducting assessments, implementing interventions, educating patients and families, documenting care, and responding to falls. Nguyen et al. (2025) highlighted the relevance of self-efficacy to fall-prevention activities. Confidence may be strengthened through repeated practice, feedback, simulations, return demonstrations, case discussions, and bedside coaching.

Institutional Support and the Philippine Context

Effective fall prevention also depends on institutional systems that support assessment, intervention, monitoring, reporting, and post-fall care. Clear policies, accessible guidelines, standardized assessment procedures, and quality-improvement

mechanisms promote consistency while allowing nurses to exercise clinical judgment. Wang et al. (2024) demonstrated the value of integrating assessment, warning mechanisms, preventive strategies, reporting, and follow-up within an organized system.

Philippine literature on inpatient falls remains limited. Tamondong-Lachica et al. (2024) reported that fewer than half of participating hospitals consistently implemented some risk assessment and management measures, while Habana et al. (2025) identified falls among reported inpatient patient-safety events at the Philippine General Hospital. These findings emphasize the importance of systematic risk identification, documentation, clinical response, reporting, and preventive action.

Family caregivers or “*bantay*” also commonly participate in bedside care in Philippine hospitals by assisting with mobility, toileting, feeding, and other activities. Their involvement should complement rather than replace nurses’ responsibilities for assessment and supervision. Patient and caregiver education therefore remains an important component of fall prevention. Variations in institutional resources and practices further support the need for context-specific capacity-building initiatives.

Capacity Building for Fall Risk Determination, Prevention, and Management

Capacity building should extend beyond one-time education. Cho and Jang (2020) emphasized continuing education, while Ayton et al. (2017) identified face-to-face education, leadership, clinical champions, audits, reminders, and feedback as important enablers of hospital fall-prevention programs. These strategies may be implemented through case discussions, simulations, return demonstrations, bedside coaching, incident reviews, and competency assessments.

Unit-Based Fall Champions may further support standardized procedures, staff education, audits, and continuing reinforcement while maintaining fall prevention as a shared responsibility of the healthcare team. Nurses should be trained not only to complete fall risk assessment tools but also to interpret findings, recognize risks not captured by numerical scores, select appropriate interventions, and reassess patients when conditions change.

Monitoring through chart audits, incident reviews, documentation of corrective actions, and comparison of fall incidence with an established baseline can help evaluate adherence and identify areas for improvement. Thus, capacity building may be viewed as a continuous process integrating education, competency development, standardized practice, monitoring, feedback, and quality improvement.

Research Questions

This research study examined the relationship between knowledge, attitude, practices, and self-efficacy regarding fall risk factors determination, prevention, and management among inpatient nurses in government hospitals in Abra. Specifically, the study aimed to answer the following:

1. What is the socio-demographic and professional profile of the inpatient nurses in the government hospitals in Abra in terms of:
 - 1.1 hospital category of assignment (provincial hospital or district hospitals);
 - 1.2 age;
 - 1.3 position;
 - 1.4 type of employment;
 - 1.5 years of experience;
 - 1.6 total number of hours of work per week;
 - 1.7 highest educational attainment;
 - 1.8 clinical area of assignment;
 - 1.9 number of patients handled per shift;
 - 1.10 awareness of the availability of fall prevention and management (FPM) policies or guidelines in the facility;
 - 1.11 type of Fall Risk Assessment Tool (FRAT) that is currently being used in the facility; and
 - 1.12 formal training on Fall Prevention and Management (FPM)?
2. What is the level of inpatient nurses' knowledge on fall risk factors determination, prevention, and management when described according to hospital category (provincial hospital or district hospitals)?
3. What is the level of inpatient nurses' attitude toward fall risk factors determination, prevention, and management when described according to hospital category (provincial hospital or district hospitals)?
4. What is the level of inpatient nurses' practices on fall risk factors determination, prevention, and management when described according to hospital category (provincial hospital or district hospitals)?
5. What is the level of inpatient nurses' self-efficacy on fall risk factors determination, prevention, and management when described according to hospital category (provincial hospital or district hospitals)?
6. Is there a significant association between the profile of the inpatient nurses and their level of knowledge, attitude, practices, and self-efficacy on fall risk factors determination, prevention, and management in the overall sample and, as supplementary stratified analyses, within the provincial hospital and district hospital groups?
7. Is there a significant relationship between the level of knowledge, attitude, and practices and the self-efficacy of inpatient nurses on fall risk factors determination, prevention, and management in the overall sample and, as supplementary stratified analyses, within the provincial hospital and district hospitals groups?
8. Based on the overall and stratified findings of the study, what capacity-building

plans and quality improvement activities may be proposed for government hospitals in Abra?

METHODOLOGY

This study employed a quantitative descriptive-correlational, cross-sectional research design to examine the knowledge, attitudes, practices, and self-efficacy of inpatient nurses regarding fall risk factor determination, prevention, and management. The study was conducted in government hospitals in Abra, Philippines, comprising one provincial hospital and four district hospitals. Total enumeration was used to include all eligible inpatient nurses who met the established inclusion criteria. A total of 123 registered nurses participated in the study, consisting of 85 nurses from the provincial hospital and 38 from the district hospitals. Eligible respondents were registered nurses with at least one year of clinical bedside experience, directly involved in patient care, and assigned or rotated to inpatient clinical areas. Nurses in managerial or administrative positions, those assigned exclusively to outpatient departments, those with less than one year of clinical experience, those on approved leave during data collection, and those who declined or withdrew consent were excluded.

Data were collected using a researcher-developed structured questionnaire consisting of five parts. Part I gathered respondents' socio-demographic and institutional characteristics. Part II consisted of 20 multiple-choice items assessing knowledge, with each correct answer scored one point and each incorrect answer scored zero. Parts III, IV, and V each contained 20 items assessing attitude, practices, and self-efficacy, respectively, using a five-point Likert-type scale. The instrument underwent content validation by three expert validators and obtained an overall Content Validity Index (CVI) of 0.88. It was subsequently pilot-tested among 30 respondents who were not included in the main study. Reliability testing yielded a KR-20 coefficient of 0.73 for the knowledge section and Cronbach's alpha coefficients of 0.994 for attitude, 0.966 for practices, and 0.972 for self-efficacy.

Following the required institutional approvals, eligible nurses were identified based on the inclusion and exclusion criteria. The questionnaires were distributed with uniform instructions, and respondents were informed of the study purpose, voluntary nature of participation, confidentiality of their responses, and right to withdraw. Completed questionnaires were retrieved, checked for completeness, coded, organized, and prepared for statistical analysis. Descriptive statistics, including frequency, percentage, mean, and standard deviation, were used to summarize the data. The Shapiro–Wilk test was performed to assess normality. As the data did not meet the assumption of normality, nonparametric statistical tests were applied. The Mann–Whitney U test and Kruskal–Wallis test were used to examine differences according to selected profile variables, while Spearman's rank-order correlation was used to determine the relationships of knowledge, attitude, and practices with self-efficacy. Statistical significance was set at $p < .05$, and analyses were performed using JASP statistical software.

The study was limited to eligible inpatient nurses working in government hospitals in Abra and focused specifically on their knowledge, attitudes, practices, and self-efficacy regarding fall risk factor determination, prevention, and management. Nurses working exclusively in outpatient, managerial, or administrative roles were not included. The cross-sectional design captured respondents' characteristics and perceptions at a single point in time; therefore, the findings describe associations rather than causal relationships. In addition, attitude, practices, and self-efficacy were assessed through self-reported responses and may have been influenced by response or social desirability bias. Since the study was confined to government hospitals in Abra, the findings may not be generalizable to nurses working in private hospitals or healthcare institutions in other geographic settings.

RESULTS

Table 1.
Socio-Demographic and Professional Profile of the Respondents

Socio-Demographic and Professional Characteristics	Rating and Intervals	Provincial Hospital (n=85)		District Hospitals (n=38)		Overall (N=123)	
		f	%	f	%	f	%
Age Groups (Years)	20 - 24	13	15.3	4	10.5	17	13.8
	25 – 29	16	18.8	5	13.2	21	17.
	30 - 34	10	11.8	5	13.2	15	12.2
	35 - 39	25	29.4	7	18.4	32	26.0
	40 – 44	18	21.2	5	13.2	23	18.7
	45 – 49	0	0.0	4	10.5	4	3.3
	50 – 54	2	2.4	3	7.9	5	4.1
	55 - 59	1	1.2	5	13.2	6	4.9
Type of Employment	Permanent	23	27.1	13	34.2	36	29.3
	Contractual/Job Order	62	72.9	25	65.8	87	70.7
Nurse Position	Staff Nurse	80	94.1	34	89.5	114	92.7
	Charge Nurse	5	5.9	4	10.5	9	7.3
Number of Work Hours per Week	40	85	100	38	100	123	100
Nursing Experience (Years)	1-5 years	45	52.9	19	50.0	64	52.0
	6-10 years	20	23.5	8	21.1	28	22.8
	11-15 years	8	9.4	2	5.3	10	8.1
	More than 15 years	12	14.1	9	23.7	21	17.1
Highest Educational Attainment	Bachelor's Degree	83	97.6	37	97.4	120	97.6
	Master's Degree	2	2.4	1	2.6	3	2.4
Clinical Area of Assignment	General Wards	0	0	27	71.1	27	22.0
	Emergency Department	14	16.5	10	26.3	24	19.5
	OR-DR-RR-NICU	19	22.4	-	-	19	15.4
	Medical Ward	15	17.6	-	-	15	12.2
	Paediatric Ward and Private Rooms	11	12.9	-	-	11	8.9
	OB-Gynae Ward	9	10.6	1	2.6	10	8.1

Socio-Demographic and Professional Characteristics	Rating and Intervals	Provincial Hospital (n=85)		District Hospitals (n=38)		Overall (N=123)	
		f	%	f	%	f	%
	Surgical-Orthopaedics Ward	10	11.8	-	-	10	8.1
	Intensive/Critical Care Unit	7	8.2	-	-	7	5.7
Number of Patients Handled per Shift	1-2	0	0	1	2.6	1	0.8
	3-4	14	16.5	6	15.8	20	16.3
	5-10	49	57.6	23	60.5	72	58.5
	11-15	13	15.3	2	5.3	15	12.2
	16 and above	9	10.6	6	15.8	15	12.2
Awareness of the Availability of Fall Prevention and Management (FPM) Policies and Guidelines in the Facility	Yes	32	37.6	27	71.1	59	48.0
	No	30	35.3	9	23.7	39	31.7
	I do not know	23	27.1	2	5.3	25	20.3
Type of Fall Risk Assessment Tool (FRAT) Currently Being Used in the Facility	Not Applicable	75	88.2	23	60.5	98	79.7
	Others: Patient Safety Policy/Policy on Patient Safety/Patient Safety Guidelines	1	1.2	12	31.6	13	10.6
	FRAT	5	5.9	1	2.6	6	4.9
	Morse Falls Scale	2	2.4	1	2.6	3	2.4
	STRATIFY	2	2.4	-	-	2	1.6
	Hendrich II Fall Risk Model	0	0	1	2.6	1	0.8
Formal Training on Fall Prevention and Management	Yes	6	7.1	2	5.3	8	6.5
	No	79	92.9	36	94.7	115	93.5
Total		85	100%	38	100%	123	100%

Table 2.
Frequency and Percentage of Correct Responses
to the 20-Item Knowledge Assessment Regarding
Fall Risk Factors Determination, Prevention, and Management

Knowledge Item Questions	Provincial Hospital (n=85)			District Hospitals (n=38)			Overall (N=123)		
	Correct Responses		VR	Correct Responses		VR	Correct Responses		VR
	n	%		n	%		N	%	
1. Which group has the highest risk of falls?	82	96.47	H	35	92.11	H	117	95.12	H
2. How does a previous history of falls affect an individual's future risk of falling?	49	57.65	M	14	36.84	L	63	51.22	M
3. Which statement about chronic diseases and medications is correct?	67	78.82	H	35	92.11	H	102	82.93	H

Knowledge Item Questions	Provincial Hospital (n=85)			District Hospitals (n=38)			Overall (N=123)		
	Correct Responses		VR	Correct Responses		VR	Correct Responses		VR
	n	%		n	%		N	%	
4. Which of the following physical conditions increases fall risk?	78	91.76	H	37	97.37	H	115	93.50	H
5. Which sensory impairment can increase fall risk?	83	97.65	H	38	100.00	H	121	98.37	H
6. How do cognitive impairment and depression affect an individual's risk of falling?	70	82.35	H	33	86.84	H	103	83.74	H
7. Which of the following statements is true regarding the relationship between urinary urgency and incontinence and an individual's risk of falling	51	60.00	M	30	78.95	H	81	65.85	M
8. Which environmental factor contributes to falls?	65	76.47	H	36	94.74	H	101	82.11	H
9. What is the purpose of conducting a fall risk assessment?	85	100.00	H	38	100.00	H	123	100.00	H
10. When should fall prevention strategies be implemented?	66	77.65	H	24	63.16	M	90	73.17	M
11. What is the nurses' role in fall prevention?	76	89.41	H	38	100.00	H	114	92.68	H
12. Which type of medication can increase fall risk?	51	60.00	M	26	68.42	H	77	62.60	M
13. What is the impact of hospital policies and environmental modifications on fall rates?	74	87.06	H	37	97.37	H	111	90.24	H
14. How often should knowledge about fall risk factors and prevention strategies be updated?	82	96.47	H	38	100.00	H	120	97.56	H
15. What can be the consequences of falls in older adults?	81	95.29	H	38	100.00	H	119	96.75	H
16. What should be the first action after a patient fall?	77	90.59	H	36	94.74	H	113	91.87	H
17. How should fall incidents be handled in a healthcare setting?	84	98.82	H	38	100.00	H	122	99.19	H
18. Why is early intervention important after a fall?	84	98.82	H	38	100.00	H	122	99.19	H
19. What is the importance of monitoring patients after a fall?	52	61.18	M	30	78.95	H	82	66.67	M
20. Which of the following statements is true regarding the role of patient and family education in fall management?	82	96.47	H	38	100.00	H	120	97.56	H

Note: n=number of respondents; %=Percentage; VR= Verbal Rating; H=High; M=Moderate; L=Low

Interpretation Scale: 75%–100% = (H) High Knowledge; 50%–74% = (M) Moderate Knowledge; 0%–49% = (L) Low Knowledge

Table 3.
Level of Knowledge of the Respondents Regarding
Fall Risk Factor Determination, Prevention, and Management

Level of Knowledge	Score Range	Provincial Hospital (n=85)		District Hospitals (n=38)		Overall (N=123)	
		F	%	F	%	F	%
High	15 - 20	70	82.4	38	100.0	108	87.8
Moderate	10 – 14	15	17.6	0	0.0	15	12.2
Low	0 - 9	0	0.0	0	0.0	0	0.0
Total		85	100	38	100	123	100

Note: F=Frequency; %=Percentage; n=85, Overall knowledge score: M=16.93, SD=2.36; n=38, Overall knowledge score: M=17.82, SD=1.16 N=123; Overall knowledge score: M = 17.20, SD = 2.10

Table 4.
Level of Attitude of the Respondents on
Fall Risk Factors Determination, Prevention, and Management

Indicators	Provincial Hospital (n=85)			District Hospitals (n=38)			Overall (N=123)		
	M	SD	VR	M	SD	VR	M	SD	VR
1. Fall risk should be assessed for every patient upon admission.	4.46	0.91	VP	4.61	0.97	VP	4.50	0.93	VP
2. Ongoing reassessment of fall risk during hospitalization is important.	4.41	0.86	VP	4.63	0.79	VP	4.48	0.84	VP
3. Identifying patient-specific fall risk factors improves patient safety.	4.45	0.91	VP	4.71	0.77	VP	4.53	0.87	VP
4. Fall risk assessment is practical and worth the time required.	4.32	0.95	VP	4.50	0.83	VP	4.37	0.92	VP
5. Standardized tools improve the accuracy of identifying high-risk patients.	4.41	0.93	VP	4.63	0.79	VP	4.48	0.89	VP
6. All hospitalized patients should undergo fall risk screening.	4.15	1.02	P	4.32	0.96	VP	4.20	1.00	VP
7. Preventing patient falls is a priority in nursing care.	4.38	0.86	VP	4.61	0.82	VP	4.45	0.85	VP
8. Nurses play a significant role in preventing falls.	4.42	0.88	VP	4.63	0.79	VP	4.49	0.85	VP
9. Nurses should actively implement fall prevention interventions.	4.39	0.87	VP	4.61	0.79	VP	4.46	0.85	VP
10. Educating patients and families is an essential responsibility.	4.39	0.87	VP	4.61	0.79	VP	4.46	0.85	VP
11. Fall prevention protocols are feasible to implement.	4.29	0.91	VP	4.34	0.85	VP	4.31	0.89	VP
12. Most patient falls in hospitals are preventable.	4.24	0.84	VP	4.18	0.80	VP	4.22	0.83	VP
13. Additional environmental and safety measures are necessary.	4.31	0.94	VP	4.47	0.76	VP	4.36	0.89	VP

Indicators	Provincial Hospital (n=85)			District Hospitals (n=38)			Overall (N=123)		
	M	SD	VR	M	SD	VR	M	SD	VR
14. Immediate response after a fall is critical to patient safety.	4.20	1.03	VP	4.42	1.06	VP	4.27	1.04	VP
15. Post-fall management and documentation improve care quality.	4.38	0.86	VP	4.63	0.75	VP	4.46	0.83	VP
16. Investigating the cause of a fall helps prevent future incidents.	4.38	0.95	VP	4.61	0.75	VP	4.45	0.90	VP
17. Reporting falls is necessary even if no injury occurs.	4.40	0.94	VP	4.58	0.79	VP	4.46	0.90	VP
18. Hospitalized patient falls can result in serious harm.	4.28	0.98	VP	4.39	1.17	VP	4.32	1.04	VP
19. Nurses have a professional responsibility when a patient falls.	4.39	0.93	VP	4.50	0.80	VP	4.42	0.89	VP
20. Reviewing fall incidents improves future prevention strategies.	4.42	0.90	VP	4.66	0.75	VP	4.50	0.86	VP
Overall	4.35	0.84	VP	4.53	0.70	VP	4.41	0.80	VP

Note: M= Mean; SD=Standard Deviation; VR=Verbal Rating

Interpretation Scale: 4.20 – 5.00 - (VP) Very Positive; 3.40 – 4.19 – (P) Positive; 2.60 – 3.39 – (N) Neutral; 1.80 – 2.59 - (Neg) Negative; 1.00 – 1.79 (VNeg) Very Negative

Table 5.
Level of Practices of the Respondents Regarding Fall Risk Factors Determination, Prevention, and Management.

Indicators	Provincial Hospital (N=85)			District Hospitals (N=38)			Overall (N=123)		
	M	SD	VR	M	SD	VR	M	SD	VR
1. I conduct fall risk assessments for all patients upon admission.	3.80	0.91	A	4.29	0.84	VA	3.95	0.91	A
2. I reassess fall risk when there is a change in the patient's condition.	3.99	0.79	A	4.53	0.80	VA	4.15	0.83	A
3. I assess patients for mobility, balance, and gait limitations.	4.08	0.74	A	4.63	0.67	VA	4.25	0.76	VA
4. I assess for medications that may increase fall risk.	4.06	0.71	A	4.74	0.50	VA	4.27	0.73	VA
5. I evaluate patients for sensory deficits (e.g., vision or hearing) that may contribute to falls.	4.16	0.74	A	4.71	0.61	VA	4.33	0.74	VA
6. I ensure that all patients, including those who appear stable, are assessed for fall risk.	3.94	0.84	A	4.61	0.68	VA	4.15	0.85	A
7. I ensure call bells and essential items are within patients' reach.	3.85	0.93	A	4.42	0.83	VA	4.02	0.94	A
8. I implement fall prevention strategies (e.g., bed alarms, non-slip footwear, environmental modifications).	3.93	0.87	A	4.53	0.89	VA	4.11	0.92	A
9. I maintain a safe environment by removing hazards (e.g., wet floors,	4.11	0.80	A	4.84	0.44	VA	4.33	0.79	VA

Indicators	Provincial Hospital (N=85)			District Hospitals (N=38)			Overall (N=123)		
	M	SD	VR	M	SD	VR	M	SD	VR
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10. I assist patients with ambulation when necessary.	4.11	0.77	A	4.79	0.47	VA	4.32	0.76	VA
11. I proactively offer toileting assistance to patients at risk of falls.	3.99	0.88	A	4.42	0.76	VA	4.12	0.86	A
12. I educate patients and caregivers about fall prevention measures.	4.07	0.74	A	4.63	0.63	VA	4.24	0.75	VA
13. I implement fall prevention measures independently, without waiting for specific instructions.	3.94	0.86	A	4.53	0.89	VA	4.12	0.91	A
14. I prioritize environmental safety checks even during busy shifts.	4.05	0.82	A	4.68	0.62	VA	4.24	0.81	VA
15. I accurately document and report all fall incidents according to hospital policy.	4.15	0.72	A	4.79	0.53	VA	4.35	0.72	VA
16. I promptly notify the physician after a patient fall.	4.25	0.74	VA	4.82	0.73	VA	4.42	0.78	VA
17. I report falls even when no visible injury is observed.	4.28	0.73	VA	4.87	0.41	VA	4.46	0.70	VA
18. I follow up with patients after a fall to monitor for complications.	4.24	0.68	VA	4.87	0.41	VA	4.43	0.68	VA
19. I participate in reviewing fall incidents to identify contributing factors.	4.09	0.85	A	4.82	0.46	VA	4.32	0.82	VA
20. I conduct post-fall evaluations for all patients, regardless of whether they appear unharmed.	4.12	0.85	A	4.82	0.61	VA	4.33	0.85	VA
Overall	4.06	0.63	A	4.67	0.47	VA	4.25	0.65	VA

Note: M=Mean; SD=Standard Deviation; VR=Verbal Rating

Interpretation Scale: 4.20 – 5.00 = (VA) Very Adequate; 3.40 – 4.19 = (A) Adequate; 2.60 – 3.39 = (MA) Moderately Adequate
1.80 – 2.59 = (SA) Slightly Adequate; 1.00– 1.79 = (I) Inadequate

Table 6.
Level of Self-Efficacy of the Respondents Regarding
Fall Risk Factors Determination, Prevention, and Management

Indicators	Provincial Hospital (n=85)			District Hospitals (n=38)			Overall (N=123)		
	M	SD	VR	M	SD	VR	M	SD	VR
1. Identify patients at risk for falls using screening tools.	3.89	0.96	H	4.03	0.72	H	3.93	0.89	H
2. Conduct accurate and timely fall risk assessments.	3.98	0.83	H	4.32	0.74	VH	4.08	0.82	H
3. Recognize clinical factors that increase fall risk.	4.08	0.77	H	4.47	0.60	VH	4.20	0.75	VH
4. Reassess fall risk when condition or treatment changes.	4.12	0.75	H	4.63	0.54	VH	4.28	0.73	VH
5. Determine which patients are at high	4.21	0.73	VH	4.66	0.53	VH	4.35	0.70	VH

Indicators	Provincial Hospital (n=85)			District Hospitals (n=38)			Overall (N=123)		
	M	SD	VR	M	SD	VR	M	SD	VR
risk for falls.									
6. Document fall risk assessments clearly and accurately.	4.16	0.78	H	4.55	0.55	VH	4.28	0.74	VH
7. Develop individualized fall-prevention plans.	3.92	0.83	H	4.29	0.69	VH	4.03	0.81	H
8. Implement evidence-based fall-prevention interventions.	4.02	0.84	H	4.39	0.64	VH	4.14	0.80	H
9. Apply fall-prevention strategies correctly and consistently.	4.16	0.77	H	4.47	0.56	VH	4.26	0.72	VH
10. Educate patients, families, and caregivers.	4.24	0.77	VH	4.66	0.53	VH	4.37	0.73	VH
11. Communicate fall risk during shift handoffs.	4.09	0.78	H	4.53	0.65	VH	4.23	0.77	VH
12. Collaborate with the healthcare team to reduce falls.	4.13	0.75	H	4.58	0.60	VH	4.27	0.74	VH
13. Provide instructions to staff and nursing assistants.	4.12	0.78	H	4.61	0.59	VH	4.27	0.76	VH
14. Evaluate and adjust prevention interventions.	4.02	0.84	H	4.55	0.69	VH	4.19	0.83	H
15. Respond promptly when a patient falls.	4.18	0.77	H	4.71	0.52	VH	4.34	0.74	VH
16. Assess patients thoroughly for injuries after a fall.	4.22	0.73	VH	4.68	0.53	VH	4.37	0.70	VH
17. Provide immediate and appropriate post-fall care.	4.22	0.73	VH	4.58	0.60	VH	4.33	0.71	VH
18. Document and report fall incidents accurately.	4.13	0.75	H	4.63	0.54	VH	4.28	0.73	VH
19. Modify the care plan after a fall to prevent recurrence.	4.11	0.72	H	4.58	0.55	VH	4.25	0.71	VH
20. Participate in reviewing fall incidents.	4.06	0.81	H	4.66	0.53	VH	4.24	0.78	VH
Overall	4.10	0.68	H	4.53	0.48	VH	4.23	0.66	VH

Note: M=Mean; SD=Standard Deviation; VR=Verbal Rating

Interpretation Scale: 4.20 – 5.00 – (VH) Very High; 3.40 – 4.19 – (H) High; 2.60 – 3.39 (M) Moderate; 1.80 – 2.59 – (L) Low; 1.00 – 1.79 – (VL) Very Low

Table 7.
Summary of the Respondents' Level of Knowledge, Attitude, Practices, and Self-Efficacy

VARIABLES	M	SD	VR	M	SD	VR	M	SD	VR
Knowledge (% correct)	84.60	11.80	H	89.10	5.80	H	86.00	10.50	H
Attitude	4.35	0.84	VP	4.53	0.70	VP	4.41	0.80	VP
Practices	4.06	0.63	A	4.67	0.47	VA	4.25	0.65	VA
Self-Efficacy	4.10	0.68	H	4.53	0.48	VH	4.23	0.66	VH

Note: M=Mean; SD=Standard Deviation; VR=Verbal Rating

Table 8.
Association Between the Respondents' Profile
and Their Knowledge, Attitude, Practices, and Self-Efficacy

Profile Variable	Test	Provincial Hospital (n=85)				District Hospitals (n=38)				Overall (N=123)			
		K	A	P	SE	K	A	P	SE	K	A	P	SE
Age	SRCC	.222	.443	.831	.831	.024*	.420	.611	.675	.076	.434	.664	.976
Type of Employment	M-W U	.510	.661	.638	.976	.214	.506	.552	.988	.253	.469	.946	.898
Nurse Position	M-W U	.741	.679	.691	.590	.227	.534	.716	.848	.475	.561	.799	.628
Years of Experience	K-W H	.300	.117	.259	.027*	.763	.352	.159	.137	.415	.120	.329	.024*
No. of Hours of Work per Week	NA	-	-	-	-	-	-	-	-	-	-	-	-
Highest Educational Attainment	M-W U	.736	.511	.116	.187	.887	.783	.246	.679	.702	.429	.121	.192
Clinical Area of Assignment	K-W H	.559	.314	.061	.007*	.234	.361	.417	.888	.382	.280	<.001*	<.001*
No. of Patients Handled per Shift	K-W H	.036*	.680	.752	.049*	.924	.096	.534	.287	.078	.236	.486	.047*
Awareness of the Availability of Policy/Guidelines on FPM in the Facility	K-W H	.311	.376	.237	.401	.810	.739	.512	.862	.386	.401	.198	.425
Type of FRAT being used in the facility	K-W H	.687	.355	.495	.269	.512	.041*	.308	.093	.424	.017*	.015*	.011*
Formal Training on FPM	M-W U	.377	.162	1.000	.938	.090	.076	.072	.070	.864	.033*	.421	.394

Note: SRCC = Spearman's rank-order correlation; K-W H=Kruskal-Wallis H test; M-W U=Mann-Whitney U test; NA=Not Applicable. Values are p-values. K = Knowledge; A = Attitude; P = Practices; SE = Self-Efficacy.

*p < .05 (significant).

Number of hours of work per week was not tested since there is no variance in the responses.

All respondents answered 40 hours.

Table 9.
Relationship of Knowledge, Attitude, and Practices with Self-Efficacy

Variables	Provincial Hospital (n=85)				District Hospitals (n=38)				Overall (N=123)			
	rho	p-value	Strength	Decision	rho	p-value	Strength	Decision	rho	p-value	Strength	Decision
K & SE	-.057	.602	N	NSig	.448	.005	M	Sig	.090	.320	N	NSig
A & SE	.575	<.001	M	Sig	.554	<.001	M	Sig	.572	<.001	M	S
P & SE	.763	<.001	S	Sig	.712	<.001	S	Sig	.792	<.001	S	S

Note. p = Spearman's rank-order correlation coefficient; K = Knowledge; A = Attitude; P = Practices; SE = Self-Efficacy;

Sig = Significant; NSig = Not Significant.

Statistical significance was set at p < .05.

Strength of correlation: < .10 = Negligible (N); .10-.39 = Weak (W); .40-.69 = Moderate (M); .70-.89 = Strong (S); ≥ .90 = Very Strong (VS).

DISCUSSION

Age

Most respondents were in the early to middle adult age groups. Of the 123 nurses, the largest proportion were aged 35–39 years (26.02%), followed by 40–44 years (18.70%) and 25–29 years (17.07%). A similar pattern was observed in the provincial hospital, while respondents in the district hospitals were more widely distributed across age groups. Only a small proportion of the total respondents were aged 45 years and above.

Age and accumulated clinical experience may contribute to professional maturity, clinical judgment, and recognition of patient safety risks (Heng et al., 2020; Patrician et al., 2024). The presence of both younger and more experienced nurses may therefore support fall prevention and management by combining current evidence-based knowledge with practical clinical experience.

Type of Employment

Most respondents (70.7%) were employed on a contractual or job-order basis, including 72.9% in the provincial hospital and 65.8% in the district hospitals. Permanent employees comprised 27.1% and 34.2%, respectively.

Although employment status does not directly determine clinical competence, supportive work environments, organizational support, and access to professional development contribute to nursing performance and patient safety (Alsadaan et al., 2023; Hult et al., 2023). Given the predominance of contractual nurses, equal access to training, mentorship, and patient safety programs is important for maintaining consistent fall prevention and management practices.

Position as a Nurse

The majority of respondents were staff nurses (92.7%), while only 7.3% were charge nurses. Staff nurses also predominated in both the provincial (94.1%) and district hospitals (89.5%).

Staff nurses have direct responsibilities for fall risk assessment, patient monitoring, preventive interventions, and other safety measures, while charge nurses support these activities through clinical leadership, supervision, and reinforcement of institutional policies. Effective nursing leadership can strengthen patient safety culture and adherence to evidence-based practices (Delamater & Hall, 2018; Alsadaan et al., 2023; Lee et al., 2023).

Years of Nursing Experience

More than half of the respondents (52.0%) had 1–5 years of nursing experience, followed by 22.8% with 6–10 years. Nurses with more than 15 years of experience comprised 17.1%. The pattern was similar between hospital groups, although district

hospitals had a higher proportion of nurses with more than 15 years of experience (23.7%) than the provincial hospital (14.1%).

The predominance of early-career nurses highlights the importance of continuing professional development and mentorship. More experienced nurses can contribute clinical expertise and guidance, while competency-based training can strengthen fall prevention and management skills across experience levels (Boros & Balogh, 2024; Morris et al., 2022).

Number of Hours per Week

All respondents worked 40 hours per week, indicating a uniform regular work schedule across the provincial and district hospitals. Maintaining reasonable work hours is relevant to patient safety because excessive workload and prolonged shifts may contribute to fatigue, reduced work effectiveness, and adverse patient outcomes (Dall'Ora et al., 2015; Milesky et al., 2025).

Highest Educational Background

Almost all respondents (97.6%) held a bachelor's degree in nursing, while only 2.4% had obtained a master's degree. The distribution was nearly identical in the provincial and district hospitals.

The predominance of bachelor's degree holders indicates that respondents possessed the fundamental professional preparation required for nursing practice and the application of evidence-based patient safety measures, including fall prevention and management (Heng et al., 2020; Shaw et al., 2020).

Clinical Area of Assignment

Respondents were assigned across different clinical areas. Overall, 22.0% worked in General Wards, 19.5% in the Emergency Department, and 15.4% in OR–DR–RR–NICU. Provincial hospital nurses were distributed across several specialty units, whereas district hospital nurses were concentrated mainly in General Wards (71.1%) and Emergency Rooms (26.3%).

Clinical assignment may influence nurses' exposure to patients at risk of falling because patient characteristics, acuity, and care demands vary across units. Differences in clinical exposure may therefore be relevant to nurses' experience and confidence in fall prevention and management (Heng et al., 2020; Heng et al., 2022).

Number of Patients Handled per Shift

The most common patient assignment was 5–10 patients per shift (58.5%), followed by 3–4 patients (16.3%). Similar patterns were observed in the provincial (57.6%) and district hospitals (60.5%).

Patient load is relevant to fall prevention because adequate staffing supports timely

assessment, surveillance, and preventive interventions. Higher patient assignments may limit opportunities for continuous monitoring and timely nursing interventions (Kim et al., 2025; Lake et al., 2026).

Awareness of Fall Prevention and Management Policies or Guidelines

Less than half of the respondents (48.0%) reported being aware of available FPM policies or guidelines, while 31.7% were unaware and 20.3% were unsure. Awareness differed considerably between groups: only 37.6% of provincial hospital nurses reported awareness compared with 71.1% of district hospital nurses.

Awareness of institutional policies is important for consistent risk assessment, prevention, reporting, and post-fall management. The relatively high proportion of provincial hospital nurses who were unaware or uncertain about existing guidelines highlights the need for regular policy dissemination, staff orientation, and continuing education (Heng et al., 2020; Shaw et al., 2020).

Fall Risk Assessment Tool Currently Used

Most respondents (79.7%) selected “Not Applicable” when asked about the fall risk assessment tool currently used in their facility, including 88.2% in the provincial hospital and 60.5% in district hospitals. Only a small proportion identified specific standardized instruments such as FRAT, Morse Fall Scale, STRATIFY, or the Hendrich II Fall Risk Model.

This finding may indicate limited use of standardized fall risk assessment tools or limited staff awareness of the tools used in their facilities. The identification of patient safety policies by some respondents instead of specific assessment instruments may also suggest confusion between institutional guidelines and formal risk assessment tools. These findings support the need for clearer protocols and training on standardized fall risk assessment (Heng et al., 2020; Heng et al., 2022).

Formal Training in Fall Prevention and Management

Only 8 respondents (6.5%) had received formal training in fall prevention and management, while 93.5% had not. Formal training was similarly limited in the provincial (7.1%) and district hospitals (5.3%). Despite this, respondents remained involved in fall prevention activities, which may have been developed through clinical experience, workplace learning, mentorship, and institutional practices.

Formal education and competency-based training can strengthen nurses' knowledge, confidence, and adherence to evidence-based fall prevention practices (Cho & Jang, 2020; Shaw et al., 2020; Heng et al., 2022). The very low training rate therefore identifies an important area for capacity building. Together with the predominance of contractual employment, this finding also underscores the importance of equitable access to continuing professional development for nurses across hospital settings (Alibudbud, 2023; Aytona et al., 2022).

Level of Knowledge on Fall Risk Factors Determination, Prevention, and Management

The item analysis showed generally high knowledge of fall risk factor determination, prevention, and management among the 123 respondents from the provincial and district hospitals, as presented in Table 2. Most items were classified as high knowledge, indicating a good understanding of fundamental concepts related to fall prevention and management. The highest performance was observed for Item 9 on the purpose of fall risk assessment, which was answered correctly by all respondents from both hospital groups. District hospital respondents also achieved perfect scores on Items 5, 11, 14, 15, 17, 18, and 20. These findings indicate strong knowledge of key areas such as identifying patients at risk, implementing preventive measures, documenting falls, initiating interventions, and educating patients and families. This supports Schoberer et al. (2022), who emphasized fall risk assessment and individualized interventions as essential components of evidence-based fall prevention, and Morris et al. (2022), who highlighted the value of staff education in improving adherence to fall prevention practices.

Despite the generally high level of knowledge, specific gaps were identified. Item 2, concerning previous history of falls as a predictor of future falls, had the lowest percentage of correct responses in both groups, with 57.65% in the provincial hospital and 36.84% in the district hospitals. This indicates limited recognition of previous falls as an important predictor of subsequent falls. Govoni et al. (2022) and Zhang et al. (2022) similarly identified previous falls as an important risk factor that should be considered during assessment and individualized care planning.

Other gaps were observed in medication-related fall risk, urinary urgency and incontinence, post-fall monitoring, and the timing of preventive interventions. In the provincial hospital, only 60.00% correctly answered Item 12 on medications that increase fall risk, while moderate knowledge was observed for Item 7 on urinary urgency and incontinence and Item 19 on post-fall monitoring. These findings indicate areas that may require further reinforcement because medication use, continence problems, and appropriate monitoring are important components of comprehensive fall prevention and management. Alsaleh et al. (2024) emphasized medication-related factors, particularly polypharmacy, as relevant to fall risk, while Schoberer et al. (2022) recommended incorporating patient-specific risk factors and appropriate monitoring into individualized prevention strategies.

In the district hospitals, Item 10 on when fall prevention strategies should be implemented was classified as moderate knowledge, with 63.16% answering correctly. This suggests that some respondents may need further reinforcement regarding the timely initiation of preventive interventions once fall risk is identified. Schoberer et al. (2022) emphasized that individualized fall prevention measures should begin following the identification of patient-specific risks, while Morris et al. (2022) supported proactive and individualized approaches to inpatient fall prevention.

Overall, inpatient nurses demonstrated a solid knowledge base regarding fall risk

factor determination, prevention, and management. However, the lower scores related to previous fall history, medication-related risks, urinary urgency and incontinence, post-fall monitoring, and timing of preventive interventions identify specific areas for improvement. These findings support the inclusion of targeted competency-based training, continuing professional development, and reinforcement of evidence-based guidelines in the proposed capacity-building plan.

Overall Level of Knowledge of the Respondents Regarding Fall Risk Factors Determination, Prevention, and Management

As shown in Table 3, respondents generally demonstrated a high level of knowledge regarding fall risk factor determination, prevention, and management. Overall, 108 of 123 respondents (87.8%) had high knowledge, while 15 (12.2%) had moderate knowledge, and none had low knowledge. In the provincial hospital, 70 respondents (82.4%) had high knowledge and 15 (17.6%) had moderate knowledge. In contrast, all 38 respondents (100%) from the district hospitals were classified as having high knowledge.

Descriptively, respondents from the district hospitals obtained a higher mean knowledge score ($M = 17.82$, $SD = 1.16$) than those from the provincial hospital ($M = 16.93$, $SD = 2.36$). The smaller standard deviation in the district hospitals also indicates that their knowledge scores were more closely clustered, whereas scores in the provincial hospital showed greater variability. Thus, although both groups demonstrated generally high knowledge, the district hospital respondents showed a higher and more consistent level of knowledge based on the descriptive results. This comparison, however, should not be interpreted as evidence of a statistically significant difference unless supported by an appropriate inferential test.

The generally high knowledge in both hospital groups is consistent with Schoberer et al. (2022), who emphasized knowledge of fall risk assessment, patient monitoring, and individualized interventions as essential to evidence-based fall prevention. Morris et al. (2022) likewise reported that educational interventions can strengthen healthcare professionals' adherence to fall prevention practices.

Despite the high overall knowledge, specific gaps remained. Item analysis identified lower performance in areas such as previous fall history, medication-related fall risk, and the timing of preventive interventions. Moreover, the presence of respondents with moderate knowledge exclusively in the provincial hospital suggests a greater need for reinforcement in this group. These findings support targeted continuing education, competency assessment, and periodic updates on evidence-based fall prevention guidelines for both hospital groups, with particular attention to the identified knowledge gaps.

Level of Attitude of the Respondents Regarding Fall Risk Factors Determination, Prevention, and Management

As shown in Table 4, respondents generally demonstrated a Very Positive attitude toward fall risk factor determination, prevention, and management. Provincial hospital

nurses obtained an overall mean of 4.35 (SD = 0.84), while district hospital nurses obtained a descriptively higher mean of 4.53 (SD = 0.70), with both interpreted as Very Positive. Considering the different sample sizes of the two groups (provincial hospital, $n = 85$; district hospitals, $n = 38$), the combined mean was 4.41 (SD = 0.80), also interpreted as Very Positive. The combined mean reflects the overall attitude of all 123 respondents rather than a simple average of the two hospital-group means. The lower standard deviation among district hospital nurses also indicates that their attitude scores were more consistent. Overall, nurses in both hospital settings demonstrated strong recognition of the importance of fall risk assessment, prevention, and management in nursing care and patient safety.

Among provincial hospital nurses, Item 1, "Fall risk should be assessed for every patient upon admission.", received a Very Positive rating ($M = 4.46$), reflecting recognition of the importance of early assessment in identifying patient-specific risks and initiating appropriate interventions. The lowest-rated statement was Item 6, "All hospitalized patients should be screened for fall risk." ($M = 4.15$), interpreted as Positive. Although still favorable, the comparatively lower rating may indicate some variation in views regarding universal screening and the use of clinical judgment. Takase et al. (2024) noted that nurses may rely on clinical judgment rather than standardized screening for all patients. Nevertheless, comprehensive fall risk assessment remains important for identifying risks that may not be immediately apparent (Cho & Jang, 2020; Alsaad et al., 2024).

District hospital nurses similarly demonstrated a Very Positive attitude. Their highest-rated statement was Item 3, "Identifying patient-specific fall risk factors improves patient safety." ($M = 4.71$), interpreted as Very Positive. This reflects strong recognition of individualized assessment as a basis for appropriate preventive interventions. Their lowest-rated statement was Item 12, "Most patient falls in hospitals are preventable." ($M = 4.18$), interpreted as Positive. Although this was the lowest-rated item, the score remained favorable and may reflect recognition that some falls can occur despite preventive measures because of unpredictable patient or clinical factors. Nevertheless, respondents continued to view fall prevention as an important nursing responsibility, consistent with Heng et al. (2020).

Overall, both hospital groups demonstrated a Very Positive attitude toward patient safety, professional responsibility, and evidence-based fall prevention. Descriptively, district hospital nurses had a slightly higher mean attitude score and less variability than provincial hospital nurses. However, this descriptive comparison should not be interpreted as a statistically significant difference unless supported by an appropriate inferential test. The findings are consistent with Cho and Jang (2020), who reported positive attitudes among nurses toward fall prevention and their fall prevention activities.

Within the KAP framework, attitude reflects beliefs and perceptions that may influence willingness to apply knowledge in practice (Andrade et al., 2020). The Very Positive attitudes observed in both hospital groups provide a favorable basis for fall prevention practices. However, favorable attitudes may not always translate into consistent practice, as implementation may also be related to institutional policies,

training, available resources, workload, and other conditions within the clinical environment.

Level of Practices of the Respondents Regarding Fall Risk Factors Determination, Prevention, and Management

As shown in Table 5, respondents generally reported favorable practices regarding fall risk factor determination, prevention, and management. Provincial hospital nurses obtained an overall mean of 4.06 (SD = 0.63), interpreted as Adequate, while district hospital nurses obtained a descriptively higher mean of 4.67 (SD = 0.47), interpreted as Very Adequate. Considering the different sample sizes of the two groups (provincial hospital, $n = 85$; district hospitals, $n = 38$), the combined mean was 4.25 (SD = 0.65), interpreted as Very Adequate. Thus, fall prevention and management practices were generally implemented in both settings, although district hospital nurses reported higher and more consistent practice ratings.

Among provincial hospital nurses, the highest-rated practice was Item 17, “I report falls even when no visible injury is observed” ($M = 4.28$), interpreted as Very Adequate. District hospital nurses reported particularly high ratings for post-fall activities, including Item 18 on follow-up monitoring after a fall ($M = 4.87$), Item 16 on physician notification ($M = 4.82$), Item 19 on reviewing contributing factors ($M = 4.82$), and Item 20 on conducting post-fall evaluations regardless of apparent injury ($M = 4.82$). These findings indicate strong reported practices in incident reporting, monitoring, and post-fall management, particularly among district hospital nurses, consistent with recommendations emphasizing timely reporting and continued monitoring following falls (World Health Organization, 2021; Weber et al., 2024).

Despite the favorable overall ratings, fall risk assessment upon admission was the lowest-rated practice in both groups. Item 1, “I conduct fall risk assessments for all patients upon admission,” was rated Adequate among provincial hospital nurses ($M = 3.80$) and Very Adequate among district hospital nurses ($M = 4.29$). Similarly, Item 6 on assessing patients even when they appear stable was rated Adequate in the provincial hospital ($M = 3.94$) and Very Adequate in the district hospitals ($M = 4.61$). These findings suggest that admission-based and routine risk assessment may be less consistently practiced than post-fall activities, particularly in the provincial hospital. Consistent assessment is important for identifying risks before a fall occurs (Morris et al., 2022), while workload and staffing demands may also influence the implementation of preventive nursing practices (Kim et al., 2025).

A clear descriptive difference was observed between the two hospital groups. District hospital nurses reported Very Adequate practices across all 20 indicators, with means ranging from 4.29 to 4.87. In contrast, most indicators among provincial hospital nurses were rated Adequate, with only Items 16, 17, and 18 reaching the Very Adequate category. Higher ratings among district hospital nurses were observed not only in post-fall management but also in preventive practices, including medication assessment, evaluation of sensory deficits, environmental safety, and assistance with ambulation. Therefore, the higher overall mean among district hospital nurses reflects consistently

higher reported practices across fall risk determination, prevention, and management rather than in post-fall care alone.

Overall, both hospital groups demonstrated favorable fall prevention and management practices, but district hospital nurses showed a more consistently Very Adequate pattern, while provincial hospital nurses demonstrated an overall Adequate level. This descriptive comparison should not be interpreted as a statistically significant difference unless supported by an appropriate inferential test. The findings support Dykes et al. (2017), who emphasized consistent implementation of individualized fall prevention interventions. The comparatively lower rating for admission-based assessment, particularly in the provincial hospital, also identifies an area for targeted improvement through systematic assessment protocols and reinforcement of evidence-based fall prevention practices.

Level of Self-Efficacy of the Respondents Regarding Fall Risk Factors Determination, Prevention, and Management

As presented in Table 6, respondents generally demonstrated favorable self-efficacy in fall risk factor determination, prevention, and management. Provincial hospital nurses obtained an overall mean of 4.10 (SD = 0.68), interpreted as High, while district hospital nurses obtained a descriptively higher mean of 4.53, interpreted as Very High. Considering the different sample sizes of the two groups (provincial hospital, $n = 85$; district hospitals, $n = 38$), the combined mean was 4.23 (SD = 0.66), interpreted as Very High. Thus, nurses in both settings expressed confidence in their ability to assess fall risks, implement preventive measures, and manage fall-related situations, although district hospital nurses reported descriptively higher self-efficacy.

Among provincial hospital nurses, the highest-rated indicator was Item 10, "Educate patients, families, and caregivers" ($M = 4.24$), interpreted as Very High. This reflects strong confidence in providing education on fall risks and preventive measures. Patient and family education is an important component of fall prevention because it promotes awareness and participation in safety measures (Shuman et al., 2016; Ong et al., 2021). Among district hospital nurses, the highest-rated indicator was Item 15, "Respond promptly when a patient falls" ($M = 4.71$), also interpreted as Very High, indicating strong confidence in responding to fall incidents and providing appropriate post-fall care.

In contrast, Item 1, "Identify patients at risk for falls using screening tools.", received the lowest mean in both groups. Provincial hospital nurses obtained a mean of 3.89, interpreted as High, while district hospital nurses obtained a mean of 4.03, also interpreted as High. Although these ratings remained favorable, they indicate comparatively lower confidence in using standardized fall risk screening tools than in other fall-related responsibilities. This finding is consistent with the respondents' institutional profile, where most nurses reported "Not Applicable" when asked about the fall risk assessment tool used in their facility. Limited exposure to standardized tools may therefore be related to lower confidence in their use. Validated assessment tools can support systematic and consistent identification of patients at risk and guide preventive

interventions (Higaonna et al., 2017; Poe et al., 2018).

A clear descriptive pattern was observed between the hospital groups. District hospital nurses reported higher overall self-efficacy than provincial hospital nurses ($M = 4.53$ versus $M = 4.10$), corresponding to Very High and High self-efficacy, respectively. However, both groups shared the same area of comparatively lower confidence—the use of fall risk screening tools. This suggests that strengthening competency in standardized fall risk assessment may benefit nurses in both settings, while particular attention may be given to the provincial hospital where overall self-efficacy was comparatively lower. This descriptive comparison should not be interpreted as a statistically significant difference unless supported by an appropriate inferential test.

The findings are consistent with Bandura's (1977) Self-Efficacy Theory, which proposes that individuals' beliefs in their capabilities are related to their effort, persistence, and performance of specific behaviours. In fall prevention, greater confidence may support nurses in carrying out assessment, prevention, education, and post-fall responsibilities. Takase (2023) similarly emphasized the relevance of confidence and situational awareness to clinical decision-making. Overall, the findings support competency-based training and routine use of standardized fall risk assessment tools to further strengthen nurses' self-efficacy and promote consistent, evidence-based fall prevention practices.

Summary of the Respondents' Level of Knowledge, Attitude, Practices, and Self-Efficacy Regarding Fall Risk Factors Determination, Prevention, and Management.

Table 7 summarizes the knowledge, attitude, practices, and self-efficacy of respondents regarding fall risk factor determination, prevention, and management. Overall, favorable results were observed across the four domains in both hospital groups, although district hospital nurses consistently obtained descriptively higher mean scores than provincial hospital nurses.

For knowledge, district hospital nurses obtained a higher mean percentage score ($M = 89.10\%$, $SD = 5.80$) than provincial hospital nurses ($M = 84.60\%$, $SD = 11.80$), although both groups were classified as having High knowledge. The smaller standard deviation among district hospital nurses indicates more consistent knowledge scores, while the provincial hospital showed greater variability. For all 123 respondents, the combined mean percentage score was 86.00% ($SD = 10.50$), also interpreted as High. These findings indicate that respondents generally had a good understanding of fall risk identification, prevention, and management.

Attitudes were also favorable in both settings. Provincial hospital nurses obtained a mean of 4.35 ($SD = 0.84$), while district hospital nurses obtained a higher mean of 4.53 ($SD = 0.70$), with both interpreted as Very Positive. The combined mean for all respondents was 4.41 ($SD = 0.80$), also interpreted as Very Positive. These findings reflect favorable perceptions of fall risk assessment, preventive interventions, and fall management as important components of nursing care and patient safety.

A more noticeable descriptive difference was observed in practices. Provincial hospital nurses obtained a mean of 4.06 (SD = 0.63), interpreted as Adequate, whereas district hospital nurses obtained a higher mean of 4.67 (SD = 0.47), interpreted as Very Adequate. The combined mean was 4.25 (SD = 0.65), interpreted as Very Adequate. Thus, fall prevention and management practices were generally reported in both settings, but district hospital nurses demonstrated higher and more consistent reported practice ratings.

A similar descriptive pattern was observed for self-efficacy. Provincial hospital nurses obtained a mean of 4.10 (SD = 0.68), interpreted as High, while district hospital nurses obtained a mean of 4.53 (SD = 0.48), interpreted as Very High. The combined mean was 4.23 (SD = 0.66), interpreted as Very High. These findings indicate that respondents generally felt confident in identifying fall risks, implementing preventive interventions, educating patients and families, and responding to fall incidents. The higher practice ratings among district hospital nurses were accompanied by higher self-efficacy ratings; however, this descriptive pattern does not establish a relationship between the two variables.

Overall, both hospital groups demonstrated favorable outcomes across knowledge, attitude, practices, and self-efficacy. District hospital nurses consistently obtained descriptively higher mean scores and generally showed less variability than provincial hospital nurses. The combined scores represent the overall results of all 123 respondents, taking into account the unequal group sizes (provincial hospital, $n = 85$; district hospitals, $n = 38$), rather than a simple average of the two hospital-group means. These descriptive differences should not be interpreted as statistically significant or causal unless supported by the appropriate inferential analyses. Instead, the findings identify existing strengths and areas that may benefit from targeted capacity-building interventions across the participating hospitals.

Association Between the Respondents' Profile and the Study Variables

As presented in Table 8, most profile characteristics were not significantly associated with knowledge, attitude, practices, or self-efficacy regarding fall risk factor determination, prevention, and management. Among provincial hospital nurses, age, type of employment, nurse position, highest educational attainment, awareness of institutional fall prevention and management policies or guidelines, type of fall risk assessment tool used, and previous formal training yielded p -values greater than .05 across the four domains. Thus, no statistically significant associations were identified for these characteristics.

However, several significant associations were observed among provincial hospital nurses. Years of nursing experience were significantly associated with self-efficacy ($p = .027$), while clinical area of assignment was also significantly associated with self-efficacy ($p = .007$). In addition, the number of patients handled per shift was significantly associated with knowledge ($p = .036$) and self-efficacy ($p = .049$). These associations should not be interpreted as evidence that these characteristics caused the observed differences.

Among district hospital nurses, most profile characteristics were likewise not significantly associated with the four study domains. Significant associations were found only between age and knowledge ($p = .024$) and between the type of fall risk assessment tool used and attitude ($p = .041$). These findings do not establish that age or the use of a particular assessment tool caused the observed differences.

When all 123 respondents were analyzed collectively, clinical area of assignment was significantly associated with practices ($p < .001$) and self-efficacy ($p < .001$), while years of nursing experience was significantly associated with self-efficacy ($p = .024$). The number of patients handled per shift was also significantly associated with self-efficacy ($p = .047$). Furthermore, the type of fall risk assessment tool used was significantly associated with attitude ($p = .017$), practices ($p = .015$), and self-efficacy ($p = .011$), while formal training on fall prevention and management was significantly associated with attitude ($p = .033$). These findings indicate that selected clinical and institutional characteristics were associated with specific study domains in the overall sample.

In contrast, age, type of employment, nurse position, highest educational attainment, and awareness of fall prevention and management policies or guidelines were not significantly associated with any of the four study outcomes in the overall sample. Hours worked per week could not be meaningfully compared because all respondents reported working 40 hours per week.

The significant findings involving experience and work-related characteristics may be considered in relation to previous literature. Clinical experience may contribute to the development of confidence and competence in patient safety activities (Negash, 2022), while workload and staffing conditions may be related to nurses' ability to consistently provide safe care (Kim et al., 2025). Clinical environments may also provide different opportunities for developing situational awareness and confidence in preventive interventions (Takase, 2023). The significant association between formal training and attitude in the combined sample further suggests that exposure to fall prevention education may be related to nurses' attitudes toward fall prevention and management. However, these findings represent associations and should not be interpreted as evidence of causal relationships.

Overall, most profile characteristics were not significantly associated with respondents' knowledge, attitude, practices, and self-efficacy. Significant associations were limited to specific profile-variable and study-domain comparisons. Accordingly, the null hypothesis of no significant association was rejected only for comparisons with $p < .05$ and retained for those with $p \geq .05$. These findings may help identify areas for targeted capacity-building while recognizing that the observed associations do not establish causation.

Relationship of Respondents' Knowledge, Attitude, and Practices to Self-Efficacy

As presented in Table 9, the relationship between knowledge and self-efficacy differed between the two hospital groups. Among provincial hospital nurses, knowledge

had a negligible negative and statistically non-significant correlation with self-efficacy ($p = -.057$, $p = .602$). In contrast, among district hospital nurses, knowledge had a moderate positive and statistically significant correlation with self-efficacy ($p = .448$, $p = .005$). This indicates that higher knowledge scores tended to be associated with higher self-efficacy among district hospital nurses, whereas no significant relationship was observed among provincial hospital nurses. When all 123 respondents were analyzed together, knowledge had a negligible positive and non-significant correlation with self-efficacy ($p = .090$, $p = .320$). Thus, knowledge was significantly related to self-efficacy only among district hospital nurses. Within the KAP Framework, knowledge provides a foundation for appropriate health-related actions but may not necessarily correspond directly to confidence or actual practice (Andrade et al., 2020; Morris & O’Riordan, 2017).

Attitude demonstrated a more consistent relationship with self-efficacy. A moderate positive and statistically significant correlation was observed among provincial hospital nurses ($p = .575$, $p < .001$), district hospital nurses ($p = .554$, $p < .001$), and the overall sample ($p = .572$, $p < .001$). These findings indicate that nurses with more favorable attitudes toward fall risk factor determination, prevention, and management tended to report higher self-efficacy. Within the KAP Framework, favorable attitudes may support nurses’ willingness and confidence to engage in fall prevention activities, although the correlational design does not establish causation.

Practices demonstrated the strongest relationship with self-efficacy. A strong positive and statistically significant correlation was found among provincial hospital nurses ($p = .763$, $p < .001$) and district hospital nurses ($p = .712$, $p < .001$). The relationship was also strong and statistically significant in the overall sample ($p = .792$, $p < .001$), representing the highest correlation among the variables examined. Thus, nurses who reported more adequate fall risk assessment, prevention, and management practices also tended to report higher self-efficacy. This finding is consistent with Nguyen et al. (2025), who reported a significant relationship between fall prevention activities and self-efficacy among hospital nurses.

The strong relationship between practices and self-efficacy may also be understood through Bandura’s Self-Efficacy Theory. Mastery experiences, or successful performance of specific activities, are an important source of self-efficacy (Bandura, 1977). Repeated engagement in fall risk assessment, preventive interventions, patient and family education, incident reporting, and post-fall care may provide opportunities for nurses to develop confidence in performing these responsibilities. Conversely, nurses with greater self-efficacy may be more confident in carrying out these activities. However, because the present study used a correlational design, the direction of the relationship cannot be determined.

Overall, practices showed the strongest and most consistent relationship with self-efficacy, followed by attitude. Knowledge showed a significant relationship with self-efficacy only among district hospital nurses and was not significantly related to self-efficacy among provincial hospital nurses or in the overall sample. These findings indicate that nurses’ self-efficacy was more consistently associated with their attitudes and

reported clinical practices than with knowledge alone. They also support the inclusion of practice-based strategies, such as standardized fall risk assessment training, simulation, return demonstrations, case-based activities, and bedside coaching, in the proposed capacity-building plan.

Conclusions

Based on the findings of the study, the following conclusions were drawn.

The inpatient nurses were predominantly in the early-to-middle adult age groups, staff nurses, contractual/job order employees, BSN degree holders, and had limited formal training on fall prevention and management. These findings highlight the need for stronger access to structured institutional training and continuing professional development.

Provincial hospital nurses demonstrated high knowledge, a very positive attitude, adequate practices, and high self-efficacy regarding fall risk factor determination, prevention, and management. District hospital nurses likewise demonstrated high knowledge and a very positive attitude, but reported very adequate practices and very high self-efficacy. Overall, the nurses demonstrated favorable knowledge, attitudes, practices, and self-efficacy related to fall prevention and patient safety. However, gaps in specific knowledge areas and inconsistent performance of routine admission-based fall risk assessment indicate areas for further improvement.

Most profile characteristics were not significantly associated with knowledge, attitude, practices, and self-efficacy. Among provincial hospital nurses, years of experience and clinical area were associated with self-efficacy, while patient load was associated with knowledge and self-efficacy. Among district hospital nurses, age was associated with knowledge, and type of FRAT with attitude. In the overall sample, years of experience and patient load were associated with self-efficacy; clinical area with practices and self-efficacy; type of FRAT with attitude, practices, and self-efficacy; and formal FPM training with attitude.

Among district hospital nurses, knowledge, attitude, and practices were significantly and positively related to self-efficacy, whereas among provincial hospital nurses, only attitude and practices were significantly related to self-efficacy. In the overall sample, attitude and practices were significantly related to self-efficacy, while knowledge was not. Practices demonstrated the strongest relationship with self-efficacy across both hospital groups and the overall sample. These findings indicate that self-efficacy was more consistently associated with nurses' attitudes and reported practices than with knowledge alone.

A comprehensive capacity-building plan is proposed to address gaps in formal training, specific knowledge areas, routine admission-based fall risk assessment, and identified institutional needs across the participating hospitals. The plan is intended to strengthen nurses' knowledge, attitudes, practices, and self-efficacy; promote the

consistent use of standardized fall prevention strategies; and support a stronger culture of patient safety in government hospitals in Abra.

Recommendations

Based on the results and conclusions of the study, the following recommendations are proposed.

Hospital administrators and nurse managers should formalize regular and structured training programs on fall prevention and management since a small proportion of respondents had received formal training. Such programs can be integrated into ongoing professional development, competency-building activities, and orientation programs for recruits to promote standardized evidence-based practices.

Respondents scored lower on specific knowledge items, including the timing of preventive interventions, the relationship between previous falls and risk for falls, and the effect of medications on risk for falls. Nurse educators and training officers can improve education in these areas. Training activities may include case-based discussions, simulation exercises, return demonstrations, and supervised clinical application to facilitate translation of knowledge into practice.

Fall Champions may be selected and trained by hospital administrators and nurse managers in each clinical area or ward to serve as unit-based leaders in promoting fall prevention and management. Fall Champions can serve as peer coaches, reinforce compliance with fall prevention policies and standardized risk assessment tools, provide unit-based education, monitor compliance with established protocols, and collaborate with the multidisciplinary team to implement quality improvement initiatives to reduce patient falls.

Fall risk assessment upon admission and the use of standardized screening tools showed comparatively lower consistency and confidence. Nursing units should focus on frequent use of standardized fall risk assessment tools and consistent performance of fall risk assessments upon admission. Standard nursing practice may also include clear protocols for the appropriate use, recording, and re-evaluation of fall risk.

Based on the significant associations involving clinical area of assignment and number of patients managed per shift in some of the study outcomes, hospital management may review staffing patterns and patient assignment, especially in clinical areas and shifts with higher patient load. These reviews can help to identify whether workload needs to be adjusted or additional support is required to enable consistent application of fall prevention measures.

Given the differences identified between the hospital groups, nursing administrators might focus on standardizing the policies, assessment tools, resources, and training opportunities for fall prevention and management across the participating facilities. More consistency in these areas may reduce variations in practice and move toward a common approach to patient safety and fall prevention.

Future researchers can replicate this study in other areas and health care settings with larger and more diverse samples to see if the results hold across different populations and institutional contexts. Longitudinal or mixed-method research designs may be considered to further investigate aspects of nurses' knowledge, attitudes, practices, and self-efficacy in relation to fall risk factor identification, prevention, and management and the effectiveness of interventions such as competency-based training programs and unit-based Fall Champion initiatives.

Suitable post hoc pairwise comparisons can be made to determine which specific groups significantly differ from each other for variables with three or more categories that show statistically significant differences via the Kruskal–Wallis H test. Differences by years of nursing experience, clinical area of assignment, and number of patients managed per shift may be particularly useful to analyse. Appropriate multiple comparison adjustments can be used to reduce the chance of type I error (e.g., Bonferroni correction). These analyses may offer insights into the groups contributing to the observed differences, which can help guide future research and develop more specific interventions.

Finally, participating hospitals can adopt the proposed capacity-building plan as a framework to enhance nurses' knowledge, attitudes, practices, self-efficacy, and adherence to evidence-based fall prevention and management techniques. It can be put in place with frequent monitoring and evaluation to see if the proposed activities are producing the desired outcomes and to identify areas that need further improvement.

Table 10
Capacity-Building Plan for Strengthening
Fall Risk Factors Determination, Prevention, and Management
Among Inpatient Nurses in Government Hospitals of Abra, Philippines

Key Result Area	Objectives	Strategies and Activities	Persons Involved	Time Frame	Success Indicators
1. Strengthening Knowledge on Fall Risk Determination	Enhance knowledge of fall risk factors, timing of interventions, previous falls, and fall-related medications.	Conduct quarterly lectures and case discussions; administer pre-/post-tests; provide unit reference materials.	Training Officer; Nurse Educators; Unit Heads; Fall Champions	Quarterly	≥90% attendance; improved post-test mean; ≥80% achieve passing score; identified gaps reviewed each training cycle.
2. Enhancing Fall Prevention Practices	Improve consistency of admission assessment, reassessment and	Integrate fall risk assessment into admission workflow; use checklists,	Chief Nurse; Unit Heads; Fall Champions;	First–second quarter, then ongoing	≥95% of audited charts have admission assessment; ≥90% checklist compliance;

Key Result Area	Objectives	Strategies and Activities	Persons Involved	Time Frame	Success Indicators
	preventive measures.	return demonstrations , and bedside coaching; reinforce reassessment.	Inpatient Nurses		identified gaps receive corrective coaching.
3. Building Self-Efficacy and Developing Fall Champions	Strengthen confidence and competence in fall assessment, prevention, and management and develop unit-based leaders.	Conduct hands-on training, simulations, mentoring, and competency assessments; designate and train ≥1 Fall Champion per clinical area/ward.	Nurse Educators; Senior Nurses; Fall Champions	First 6 months; semi-annual refreshers	100% of areas/wards have ≥1 trained Fall Champion; ≥90% complete competency assessment; improved self-efficacy ratings; ≥1 coaching activity/quarter.
4. Institutionalizing Formal Training and Policy Awareness	Ensure nurses receive formal training and remain informed of current policies and guidelines.	Integrate FPM into orientation and annual in-service training; regularly disseminate and review policies and updates.	Hospital Administrator; Training Office; HR; Nursing Service Office; Fall Champions	Annually and upon hiring	100% of new nurses receive FPM orientation; ≥90% of current nurses complete annual training; policy dissemination documented and policies accessible.
5. Standardizing and Mastering the Fall Risk Assessment Tool	Adopt a uniform validated tool and ensure competence in its correct use.	Select a validated tool; standardize scoring, interpretation, documentation, and reassessment; provide training, return demonstrations , coaching, refreshers, and chart audits.	Hospital Administrators ; Quality Improvement Team; Nursing Service Office	Selection/training within 6 months; full implementation within 1 year; annual review	One validated tool adopted within 1 year; ≥90% complete training and demonstrate competency; ≥95% of eligible audited charts have properly completed assessments; errors addressed through coaching/reassessment.
6. Monitoring, Reporting, and	Sustain fall prevention through monitoring,	Conduct unit monitoring, quarterly chart audits, incident	Quality Improvement Team; Fall Champions;	Monthly–quarterly	100% of areas submit quarterly reports; quarterly audits completed; gaps have

Key Result Area	Objectives	Strategies and Activities	Persons Involved	Time Frame	Success Indicators
Quality Improvement	non-punitive reporting, and continuous improvement.	reviews, safety huddles, coaching, trend analysis, and quarterly QI reporting.	Unit Heads; Chief Nurse		documented corrective actions; 100% of reported falls reviewed; fall incidence tracked quarterly and reduced from baseline within 12 months according to institutional targets.

Key Result Area 1: Strengthening Knowledge on Fall Risk Determination addresses gaps in the timing of preventive interventions, previous falls as a risk factor, and medications that increase fall risk. Quarterly lectures, case discussions, and pre- and post-training assessments will reinforce these areas. As knowledge was not significantly related to self-efficacy among provincial hospital nurses, education will be complemented by practical application.

Key Result Area 2: Enhancing Fall Prevention Practices addresses the lower consistency of fall risk assessment on admission. Integrating assessment into admission workflows, supported by bedside coaching, return demonstrations, and checklists, will promote consistent practice. This is particularly important because practices showed the strongest positive relationship with self-efficacy in both hospital groups. Compliance will be evaluated through quarterly chart audits.

Key Result Area 3: Building Self-Efficacy and Developing Fall Champions addresses lower confidence in using formal fall risk screening tools. Workshops, simulations, return demonstrations, coaching, and mentoring will provide mastery experiences that can strengthen competence and confidence. At least one trained Fall Champion per clinical area or ward will support staff and monitor compliance, with competency assessments, self-efficacy ratings, and coaching records used for evaluation.

Key Result Area 4: Institutionalizing Formal Training and Policy Awareness addresses the limited formal training reported by provincial (7.1%) and district hospital nurses (5.3%). Orientation, annual in-service education, and regular policy dissemination will improve access to training and awareness of institutional procedures, although formal training was significantly associated only with attitude in the overall sample ($p = .033$) and was not significantly associated with the other study outcomes.

Key Result Area 5: Standardizing and Mastering the Fall Risk Assessment Tool addresses variations in tool use and lower confidence in formal screening. Nurses will receive training on tool purpose, scoring, interpretation, documentation, assessment, and reassessment through clinical scenarios, return demonstrations, competency assessments, coaching, and refresher sessions. Chart audits will assess correct application in practice.

Key Result Area 6: Monitoring, Reporting, and Quality Improvement establishes ongoing audits, incident reviews, unit reports, feedback, and corrective actions led by Fall Champions, Unit Heads, and the Quality Improvement Team. Baseline fall incidence will be established before implementation and compared with quarterly rates and the 12-month rate to evaluate progress toward institutional targets.

Together, the six KRAs integrate knowledge, policy awareness, clinical practice, self-efficacy, standardized assessment, and continuous quality improvement. Fall Champions and measurable indicators will support implementation, monitoring, and sustainability.

Thus, the proposed capacity-building plan provides a practical framework for addressing identified gaps, strengthening nurses' competencies and consistent fall prevention practices, and supporting sustainable patient safety improvements in government hospitals in Abra.

Compliance with Ethical Standards

The researchers observed ethical standards throughout the conduct of the study. Informed consent was obtained from all respondents, who were informed that participation was voluntary and that they could withdraw at any time without penalty. Respondents' anonymity and confidentiality were maintained, and all data were handled in accordance with applicable data privacy principles. The respondents' rights, safety, dignity, and well-being were safeguarded throughout the research process. The researchers declare that no conflict of interest existed in the conduct of the study. Plagiarism was strictly avoided through proper acknowledgment and citation of sources, and the findings were analysed and interpreted objectively without intentional bias. The data and results were used solely for academic and research purposes. Artificial intelligence tools were used only as an assistive tool in refining language, grammar, organization, and presentation of the manuscript; the researchers retained responsibility for the study's content, analysis, interpretation, and final manuscript.

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