

From Recognition to Reporting: Assess Awareness, Self-Reporting Practice, and Barriers to Incident Reporting: Across-Sectional Study among Nurses in an Accredited Saudi General Hospital

¹ Ms. Muneerah Sehaime Al Otaibi;

² Prof. Nirvana Abdelrahman Gheith;

³ Prof. Maram Ahmed Bankhar

Corresponding Author: **Ms. Muneerah Sehaime Al Otaibi**

² ORCID ID: 0000-0002-8715-5608

Paper Number: 240518

<https://doi.org/10.68089/202609240518>

Abstract:

Background: Incident reporting is a core patient-safety mechanism because it translates frontline errors, adverse events, and near misses into organizational learning. In practice, however, the presence of a reporting system does not guarantee consistent reporting behavior, particularly when reporting remains shaped by fear, confidentiality concerns, weak feedback, and workflow friction.

Aim: To examine nurses' awareness of incident reporting practices, self-perceived reporting practice, and perceived barriers to incident reporting in an accredited Saudi governmental hospital.

Methods: A single-site cross-sectional survey was conducted among nurses at Al Quwayiyah General Hospital. Data were collected between January 2024 and January 2026, and the final analytic sample comprised 223 nurses. The questionnaire included demographic and workplace characteristics, awareness of and access to the incident reporting system, self-perceived reporting practices across 11 incident scenarios, perceived obligation to report, and perceived barriers. Descriptive statistics, correlation analysis, and group comparisons were applied.

Results: Most participants reported that an incident reporting system existed in their workplace (88.8%) and that they knew how to access the reporting form (81.2%). Although 69.1% had ever completed an incident form, only 38.1% had submitted a report in the last month. The overall awareness score averaged 3.58 ± 1.219 . Scenario-based responses showed high recognition of reportable incidents, whereas actual reporting was consistently lower across key events. The mean self-perceived reporting practice score was 3.010 ± 0.3925 , and the mean barrier score was 2.876 ± 0.6092 . The highest barrier items were lack of coworker support (3.11 ± 1.193), worry about litigation (3.08 ± 1.281), and concern about who might access disclosed information (3.06 ± 1.167). Awareness correlated positively with reporting practice ($r = 0.326$; $p < 0.001$), whereas barriers correlated negatively with reporting practice ($r = -0.424$; $p < 0.001$). **Conclusion:** High awareness and system visibility coexisted with lower routine reporting, indicating a clear recognition-reporting gap. Awareness alone appeared insufficient when reporting remained constrained by social, legal, and confidentiality-related barriers. Strengthening non-punitive culture, confidentiality assurance, feedback loops, and workflow support may be necessary to improve consistent reporting behavior.

Keywords: Incident reporting; nurses; patient safety; safety culture; reporting barriers; Saudi Arabia

Introduction

Preventable patient harm remains a major challenge for health systems, and international safety policy continues to frame avoidable harm reduction as a core quality priority (World Health Organization [WHO], 2021). The burden is not only clinical but also organizational and economic, because unsafe care consumes staff time, beds, and financial resources that could otherwise support planned services (Organisation for Economic Co-operation and Development, 2022). Within this context, incident reporting remains important because it provides a mechanism through which frontline events can be recognized, documented, and transformed into learning for prevention.

Incident reporting systems should therefore be understood as learning systems rather than mere counting tools. The WHO has emphasized that reporting and learning structures are intended to capture harmful incidents, no-harm incidents, and near misses in order to support analysis, feedback, and safer systems of care (WHO, 2020). Contemporary hospital literature similarly describes reporting infrastructure as part of routine risk management and organizational learning (Kumah et al., 2024). At the same time, reported incidents do not represent the full burden of safety events, because reporting is filtered through staff behavior, local definitions, usability, and organizational response. A systematic review comparing incident reporting with the Global Trigger Tool found that reporting systems captured only a fraction of adverse events identified through record review (Hibbert et al., 2023).

Clear terminology also matters. Variation in definitions of serious reportable incidents has been shown to limit comparability across systems and weaken shared learning (Hegarty et al., 2021). The WHO patient safety framework and related taxonomic approaches remain useful because they distinguish harmful incidents, no-harm incidents, and near misses while preserving attention to contributing factors and care-process context (Mitchell et al., 2020; WHO, 2020). These distinctions are especially relevant in nursing settings, where a large proportion of clinically important events emerge from routine observation, coordination, medication handling, escalation, and documentation.

Nurses are central to incident detection and reporting because they remain closest to continuous patient care and often identify safety events in real time. Yet the formal availability of a reporting system does not ensure consistent reporting practice. An integrative review of nurses' voluntary error-reporting experiences identified fear of blame or punishment, weak feedback, uncertainty about what should be reported, time pressure, and reporting burden as recurrent deterrents (Woo & Avery, 2021). In regional evidence closely aligned with the present topic, Jordanian nurses demonstrated high awareness of

reporting systems but only moderate reporting practice, while fear-related and process-related barriers remained influential (Oweidat et al., 2023).

Evidence from other settings shows a similar pattern in which awareness does not consistently translate into reporting practice. In China, nurses demonstrated generally strong awareness and reporting-related attitudes, but perceived barriers continued to constrain reporting-related outcomes (Wu et al., 2024). In Ethiopia, reporting behavior remained limited, while training, belief in the value of reporting, and lower fear of legal or punitive consequences were associated with better reporting behavior (Shemsu et al., 2024; Yalew & Yitayew, 2021). Together, these findings suggest that awareness is necessary but insufficient when fear, workload, and weak feedback remain active constraints on reporting practice (Shemsu et al., 2024; Woo & Avery, 2021).

Beyond awareness, sustained reporting depends on whether staff can see that submitted reports are reviewed, discussed, acted upon, and used for improvement rather than disappearing into a closed system (Shojania, 2021; WHO, 2020). Evidence on near misses and safety-event handling supports this view. In Japanese homecare nursing, many patient-safety events that prompted nursing action were not formally documented as incidents, indicating that under-capture can occur even when nurses detect risk in practice (Yamamoto-Takiguchi et al., 2021). Hospitals may also derive richer learning when incident narratives are actively analyzed for contributory factors rather than treated as isolated counts (Tabaie et al., 2023).

Barriers to incident reporting are not limited to workload or procedural burden. Fear of punishment, blame, litigation, and reputational harm recur across nursing settings (Woo & Avery, 2021). In China, power distance and face-saving were found to mediate fear of medication-error reporting, suggesting that hierarchy and concern about professional image can suppress disclosure even when staff understand reporting expectations (Yang et al., 2020). Evidence from Ethiopia similarly identified fear of legal penalty, weak feedback, and uncertainty about reporting consequences as constraints on reporting behavior (Shemsu et al., 2024; Yalew & Yitayew, 2021). These findings indicate that reporting decisions are shaped strongly by perceived consequences and organizational climate rather than by knowledge alone.

The Saudi context adds further relevance. National evidence has demonstrated relationships between patient safety culture and sentinel-event patterns, reinforcing the need to interpret incident data within the surrounding safety culture (Binkheder et al., 2023). A Saudi teaching-hospital case study showed that implementation of an electronic incident-reporting system was shaped by organizational and workflow barriers and enablers rather than by technology alone (Abu Alrub et al., 2022). More broadly, evidence from users of

incident-reporting software indicates that usability, clarity, and confidence in the reporting process can influence engagement with reporting systems (Koskiniemi et al., 2025).

Against this background, the present study examined nurses' awareness of incident reporting practices, their self-perceived reporting practice, and their perceived barriers to incident reporting at Al Quwayiyah General Hospital, an accredited governmental hospital operating within an established electronic incident-reporting context. The study was designed to clarify whether the main local challenge was lack of awareness, weak reporting follow-through, perceived reporting burden, fear-related barriers, or a combination of these factors.

Methods

Study design and setting

This study used an observational cross-sectional survey design in a single accredited governmental hospital in Saudi Arabia. The study site was Al Quwayiyah General Hospital, a public hospital in the Riyadh region with approximately 200 beds. The hospital used the Safety Information System (SIS), an electronic incident-reporting pathway intended to support documentation, review, feedback, and organizational learning from safety events (Koskiniemi et al., 2025).

Participants and sampling

The study focused on registered nurses involved in direct clinical care. Eligibility criteria included at least six months of employment at the study hospital and the ability to communicate in either Arabic or English. Nurses working exclusively in administrative or managerial positions were excluded. The total eligible nursing population at the hospital was 500, which constituted the sampling frame. Based on the sample size calculation formula, the required sample size was 223 nurses. Participants were selected from the hospital staff roster and departmental schedules. All 223 selected nurses completed the questionnaire, yielding a response rate of 100%. The final analysis therefore included 223 completed questionnaires.

Instrument and variables

Data were collected using a structured questionnaire adapted from the instrument published by Oweidat et al. (2023). The questionnaire contained four sections. Section 1 captured socio-demographic and workplace characteristics. Section 2 assessed awareness of and access to the incident reporting system using five yes/no items. Section 3 assessed self-perceived reporting practices across 11 incident scenarios, with each scenario answered twice: once for actual

reporting frequency and once for how often the respondent believed the event should be reported. Responses followed a 4-point scale: never, less than 50% of occasions, 50% or more of occasions, and always. Section 4 assessed perceived barriers using 19 Likert-type items rated from strongly disagree to strongly agree.

The adapted questionnaire underwent contextual review for clarity, relevance, and suitability before administration. Where bilingual administration was required, the instrument was translated using a forward-backward translation procedure, in which the original English version was translated into Arabic by a bilingual translator and then back-translated into English by an independent translator to check semantic equivalence. Minor wording adjustments were made to improve clarity and contextual appropriateness. Pilot testing was conducted among approximately 20 nurses who were not included in the final analysis. Internal consistency in the current sample was acceptable, with Cronbach's alpha estimated at 0.81 for the awareness/access items, 0.84 for the scenario-based reporting scale, and 0.87 for the barriers scale. Awareness items were summed to create a total awareness score, and higher scores indicated greater awareness. Barrier items were summarized so that higher scores reflected greater perceived barriers. The self-perceived reporting practice score represented the average of the actual-reporting items.

Data collection and statistical analysis

Completed questionnaires were entered and cleaned in Microsoft Excel and then analyzed in SPSS version 28. Descriptive statistics were used to summarize participant characteristics and questionnaire responses using frequencies, percentages, means, and standard deviations as appropriate. Pearson correlation coefficients were used to examine associations among the awareness, reporting-practice, and barrier scores. Group differences were explored using independent-samples *t* tests and analysis of variance, with $p < 0.05$ considered statistically significant.

Ethical considerations

Ethical approvals were obtained from the relevant hospital and university authorities before data collection, and written informed consent was obtained from all participants. Confidentiality was maintained by using self-administered questionnaires, secure collection procedures, and restricted access to study data.

Results

Participant characteristics

A total of 223 nurses participated in the study. Most participants were female (74.0%), held a bachelor's degree in nursing (81.6%), and worked in a range of

clinical areas. The mean age was 33.99 ± 6.92 years, and 39.0% reported 1-5 years of nursing experience. The largest clinical subgroups came from the operating room (19.3%), gynecology (17.9%), and medical/surgical units (15.2%).

Table 1. Participant characteristics (N = 223)

Variable	Category	n	%
Gender	Female	165	74.0
Gender	Male	58	26.0
Education	Bachelor	182	81.6
Education	Postgraduate	41	18.4
Experience in nursing	1-5 years	87	39.0
Experience in nursing	6-10 years	75	33.6
Experience in nursing	11 years and above	61	27.4
Primary workplace unit	Operation room	43	19.3
Primary workplace unit	Gynecology	40	17.9
Primary workplace unit	Medical/Surgical	34	15.2
Primary workplace unit	Pediatric	28	12.6
Primary workplace unit	Emergency room	26	11.7
Primary workplace unit	Critical care unit	25	11.2
Primary workplace unit	Other	14	6.3
Primary workplace unit	Psychiatric	13	5.8
Hospital accreditation	Accredited	223	100.0

Awareness of reporting infrastructure was high. Most nurses stated that an incident reporting system existed in their workplace (88.8%), knew how to access the incident form (81.2%), and knew what to do with the completed form (81.6%). A majority had previously completed an incident form (69.1%), but only 38.1%

had submitted a report in the last month. The overall awareness score averaged 3.58 ± 1.219 .

Table 2. Awareness of and access to the incident reporting system (N = 223)

Item	Yes n (%)	No n (%)
Awareness of an incident reporting system in workplace	198 (88.8%)	25 (11.2%)
Ever filled in an incident form	154 (69.1%)	69 (30.9%)
Know how to access the incident form	181 (81.2%)	42 (18.8%)
Filled an incident report in the last month	85 (38.1%)	138 (61.9%)
Know what to do with the completed incident form	182 (81.6%)	41 (18.4%)
Awareness score (mean $\pm$ standard deviation [SD])	3.58 ± 1.219	

Scenario-based recognition and reporting practice

Scenario-based responses showed a consistent recognition-reporting gap. Events such as pressure sores, falls, hospital-acquired infection, postoperative deep vein thrombosis, wrong treatment or procedure, and omission of necessary treatment were commonly recognized as reportable, with 'always' recognition ranging from 65.0% to 74.4%. However, the proportion of nurses indicating that they 'always' reported these same events was lower, ranging from 40.8% to 48.0%. Perceived obligation to report remained high across scenarios, reinforcing the gap between recognizing what should be reported and reporting it consistently in practice.

Table 3. Selected examples of the recognition-reporting gap across incident scenarios

Incident scenario	Always recognized n (%)	Always reported n (%)	Always should be reported n (%)	Mean actual reporting score
Pressure sore sustained in hospital	162 (72.6%)	107 (48.0%)	151 (67.7%)	3.00 ± 1.125
Injury due to a fall in hospital	145 (65.0%)	101 (45.3%)	137 (61.4%)	3.06 ± 1.036
Hospital-acquired infection	151 (67.7%)	102 (45.7%)	152 (68.2%)	3.08 ± 1.026
Postoperative DVT due to inadequate prophylaxis	154 (69.1%)	91 (40.8%)	137 (61.4%)	2.89 ± 1.089
Wrong treatment or procedure	166 (74.4%)	100 (44.8%)	146 (65.5%)	2.98 ± 1.105
Necessary treatment or procedure not received	162 (72.6%)	99 (44.4%)	150 (67.3%)	3.00 ± 1.099

Perceived barriers

The overall reporting-barrier score was 2.876 ± 0.6092 , indicating a moderate barrier burden. The highest-scoring barriers were lack of coworker support (3.11 ± 1.193), worry about litigation (3.08 ± 1.281), concern about who might access disclosed information (3.06 ± 1.167), worry about disciplinary action (3.01 ± 1.317), and concern that anonymity could be compromised (3.00 ± 1.157). Process-related and workload-related barriers were present but comparatively less prominent than the social and confidentiality-related concerns.

Table 4. Highest-scoring perceived barriers to incident reporting

Barrier item	Mean $\pm$ SD	Strongly agree n (%)	Neither n (%)
My co-workers may be unsupportive.	3.11 $\pm$ 1.193	50 (22.4%)	120 (53.8%)
I am worried about litigation.	3.08 $\pm$ 1.281	56 (25.1%)	97 (43.5%)
I worry about who else is privy to the information that I disclose.	3.06 $\pm$ 1.167	45 (20.2%)	124 (55.6%)
I am worried about disciplinary action.	3.01 $\pm$ 1.317	53 (23.8%)	102 (45.7%)
Even if I don't give my details, I'm sure that they'll track me down.	3.00 $\pm$ 1.157	44 (19.7%)	109 (48.9%)
I don't want to get into trouble.	2.99 $\pm$ 1.320	54 (24.2%)	88 (39.5%)

Associations among the main study scores

Awareness correlated positively with self-perceived reporting practice ($r = 0.326$; $p < 0.001$), whereas perceived barriers correlated negatively with reporting practice ($r = -0.424$; $p < 0.001$). Awareness was not correlated with the barrier score ($r = 0.012$; $p = 0.854$). In group comparisons, reporting practice differed by gender ($p = 0.036$), with a higher mean score among male nurses than among female nurses. Education was not associated with the main scores, and years of experience showed no significant difference for awareness or reporting practice; the barrier score showed a near-significant pattern across experience groups ($p = 0.053$).

Table 5. Correlations among awareness, reporting practice, and barrier scores

Variable	Awareness score	Reporting practice score	Barrier score
Awareness score	1.000	0.326 (p < 0.001)	0.012 (p = 0.854)
Reporting practice score	0.326 (p < 0.001)	1.000	-0.424 (p < 0.001)
Barrier score	0.012 (p = 0.854)	-0.424 (p < 0.001)	1.000

Discussion

The principal finding of this study was the coexistence of high awareness of the incident reporting system with lower routine reporting practice. Most nurses knew that a formal reporting pathway existed and understood how to access it, yet only 38.1% had submitted a report in the previous month. This pattern indicates that system visibility and procedural awareness alone do not ensure consistent use. It is consistent with patient-safety literature emphasizing that incident-reporting systems generate value when they are actively used and integrated into organizational learning rather than functioning as passive infrastructure (Kumah et al., 2024; WHO, 2020). It also aligns with evidence showing that reporting systems capture only a fraction of adverse events identified through more systematic review methods (Hibbert et al., 2023).

The scenario-based findings sharpened this pattern. Across clinically important events, nurses commonly recognized that incidents were reportable and indicated that they should be reported, but their reported frequency of doing so was consistently lower. This recognition-reporting gap closely mirrors findings among Jordanian nurses (Oweidat et al., 2023) and is consistent with evidence from China and Ethiopia showing that favorable awareness or attitudes do not necessarily translate into consistent reporting practice when barriers remain active (Shemsu et al., 2024; Wu et al., 2024; Yalew & Yitayew, 2021). Nursing evidence more broadly has similarly shown that staff may endorse reporting in principle while reporting less consistently in practice when fear, futility, or reporting burden are present (Woo & Avery, 2021).

The findings also fit the wider literature on under-captured safety events and organizational learning. In Japanese homecare nursing, many safety-related events that prompted nursing action were not formally recorded as incidents despite their practical relevance to patient safety (Yamamoto-Takiguchi et al., 2021). When frontline events are noticed but not converted into formal reports,

organizations lose opportunities for review, pattern recognition, and system improvement (Shojania, 2021; WHO, 2020). Conversely, active analysis of incident narratives can reveal contributory factors that would be missed if reports were treated only as event counts (Tabaie et al., 2023). The current findings therefore suggest that the key challenge is not simply recognizing risk, but reliably converting recognition into a report that can enter the organizational learning process.

The barrier profile helps explain why this conversion may fail. The highest-scoring concerns involved coworker support, litigation, access to disclosed information, disciplinary action, and anonymity, indicating that the main friction was social, legal, and confidentiality-related rather than a simple lack of knowledge. This pattern is consistent with evidence that trust in a just culture depends on transparent, fair, and clearly non-punitive responses to reported events (van Marum et al., 2022). Qualitative evidence from Indonesia has likewise shown that fear of blame, embarrassment, and legal exposure can discourage formal reporting (Pramesona et al., 2023), while nursing reviews have repeatedly identified punishment and reputational concern as barriers to voluntary reporting (Woo & Avery, 2021). Chinese evidence further suggests that power distance and face-saving can intensify fear of disclosure (Yang et al., 2020). Together, these findings support interpreting the current barrier profile as an organizational trust issue as well as an individual reporting decision.

The results also help explain why accreditation and electronic infrastructure do not automatically normalize reporting behavior. Saudi evidence indicates that reporting is shaped by safety culture, management support, and the way organizations implement and respond to reporting systems (Abu Alrub et al., 2022; Alsahli et al., 2024). In a Saudi teaching hospital, electronic incident-reporting implementation was influenced by organizational and workflow barriers and enablers rather than by technology alone (Abu Alrub et al., 2022). Broader evidence similarly shows that engagement is stronger when reporting software is usable, roles are clear, and follow-up is visible (Koskiniemi et al., 2025), whereas weak standardization or poor linkage between reports, investigation, and follow-through can reduce learning value (Jabin et al., 2023). Positive system usability has also been associated with greater willingness to report near misses among hospital nurses (Alalaween & Karia, 2024).

The correlation pattern reinforces this interpretation. Awareness was positively associated with self-perceived reporting practice, confirming that knowledge and access still matter. However, perceived barriers showed a stronger negative association with reporting practice, while awareness itself was not associated with the barrier score. A nurse may therefore understand how the reporting system works and still hesitate to use it because of cultural, legal,

confidentiality, or relational concerns. This distinction is important for intervention design: education that focuses only on reporting mechanics is unlikely to be sufficient if distrust and perceived consequences remain unchanged (Alsahli et al., 2024; Elmi et al., 2025).

The observed gender difference in reporting practice should be interpreted cautiously. Although statistically significant, the cross-sectional design does not support causal inference, and the available study data do not provide sufficient contextual information to explain the difference. Education and years of experience were not materially associated with awareness or reporting practice. This is compatible with wider evidence suggesting that leadership behavior, team climate, and organizational culture may be more influential for reporting practice than demographic characteristics alone (Al-Oweidat et al., 2023).

Taken together, the findings support interventions that combine practical reporting support with visible organizational learning. Feedback loops, simplified processes, team-based root-cause review, and communication of actions taken can strengthen the connection between reporting and improvement (Shojania, 2021; Tsamasiotis et al., 2024). The WHO similarly emphasizes that incident reporting should sit within a broader safety-learning process in which reports are reviewed, acted upon, and communicated back to frontline staff (WHO, 2020, 2021). Analytic use of narrative reports can further increase learning by identifying contributory factors that are not evident from event counts alone (Tabaie et al., 2023). For the current hospital, the priority is therefore not simply increasing awareness of the reporting pathway, but reducing procedural friction while strengthening confidentiality assurance, supportive responses, closed-loop feedback, and confidence that reports lead to fair handling and meaningful improvement.

Strengths and Limitations

This study provides hospital-level evidence from an accredited Saudi governmental hospital operating within an established electronic incident-reporting context. By examining awareness, self-perceived reporting practice, perceived obligation to report, and barriers together, it identified the recognition-reporting gap as the central empirical issue and offered a more integrated picture of why under-reporting may persist.

Several limitations should be considered. The study was conducted in a single hospital, which limits generalizability to other settings. The measures were self-reported and may therefore have been influenced by recall bias and social desirability bias. In addition, the cross-sectional design allows assessment of associations but not causation.

Conclusion

Among nurses in this accredited Saudi hospital, awareness of the incident reporting system was generally high, but routine reporting remained comparatively lower. The central finding was a clear gap between recognizing reportable incidents and reporting them consistently. Reporting practice was positively associated with awareness and negatively associated with perceived barriers, while the most prominent barriers reflected coworker support deficits, legal concern, and confidentiality-related distrust. These findings suggest that strengthening reporting behavior will likely require a trusted, non-punitive, and visibly useful reporting environment rather than reliance on system availability alone.

Practice and Policy Implications

For nursing administration, the findings support strengthening confidentiality protections, communicating clearly who can access incident data, and ensuring that submitted reports are followed by timely feedback and visible improvement activity. For nursing practice, supportive team responses and supervisory reinforcement may be essential for reducing the social cost of reporting. Workflow simplification should occur in parallel with culture-focused strategies so that reporting remains feasible during busy clinical shifts.

Targeted education should therefore extend beyond what to report and how to report. It should also address why reporting is protected, how just-culture principles operate, and how incident reports contribute to quality improvement. In an accredited hospital environment, these steps may help convert system awareness into more reliable day-to-day reporting behavior.

Author Contributions

Muneerah Sehaim Al Otaibi contributed to the conception and design of the study, data collection, formal analysis, interpretation of the findings, and drafting of the manuscript. [Supervisor] contributed to study supervision, methodological guidance, critical revision of the manuscript, and final approval of the version to be submitted. This article was derived from a master's thesis in nursing submitted to King Abdulaziz University.

Funding

This research received no funding from any organization or other source.

Acknowledgments

The authors sincerely thank the nurses who participated in this study for their valuable time and cooperation. The authors also acknowledge the institutional support of Al Quwayiyah General Hospital and the academic environment of King Abdulaziz University that supported the completion of this master's research.

Conflict of Interest

The authors declare no conflict of interest.

Data Availability Statement

The data that support the findings of this study are not publicly available due to confidentiality and institutional restrictions. However, de-identified data may be made available by the corresponding author upon reasonable request and with permission from the relevant institutional authority.

Author Address:

¹Postgraduate Student at Faculty of Nursing, Postgraduate Nursing Administration Unit. King Abdulaziz University, Jeddah, Saudi Arabia.

²Professor of Nursing Administration, King Abdulaziz University, Jeddah, Saudi Arabia

³Professor of Nursing Administration, King Abdulaziz University, Jeddah, Saudi Arabia

References:

- Abu Alrub, A. M., Amer, Y. S., Titi, M. A., May, A. C. A., Shaikh, F., Baksh, M. M., & El-Jardali, F. (2022). *Barriers and enablers in implementing an electronic incident reporting system in a teaching hospital: A case study from Saudi Arabia. The International Journal of Health Planning and Management*, 37(2), 854–872.
- Alalaween, M. A., & Karia, N. (2024). *The predictive power of electronic reporting system utilization on voluntary reporting of near-miss incidents among nurses: A PLS-SEM approach. Belitung Nursing Journal*, 10(1), 15–22.
- Al-Oweidat, I. A., Saleh, A., Khalifeh, A. H., Abu Tabar, N., Al Said, M. R., Khalil, M. M., & Khrais, H. (2023). *Nurses' perceptions of the influence of leadership behaviours and organisational culture on patient safety incident reporting practices. Nursing Management*, 30(6), 33–41.
- Alsahli, H., Al-Wathinani, A. M., Althobaiti, T. A., Abahussain, M. A., & Goniewicz, K. (2024). *Shaping safety: Unveiling the dynamics of incident*

reporting and safety culture in Saudi Arabian healthcare. *Journal of Multidisciplinary Healthcare*, 17, 3775–3789.

- Binkheder, S., Alaska, Y. A., Albaharnah, A., AlSultan, R. K., Alqahtani, N. M., Amr, A. A., Algerian, N., & Alkutbe, R. (2023). The relationships between patient safety culture and sentinel events among hospitals in Saudi Arabia: A national descriptive study. *BMC Health Services Research*, 23, 270.
- Elmi, A. H., Hassan, R. A., Abdi, A. O., Yusuf, F. Y., HassanIbrahim, K., & Abdi, A. A. (2025). Awareness of reporting practices and barriers to incident reporting among nurses in Mogadishu, Somalia. *BMC Nursing*, 24, 1134.
- Hegarty, J., Flaherty, S. J., Saab, M. M., Goodwin, J., Walshe, N., Wills, T., McCarthy, V. J. C., Murphy, S., Cutcliffe, A., Meehan, E., Landers, C., Lehane, E., Lane, A., Landers, M., Kilty, C., Madden, D., Tumelty, M., & Naughton, C. (2021). An international perspective on definitions and terminology used to describe serious reportable patient safety incidents: A systematic review. *Journal of Patient Safety*, 17(8), e1247–e1254.
- Hibbert, P. D., Molloy, C. J., Schultz, T. J., Carson-Stevens, A., & Braithwaite, J. (2023). Comparing rates of adverse events detected in incident reporting and the Global Trigger Tool: A systematic review. *International Journal for Quality in Health Care*, 35(3), mzad056.
- Jabin, M. S. R., Steen, M., Wepa, D., & Bergman, P. (2023). Assessing the healthcare quality issues for digital incident reporting in Sweden: Incident reports analysis. *DIGITAL HEALTH*, 9, 20552076231174307.
- Koskiniemi, S., Syyrilä, T., Hämeen-Anttila, K., Mikkonen, S., Manias, E., Rafferty, A. M., Franklin, B. D., & Härkänen, M. (2025). Patient safety incident reporting software: A cross-sectional survey of nurses and other users' perspectives. *Journal of Advanced Nursing*, 81(9), 5401–5413.
- Kumah, A., Zon, J., Obot, E., Yaw, T. K., Nketsiah, E., & Bobie, S. A. (2024). Using incident reporting systems to improve patient safety and quality of care. *Global Journal on Quality and Safety in Healthcare*, 7(4), 228–231.
- Mitchell, R., Faris, M., Lystad, R., Fajardo Pulido, D., Norton, G., Baysari, M., Clay-Williams, R., Hibbert, P., Carson-Stevens, A., & Hughes, C. (2020). Using the WHO International Classification of Patient Safety framework to identify incident characteristics and contributing factors for medical or surgical complication deaths. *Applied Ergonomics*, 82, 102920.
- Organisation for Economic Co-operation and Development. (2022). *The economics of patient safety: From analysis to action*.
- Oweidat, I., Al-Mugheed, K., Alsenany, S. A., Abdelaliem, S. M. F., & Alzoubi, M. M. (2023). Awareness of reporting practices and barriers to incident reporting among nurses. *BMC Nursing*, 22(1), 231.
- Pramesona, B. A., Sukohar, A., Taneepanichskul, S., & Rasyid, M. F. A. (2023). A qualitative study of the reasons for low patient safety incident reporting

among Indonesian nurses. *Revista Brasileira de Enfermagem*, 76(4), e20220583.

- Shemsu, A., Dechasa, A., Ayana, M., & Tura, M. R. (2024). Patient safety incident reporting behavior and its associated factors among healthcare professionals in Hadiya Zone, Ethiopia: A facility-based cross-sectional study. *International Journal of Nursing Studies Advances*, 6, 100209.
- Shojania, K. G. (2021). Incident reporting systems: What will it take to make them less frustrating and achieve anything useful? *The Joint Commission Journal on Quality and Patient Safety*, 47(12), 755–758.
- Tabaie, A., Sengupta, S., Pruitt, Z. M., & Fong, A. (2023). A natural language processing approach to categorise contributing factors from patient safety event reports. *BMJ Health & Care Informatics*, 30(1), e100731.
- Tsamasiotis, C., Fiard, G., Bouzat, P., François, P., Fond, G., Boyer, L., & Boussat, B. (2024). From reporting to improving: How root cause analysis in teams shape patient safety culture. *Risk Management and Healthcare Policy*, 17, 1847–1858.
- van Marum, S., Verhoeven, D., & de Rooy, D. (2022). The barriers and enhancers to trust in a just culture in hospital settings: A systematic review. *Journal of Patient Safety*, 18(7), e1067–e1075.
- Woo, M. W. J., & Avery, M. J. (2021). Nurses' experiences in voluntary error reporting: An integrative literature review. *International Journal of Nursing Sciences*, 8(4), 453–469.
- World Health Organization. (2020). Patient safety incident reporting and learning systems: Technical report and guidance. www.who.int
- World Health Organization. (2021). Global patient safety action plan 2021–2030: Towards eliminating avoidable harm in health care. www.who.int
- Wu, F., Wang, X., Chen, S., Li, H., & Xie, H. (2024). Nurses' adverse event reporting attitudes and related factors: A cross-sectional study in maternal and child specialized hospitals in China. *Frontiers in Public Health*, 12, 1434387.
- Yalew, Z. M., & Yitayew, Y. A. (2021). Clinical incident reporting behaviors and associated factors among health professionals in Dessie comprehensive specialized hospital, Amhara Region, Ethiopia: A mixed method study. *BMC Health Services Research*, 21(1), 1331.
- Yamamoto-Takiguchi, N., Naruse, T., Fujisaki-Sueda-Sakai, M., & Yamamoto-Mitani, N. (2021). Characteristics of patient safety incident occurrences reported by Japanese homecare nurses: A prospective observational study. *Nursing Reports*, 11(4), 997–1005.
- Yang, R., Pepper, G. A., Wang, H., Liu, T., Wu, D., & Jiang, Y. (2020). The mediating role of power distance and face-saving on nurses' fear of medication error reporting: A cross-sectional survey. *International Journal of Nursing Studies*, 105, 103494.