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Senior nurses' perceptions of junior nurses incident reporting: A qualitative study

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Aim: To develop an understanding of senior nurses ranking and perceptions of incident reporting by junior nurses.

Background: Nurses must be encouraged to report incidents to nursing management. It is important to ascertain how senior nurses perceive their concerns, as it is crucial to ensuring that patient safety are managed.

Method: Qualitative study**.** Four focus groups explored senior nurses' perceptions of risks identified by nurses from a live incident reporting database. Data were analysed using framework analysis.

Results: Five themes emerged demonstrating differences of opinions in relation to the classification of events by senior and non senior nurses. Senior nurses held the view that some junior nurses use incident reporting to '*vent frustration*.'

Conclusion: There is a mismatch between senior nurses and junior nurses' perceptions of safety incidents. Nurses need to develop the writing style and use language that redflags incidents when reporting incidents. Senior nurses need to create a positive culture where risk from incident reporting is used to improve patient safety and subsequently a positive work environment.

Implications for Nursing Management: Our research identified the need for joint training to promote a shared understanding among nurses as to how incident report should be completed to promote patient safety.

Background

Internationally, there is a clear mandate within health and social care to create organisations with a safety culture, by encouraging the reporting of incidents and learning from these to minimise risk and harm to patients (World Health Organisation, 2019). Globally, unsafe care is one of the ten leading causes of death and disability (World Health Organisation, 2019). In the United States (US) adverse events are the third most common cause of death (Makary and Daniel, 2016).

International summits have been held to explore new and innovative ways to address and minimise unsafe care that is a universal issue (Third Global Ministerial Summit on Patient Safety, 2018). Jha et al. (2013) estimated that adverse events are more prevalent in low and middle-income countries, which impacts on disability adjusted life years. Additionally, patient harm is linked to high financial costs and loss of trust in health and social care providers. Improving patient safety in US Medicare hospitals is estimated to have saved USD 28 Billion between 2010 and 2015 (Slawomirski et al. 2017).

Nurses should feel empowered to disclose safety incidents and that any concerns they raise are acted upon. However, the decision to act on an incident is dependent upon the nurse's rating of the incident. Therefore, it could be hypothesised that in some instances incidents reported may not always be fully acted upon. This could have an impact on patient and staff safety.

Harm are avoidable therefore strategies to manage and reduce adverse incidents are paramount. Organisational culture is a contributing factor regarding safety in health care (Yu et al. 2018). To foster a culture of openness and transparency when adverse events occur it is essential that the appropriate structures and processes are in place. Incident reports are used to register risk and or harm involving patient or staff. Nurses are a continued source in patient care and therefore ideally placed to undertake risk assessment and develop harm free care settings. Building such a culture requires effective leadership from senior nurses (Kuseumawati et al. 2019). A Chinese study (cross sectional survey) investigated nurses underreporting of safety incidents and found that senior nurses' attitude and behaviour affected junior nurses' perception of patients' safety culture (Hong and Li 2017). Senior nurses are considered leaders and execute roles such as supervising care provided by bedside nurses, liaising with the multidisciplinary team to coordinate the daily management of a ward or clinical setting (Spooner et al. 2019). In essence they are nurses with a role that is recognised as pivotal to the overseeing of provision of safe, effective and person centred care. (Rankin et al. 2016). Therefore senior nurses management styles may be a factor in promoting safe care settings (Squires et al. 2010; Samur and Intepeler, 2019).

Leadership commitment to safety is key to cultivating a culture of patient safety as well as implementing strategies that will support nurses' psychological safety and create a fair culture (O'Donovan et al. 2019). Within nursing differences exist between safety related issues and nursing hierarchy. Yoo and Kim (2017) reported that nurses with less than 3 years' experience (staff nurses), rated risk on a higher scale compared to nurses with 4-6 years of clinical

experience. Murray et al. (2019) reports that newly qualified graduate nurse do not have confidence to manage some patient safety situations.

In all United Kingdom (UK) hospitals, a multidisciplinary hospital-wide electronic reporting system called DATIX is used to record all safety incidents. DATIX is the company that provides the software for safety reporting in the UK. It is a mandatory and statutory requirement in the UK that all staff receive training on using DATIX system.

In the UK registered nurse grades are from band 5-8+ those from band 7 onwards are considered senior. Senior nurses have the important role in investigating adverse events and influencing safety (Stapley et al. 2018). Junior nurses are qualified nurses responsible for providing care to individual or groups of patients. As their skills and competencies develop, junior nurses begin to actively participate in contributing to the management of the ward or department.

Understanding senior nurses perceptions and classification of adverse incidents is important. How they action risks identified in incident reports by junior nurses is worthy of exploration since it can influence the safety culture. Research into nurses' clinical decision making fall into two categories intuitive (type I), or analytical (type 2). Intuitive decisions are often made at speed, usually effective and stems either from instinctual cognitive processes or from highly practiced, over-learned behaviour (Brehaut et al. 2007)

and are more likely to fail (Croskerry et al. 2013). Analytical decision-making (type 2) is slower, more deliberate methodical thinking that involves reviewing all data collected throughout the process. The psychological impacts on staff that are involved in these incidents are often underestimated with little or no support resulting in negative attitude towards incident reporting (Shaw et al. 2005).

Our search identified one study (Wilson et al. 2012) that explored safety cultures differences between senior and junior nurses using survey methodology. Other researchers have examined attitudes towards incident reporting (Yoo and Kim, 2017) and comparison between incident reporting between doctor and nurses using surveys (Bagenal et al. 2016). At the time of our search no studies examined senior nurses perceptions and or their understanding of ranking incident reporting system using qualitative methodology. Our study aims to develop an understanding of senior nurses ranking and perceptions of incident reporting by junior nurses.

METHODS

Focus groups are one type of qualitative method, which is essentially based on the lived experience. Bradbury et al. (2009) suggest that focus groups stimulate discussion and open up new perspectives (Jayasekara et al. 2012). We perceive a focus group as one type of technique used in research that aims to collect data that involves group interaction on a pre-determined topic, usually set by the researcher. They are particularly useful when little is known about an area we wish to study (Powell and Single 1996). In our study focus group technique allowed us to investigate what a group of senior nurses thought about critical incident reporting as well as how and why i.e. to explore their reasons (Barbour, 2007).

Ethical approval was granted and registered under ID 17 A 62 for all parts of the study. A senior nurse selected critical incidents that were available on the DATIX system (see table2). In the UK managers can view all critical incidents but other users can view only incidents that are relevant to them. To protect and anonymity of patients and staff we ensured that all data were anonymised by removing all identifiable markers e.g. names, incident location, dates. The study was advertised via posters and email. Those who responded were sent a participant information sheet and consent to participate form. Participants had an opportunity to ask any questions and get replies before the interview. All interviews were audio recorded and transcribed verbatim.

Study participants were recruited from three acute care hospitals using convenience sampling. Focus groups constituted 7 to 11 participants for approximately 90 minutes, which is consistent with the focus group literature (Tritter and Landstad, 2020).

Focus groups members listened and responded to each other perspectives (Côté-Arsenault & Morrison-Beedy, 2005). The first author of the paper led the focus groups, the second author co facilitated, and kept detailed feed notes of observations and interactions. The second author is experienced in conducting focus groups and supported the first author to design the focus group management and reflect on group dynamics. We role rehearsed the focus group so that the first author gained confidence. A pilot was undertaken to enhance the structure and quality of the focus group. Adjustments after pilot were to keep participants to time and reduce the number of incidents examples used. Two focus groups were rescheduled because of last minute participants' cancellation due to winter work pressures. The consolidated criteria for reporting qualitative research (COREQ) was used to enhance the quality of the research.

Focus group(s), participants were given anonymised incidents from the DATIX database to rate and discuss and to reason any course of action and the quality of the incident report. These were kept in the original report writing style and may include acronyms and grammatical errors, this was because the authenticity of the report was important. We perceived using live scenarios as a key difference from other studies e.g. Espein et al. (2015) used hypothetical scenarios. Participants were asked to discuss risks they encountered within their wards, education and training in relation to patient safety as well as perceptions of the incident investigation system. The topic guide was used to facilitate discussion, but it was also flexible enough to allow participants to explore issues in depth and allow them to develop thematic conversation in their own way.

Table one: Participants' demography

	Focus group 1		Focus group 2		Focus group 3		Focus group 4	
Number of senior nurses Attending per focus group	6		7		5		7	
Band	8= N=4	7=N=2	8=N=4	7=N=3	8=N=1	7=N=4	8=N=1	7=N=6
Gender								
Female	5		6		3		6	
Male	1		1		2		1	
Age range								
30-30	1		2		0		1	
40-50	4		3		2		4	
51+	1		2		3		2	

Table two: Outline of scenarios should be table 1 and demographics table 2

Study Scenario	Initial Remedial Actions	Being Open
Patient transferred from Medical Admission Unit (MAU) due to lack of beds- since then not risk assessment has been completed. Ted Stockings and medication prescribed but not given.	Asked staff nurses who had handed over the patient why these things had not been done . The nurse refused to do a risk assessment. Bleeped doctor regarding the medication and applied TED stockings	Apologised to patient in relation to medication delay and explained
Patients very highly demanding of nurses attention throughout shift and continually asked for nurses Attention. The patient was on Amiodarone and Glyceryl Glyceryl Trinitrate infusion. Patient has dementia, has been vomiting, quite agitated, and has been trying to get out of bed throughout the night. Difficult to ensure all nursing risk assessments and care plans and patient care are completed and ability to ensure patients are safe in side rooms when attention is also required by those in Conary Care Unit	Informed Senior Nurse	
A patient who requires a 1:1 a mental health nurse was not being monitored as the shift was unfilled. The shift was out to bank and escalated to agency But was still not filled.	Escalated to senior nurses. Patient is being closely monitored as our staffing allows	
0120 nurse check pts. Routine observation - notice patient unresponsive, pulse present but Breathing shallow. Cardiac arrest call was pulled out. The nurse reports patient was alert and orientated at midnight, had a drink and able to move four limbs.	Cardiac arrest call placed when patient was unresponsive and reviewed by medical, surgical and intensive care teams. CT scan arranged, medical team Contacted neurosurgeon in relation to direction of care	

Results were discussed with neurosurgeon. It was agreed that the patient was not for surgical input due to extension of bleed to brain stem. Surgical consultant was informed, Medical team have spoken to the family regarding the direction of care. Intensive Care team felt it is appropriate to stop sedation and patient to be intubated and not for escalation or resuscitation in the event of cardiac arrest.	Family and relatives at bedside Imam contacted as requested by family	
Controlled drug expired and being used by nursing staff after the expiry date	Discarded expired drug. Informed pharmacist and senior nurse	

Analysis

Our research used focus groups interviews that utilized the framework method for the management and analysis of the qualitative data using the approach by Rabiee (2004) who combined Krueger's and Ritchie's framework. Step 1 was familiarisation with the data by reading the texts several times and reflecting and discussing the content. At this stage themes emerged. Step 2 was developing categories in either phrases and or concepts arising from the text. Step 3 involved comparing and contrasting quotes and indexing and sorting the data and collapse concepts and phrases under major themes. Data analysis was inductive and deductive in nature. Step 4 a template was designed to initially interrogate the data based on the aims of the focus group. Step 5 two of the researchers independently compared and discussed the cluster codes and identified if any codes were missing and agreed on the identification of codes, demonstrating our credibility (Moorley and Cathala, 2019). Step 6 we formulated a working analytical framework using the existing categories and codes. Step 7 each transcript was systematically interrogated highlighting and cutting out lines from the transcripts and selecting and attaching an appropriate code to produce the final analytical framework. Step 8 the working analytical framework was then applied by indexing subsequent transcripts using the existing

categories and codes. A separate large sheet was used for each category. We then placed data from transcripts for each participant and code, summarised it using verbatim words and inserted it into the corresponding cell in the matrix. Key words and phrases were underlined to look for patterns within the data and included illustrative quotations in bold with references to the original transcripts.

Data saturation within qualitative research is viewed as important to ensure quality as an essential methodological element of the research study (Fusch and Ness, 2015). There are many inconsistences within qualitative research as to how data saturation can be claimed (Saunders, 2018). We are unable to confirm with complete certainty we reached data saturation but the study's sample provided the '*best opportunity'* to reach saturation (Fusch and Ness, 2015:1409). Qualitative research unlike quantitative research does not seek to power but to a provide a rich understanding (Braun and Clarke 2006).

This study adopted a triangulation approach described by Denzin (2017) to incorporate investigators with different areas of expertise and professional background. In addition within the focus group investigator triangulation was utilized, which involved two researchers independently analyzing transcripts and meeting to agree and or disagree on codes, and themes that merged from the data. A limitation of the research is that we did not collect data from multiple sites in the UK although we recruited senior nurses from three large teaching hospitals. Therefore the transferability of the research may be limited. In addition we did not undertake member checking, as we wanted to limit the burden on the participants, as they were very busy senior nurses. Furthermore, a number of

questions have been raised about member checking as a method of establishing credibility, in relation to power, epistemological position and the practicalities of how to respond to the participants if they do not agree with the interpretations made (Tobin and Begley 2004).

RESULTS

Five themes with sub themes emerged from the data analysis.

Risk decision making

This theme (see table 3) emerged from the outcome and the content of the incident report. Real world scenarios were used for the focus groups. Interestingly 4 of the cases were downgraded from moderate harm to low harm and or near miss. One incident was upgraded to high risk with the understanding that this would be downgraded.

Table 3: Comparison of Risk decision making by staff and senior nurses

Risk Scenario	**Original grade by Junior Nurse from Critical Incident Report**	**Grade by Senior Nurses from Focus Group**
Cardiac Arrest	Moderate harm	Senior nurses agreed that this was high risk as the patient died but would eventually be downgraded.
Ted Stocking and Medication not Administered	Moderate harm	Near Miss (No risk assessment)
Conary Care Patient	Moderate Harm	Low Harm (sounds like a moan) pending a full investigation
Date Expired on Medication	Moderate Harm	Near Miss
A mental health patient that was being monitored but was placed at risk due to staffing levels	Moderate Harm	Low Harm

Quality: ' There is just no information' (FG 2 P **3)**

When reviewing the critical incident reports senior nurses looked for specific key words in the report that may highlight that there was actual harm to the patient. They seemed to use this approach to seek downgrading rather than agreeing or upgrading.

'It always sounds like the words they use within it is the trigger isn't it? Because what you've started to do is to start looking for certain words. So is it the way that they have been written? Because it sounds like the moment they start to use certain words, you then have to upgrade the risk isn't it? But these are quite badly written.' (FG 3 P7)

When asked what information may have been helpful in relation to grading of the incident (scenario 1) it was perceived that more information such as dates and times of transfers, admission and information about the patient would have been helpful (FG1 P2). Another participant perceived that some information about staffing levels would have been helpful. "*She* (junior nurse) *should have probably* put '*I was unable to complete this documentation because due to short of staff or the ward was busy*." (FG1, P1). Another scenario was downgraded to low risk because the referrer did not mention an unsafe environment (FG3 P2). Some participants held the view that DATIX should he written as a mini reflection to improve the quality of the report writing. (FG1,2, P2,3,1).

Perceptions of Risk

Across all focus groups there was a view that despite the context of the event if there was no harm to the patient then this was a 'low risk' and the incident report would be downgraded.

"Based *from the report, there is nothing that happened to the patients... Therefore, it is like to staff just venting out what happened during her night… So this is no harm because nothing happened to the patient***."*** (FG2 P4).

"It looks like by the report that the patient was still alive in the morning… but she was not happy" (FG2 P1).

Participants' perceived that junior nurses may simply be flagging there was an issue "*to cover themselves"* (FG1 P3). There was some empathy in what sounded like an over familiar situation.

"*She could have done with some help… Things could have gone the other way, demented patient, disorientated, busy, calling. I felt for her or him."* (FG1 P3)**.**

In relation to the medication scenario, no harm was perceived to have occurred because the patient had good pain relief even though the medication was out of date (FG2 P4).

Senior nurses perceptions of risk management

Across all of the focus groups participants perceived that junior nurses do not receive suitable training on DATIX, the online incident reporting system. They stated that the DATIX system was an open platform, which all staff has access to and that this could affect the number of incidents reported *"they always think the more we report, even the littlest thing, the safer it will be*" **(**FG 2 P4)

The fact that some of the participants were not formally trained and or understood the purpose of the DATIX resulted in some junior nurses perceiving that they themselves were going to get

"*into trouble.*" (FG2 P1). Some of the participants reported that fear of DATIX amongst staff remain common (FG 1 P 6).

Venting and complaining

There was a view that junior nurses needed to recognise they '*may not get anything out of the* DATIX, "*other than a moan"* (FG1 P2) and that DATIX reporting was "*emotional driven"* especially if related to staffing issues (FG3 P2). The same participant perceived that rather than viewing it as a negative experience both parties could reflect on the experience.

Some members of the focus group acknowledged the impact of the incident on junior nurses but as there was, no harm to the patient the risk was dismissed. *"It looks like it was written full of heavy emotions… Angry and tired, might be at the end of the shift and frustrated."* (FG3 P2).

There was a perception by some members that on some occasions it was just staff nurses '*venting'* their anger about the situation. One senior nurse stated:

> *"We don't know what is actually going on… but it looks like someone was moaning about the number of patients they were looking after.*" (FG1 P6)

> **"***Based from the report, there is nothing that happened to the patients… So it's like to staff just venting out what happened during her night… So this is no harm because nothing happened to the patient.***"** (FG2 P4).

In relation to staffing, another participant perceived that the tone of the DATIX could be perceived that she was *"complaining through the DATIX."* (FG2 P1). The participants wanted to know what proactive approaches were taken e.g. "*did she inform senior nurses? Did you call the site nurse practitioner; did you ask for some help, did you get any?*" (FG2 P3).

Another participant perceived that the DATIX was completed because the referrer wanted to raise it as an issue to managers (FG2 P1). There was the view that "*Sometimes you need to work as safely as you can with what you got."* (FG1 P3).

Investigating Risk

Participants identified a number of national promoting issues that makes it more challenging for them to investigate incidents thoroughly. The majority of the participants agreed that the period given to investigate and close DATIX reports places them under pressure. They reported that the pressure to meet the deadline results in DATIX being investigated and closed quickly, which leads to frustration and loss of learning.

Reporting of incidents that are submitted nationally also emerged as an issue. Some of the participants in FG1&3, highlighted that they do not support junior nurses reporting incidents such as pressure ulcers as it is reported nationally.

> *"And in terms of reporting on DATIX - like pressure ulcers, we always say don't grade, just describe it but don't grade. Because it does affect the ward data doesn't it? Because it's nationally* reported." (FG4 P2)

"*Pressure Ulcers/ pressure ulcers particularly you might say is a grade 2 and they make it un-stageable and make it a moderate harm."* (FG1 P3)

Additionally, some participants who had high number of falls in their clinical area stated that the falls data makes their ward look like its failing to provide adequate patient care. Some felt that data is often viewed in isolation, for example, one patient may have several falls due to poor compliance, but this reflects badly on the ward.

Discussion

This is the first study in the UK to explore senior nurses' perceptions of the grading of safety incidents. Our research found that despite risks being identified by junior nurses they were in most cases downgraded by senior nurses. It is important to emphasise that this is a UK study and that senior nurses in other countries may be governed by different procedures and policies that impact upon decision making. Decision-making is a key attribute of the expert practitioner. Whilst junior nurses maintain safety through reporting mechanisms this could be hindered by the perceptions and views of senior nurses who are responsible for escalating and or deescalating the concerns of nurses. Risk is subjective, however it is essential that the concerns raised by nurses are not dismissed and that there is an exploration of the existing wide variation in what is considered risky behaviour. Reports in our study influenced transparency of decision-making, which were related to the belief that patient safety would be improved by reporting incidents (Yoo and Kim, 2017).

What is evident from our research is that it is possible that staff nurses do not understand how senior nurses make decisions on incidents reported and the quality of information needed to make a decision. Therefore the way incidents are reported determines how it is analysed which contributes to promoting a safety culture. It is evident that nurses are not taught on how to complete a DATIX, using key words and terms that senior nurses use to categorise risk and harm. Our study identified that there was mis-match between the category allocated by nurses and the decisions made by senior nurses. Interestingly senior nurses appear to think fast and appeared to be guided by their vast clinical experience (intuitive decision making), there was agreement about decisions, which is not consistent with intuitive decision-making (Almashat et al. 2008). Evidence suggests that more experience staff have a high tolerance or appetite for risks (Yoo and Kim, 2017).

The first parameter was the way in which information was presented. Our research identified that the way in which the incident report was written is a critical factor in how senior nurses respond to the DATIX or incident. Tighe et al. (2006) research into incidents recorded on DATIX reported a mismatch between the recorded events and the category allocated to the incident in the historical record. Additionally, the database did not contain complete information for every incident, contributory factors were rarely recorded and relatively large numbers of incidents were recorded as "other" in the type of incident. Moreover there is a view that in some cases incident reporting is being used to '*vent*' frustrations. This is different from Cooper et al. (2017) who suggest that incident reporting were perceived by hospital managers by professionals to 'cover their own backs'. Our research demonstrates that incidents were classified based on the parameter of 'no harm'. Unlike Espin et al. (2019) our research did not identify deviation from professional

practice as a parameter, senior nurses to some extent wanted to protect the reputation of their ward and were therefore reluctant in some cases to rate pressure ulcers as high risk. Likewise Evans et al. (2006) identified that near misses and incidents which occur over time such as pressure ulcers and deep vein thrombosis due to inadequate prophylaxis were least likely to be reported. It is clear that in some incidents reports senior nurses did not perceive the risks were worthy of reporting. Nurses may need further training on using safety-reporting system (Stavropoulou, Doherty, and Tosey, 2015).

Conclusion and Implication for Nursing Management

Senior nurses need to create a positive culture where risk from incident reporting is used to improve patient safety and subsequently a positive work environment. Good leadership and role modelling are reported to be the foundation of a patient safety culture (O'Connor & Carlson, 2016). Our research identified a mismatch between senior nurses and junior nurses' perceptions of safety incidents. There needs to be greater in-depth work to explore junior nurse's perceptions of risk. There needs to be a shared understanding as to how senior nurses make decisions and a better understanding as to how incidents should be reported and or written using appropriate language. Perhaps two reporting mechanisms are needed- one where nurses, reflect, and vent their feelings and secondly a hard safety report mechanism.

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