

## Original Article

# Protective Disciplinary Exchange: A Qualitative Study into Nurse Managers' Supportive Strategies for Nursing Error Management

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### ABSTRACT

**Background:** Understanding nurse managers' supportive strategies for managing nursing errors can facilitate the improvement of nursing care quality and patient safety. **Objectives:** This study aimed to explore nurse managers' supportive strategies for nursing error management (NEM). **Methods:** This descriptive qualitative study was conducted on twenty nurse managers and two nurses purposively recruited from teaching hospitals affiliated to Urmia University of Medical Sciences, Urmia, Iran. The data were collected via in-depth semistructured interviews and concurrently analyzed via conventional content analysis. **Results:** Nurse managers' supportive strategies for NEM were overlooking nurses' errors to promote their obedience, prioritizing nursing care measures to reduce errors, error prevention training rounds during shift handover instead of error reporting, and alternative disciplinary measures instead of error reporting. These strategies were conceptualized as protective disciplinary exchange. **Conclusion:** Protective disciplinary exchange denotes that nurse managers prefer to manage nursing errors with flexibility. This situational communicative strategy helps nurse managers protect their staff resources and maintain their positions.

**KEYWORDS:** Nurse, Nurse manager, Nursing error, Nursing support, Qualitative research

## INTRODUCTION

Nursing errors are one of the main safety issues in health-care settings.<sup>[1]</sup> Error is defined as the establishment of wrong goals or using incorrect actions due to the lack of knowledge. In this sense, errors occur unintentionally. Human errors exist everywhere and not all of them can be prevented.<sup>[2]</sup>

Workplace environment characteristics significantly affect error occurrence.<sup>[3]</sup> For instance, environmental characteristics such as a routine centered climate,<sup>[4]</sup> heavy workload, intense time pressure,<sup>[5]</sup> new professional techniques,<sup>[6]</sup> sophisticated equipment, high client-staff ratio, and varying needs of clients can increase the likelihood of errors.<sup>[2]</sup> All these characteristics are very common in nurses' work environment, and hence, nurses' errors might not be prevented completely.<sup>[7]</sup>

Effective nursing error management (NEM) largely depends on the quality of error reporting. Nurses'

error reporting willingness in turn depends on different factors<sup>[8]</sup> such as the severity of error-induced patient injury<sup>[9]</sup> and organizational approach to error management.<sup>[10]</sup> A harsh approach toward nursing errors may cause nurses to hide their own errors, which in turn can increase error occurrence.<sup>[10]</sup> A study showed that the error management atmosphere in an organization affects its employees' error-related beliefs and their willingness to report their errors, so that employees may be more willing to freely report their errors in a supportive organizational climate and vice versa.<sup>[11]</sup>

There are two main approaches to error management, namely error prevention and flexibility to errors. The

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error-prevention approach holds that quality can be achieved in the best possible way through preventing errors and managing them through official organizational structures and procedures. Contrarily, the flexibility to error approach asserts that quality can be achieved by informal and flexible handling of errors.<sup>[12]</sup> In this approach, managers encourage and support nurses to make positive changes in their practice.<sup>[10]</sup> A supportive approach helps managers manage errors more effectively. Therefore, this approach is beneficial for both nurses and patients.<sup>[13]</sup>

In Iran, studies into nursing errors have been conducted mainly through quantitative designs. Some studies also used qualitative designs to explore nurses' perceptions of the factors affecting nursing errors. For instance, a study showed that nurses preferred not to report nursing errors due to factors such as concerns over patients' reactions, concerns over managers' reactions, concerns related to job security, and negative experiences respecting the outcomes of error reporting in the past.<sup>[14]</sup> Another study on critical care nurses found that the main reasons for nursing errors were job strain, blind care delivery, and limited coordination among health-care providers.<sup>[7]</sup> Moreover, a study found that critical care nurses' main strategy for NEM was error removal.<sup>[8]</sup> However, none of the previous studies in Iran evaluated the role of managerial support in NEM.

### Objectives

This study aimed to explore nurse managers' supportive strategies for NEM.

## METHODS

### Design and participants

This qualitative study was conducted using conventional content analysis. Participants were twenty nurse managers (including eleven head nurses, six supervisors, and three matrons) and two nurses who were selected from teaching hospitals affiliated to Urmia University of Medical Sciences, Urmia, Iran. The inclusion criterion for nurse managers was a managerial work experience of at least 2 years. Sampling was purposively done from March 2016 to April 2017, with maximum variation respecting participants' age, gender, education level, and organizational position.

### Data collection

Data collection was performed by the first author through in-depth semistructured interviews. Examples of interview questions were, "In case of nursing errors in difficult work conditions, how do you treat nurses to encourage them to report their errors?" and "Can you describe your experience in this area?" Based on

the participants' responses to these questions, probing questions were asked to enrich the data. Some notes were also taken during interviews to determine the subject of the subsequent interviews. The mean of interview length was 45 min, in the range of 30–90. Interviews were conducted at participants' preferred time and place (mostly in a private room at the participants' work place). Data collection was terminated when no new conceptual code was emerged from the interviews and all categories were fully developed. All interviews were recorded using an MP3 recorder.

### Data analysis and trustworthiness

Data analysis was started immediately after the first interview and performed simultaneously with data collection. Qualitative content analysis was used for data analysis. Each interview was frequently read to achieve a sense of the whole and to find key ideas and concepts as meaning units. Meaning units were condensed and coded using participants' own words or new wording. Accordingly, 917 primary codes were generated. Codes with conceptual similarity were grouped into subcategories and categories and examples for each code and category were identified based on the data.<sup>[15]</sup> Table 1 shows an example of developing a category.

Credibility was established through allocating adequate time to data collection and analysis, prolonged engagement with the data, maximum variation sampling, member checking, peer checking, and external debriefing.<sup>[16]</sup> Transferability was also maintained through maximum variation sampling<sup>[17]</sup> and detailed description of the study setting. Peer checking by coauthors also helped establish the dependability of the findings.

### Ethical considerations

This study was approved by the Ethics Committee of Tarbiat Modares University, Tehran, Iran (approval code: IR.TMU.REC.1395.383). Informed consent was taken from all participants and they were provided with information about the study aim and methods, confidentiality of their data, voluntariness of participation, and freedom to voluntarily withdraw from the study.

## RESULTS

Among the participants in this study, eight were men and fourteen were women and ranged in age from 40 to 53 years. Twenty participants held bachelor's degree in nursing and two held master's degree.

Nurse managers' main supportive strategy for NEM was protective disciplinary exchange. This main theme included four main categories and eleven subcategories.

**Table 1: The development of a subcategory**

Subcategory	Codes	Meaning units
Overlooking missed nursing care measures	Overlooking nurse's failure to report the error as a special case	I did not want to let her know that I was aware of her error. I could ask her why she had not reported it in the special cases document. I quickly overlooked her error. I knew that she had intentionally hidden the error (a female head nurse)
	Overlooking trivial things in order to prevent a lengthy shift handover	For example, the day when there were ten extra beds in our ward, I got only a cursory look at patients' medical records during shift handover and just dealt with more important things. I did so because strict approach to shift handover in case of ward crowdedness can prolong the process of shift handover and cause fatigue for nurses (a female head nurse)
	Avoiding multiple questions to overlook errors	Last night, none of my staff was able to sleep even for half an hour. Thus, at the time of shift handover, I did not ask them many questions in order not to find an error. Nurses' morale is destroyed when an error is found.
	Justifiability of errors due to heavy workload	Errors are inevitable with such high number of patients in the ward. Heavy workload is associated with great fatigue and hence, I avoided exacerbating their fatigue (a male head nurse)
	Overlooking trivial things to prevent distress	
	Ward crowdedness as a reason for overlooking errors	The only thing I do is that I don't attempt to question my nurses' practice for trivial things. I overlook forgivable errors, inform nurses that I overlook some of their errors for their heavy workload, and ask them to attempt not to repeat their errors (a female head nurse)
	Overlooking trivial errors	

The categories include overlooking nurses' errors to promote their obedience, prioritizing nursing care measures to reduce errors, error prevention training rounds during shift handover instead of error reporting, and alternative disciplinary measures instead of error reporting [Table 2].

### Overlooking nurses' errors to promote their obedience

Nurse managers overlooked some missed nursing care measures, attempted to hide some nursing errors from patients' companions, and collaborated with physicians to hide some nursing errors from them. They believed that due to nurses' heavy workload and their unique work conditions, some nursing errors are inevitable. They also noted that some nurses' errors should be overlooked to promote their obedience.

#### Overlooking missed nursing care measures

The codes of this subcategory were overlooking some special cases, overlooking trivial cases during shift handover, avoiding strict questioning of nurses' practice, considering errors inevitable due to nurses' heavy workload, and overlooking trivial cases not to destroy nurses' morale.

*The only thing I do is that I don't attempt to question my nurses' practice for trivial things. I overlook forgivable errors, inform nurses that I overlook some of their errors for their heavy workload, and ask them to attempt not to repeat their errors (a female head nurse).*

#### Collaboration with nurses to hide some nursing errors from patients' companions

Nurse managers attempted to hide some nursing errors from patients' companions. The codes of this category

were collaborative hiding of errors, manager's tacit consent for hiding errors, the positive effects of head nurses' actions without reporting errors to hospital nursing office, and hiding nurses' errors to prevent legal problems for them.

*If we told the patient's companions that the error was unintentional and might happen for every patient, they might bring a legal suit against nurses. Thus, we told them that the problem was due to an allergic reaction to the infused intravenous solution. This technique helped manage the error without any trouble (a female supervisor).*

#### Closer collaboration with physicians to make them overlook some nursing errors

Nurse managers noted that in some cases, they needed to more closely collaborate with physicians to persuade them to overlook some nursing errors. For instance, they respected physicians, helped them hide their errors, more closely collaborated with them to correct nursing errors, and established good relationships with them to prevent them from taking disciplinary actions against nurses.

*I attempt to create good conditions for physicians' practice so that they feel I have close collaboration with them. In this way, if I ask them to overlook a nursing error, they will agree. The ultimate result is the greater obedience of nurses to me (a male head nurse).*

#### Prioritizing nursing care measures to reduce errors

This category included two subcategories, namely prioritizing nursing care measures to ensure patient

**Table 2: Nurse managers' supportive strategies for nursing error management**

Subcategories	Categories	Theme
Overlooking missed nursing care measures	Overlooking nurses' errors to promote their obedience	Protective disciplinary exchange
Collaboration with nurses to hide some nursing errors from patients' companions		
Closer collaboration with physicians to make them overlook some nursing errors		
Prioritizing nursing care measures to ensure patient safety	Prioritizing nursing care measures to reduce errors	
Prioritizing nursing care measures to reduce nurses'		
Training rounds for preventing the recurrence of a prior error	Error-prevention training rounds during shift handover instead of error	
Getting feedback from junior nurses to prevent the recurrence of a same error		
Highlighting errors to prevent their repetition	Alternative disciplinary measures instead of error reporting	
Controlling nurses' practice to prevent errors		
Using leverage instead of error reporting		
Informal management of errors instead of error reporting		

safety and prioritizing nursing care measures to reduce nurses' workload.

#### **Prioritizing nursing care measures to ensure patient safety**

Our participants noted that in case of excessive job demands, the best approach to ensure patient safety is to prioritize nursing care measures based on their importance and perform more important measures (such as administration of high-risk medications) before less important measures (such as intravenous infusion to keep vein open).

*Sometimes, the intravenous solution contains KCl, glucose, or insulin and hence, it should be infused at a certain rate. However, sometimes an intravenous solution is infused just to keep the vein open. Strict supervision in case of less important measures may cause nurses to feel boredom of their job (a female supervisor).*

#### **Prioritizing nursing care measures to reduce nurses' workload**

According to the participating nurse managers, the best option in case of heavy workload is to prioritize nursing care measures to reduce workload and thereby to reduce nursing errors.

*I don't place great importance on writing nursing tasks because practical tasks are more important. If I place great importance on writing tasks, nurses may also decide to devote most of their time to these tasks in case of heavy workload and fail to perform more important tasks such as direct care measures (a male head nurse).*

#### **Error prevention training rounds instead of error reporting**

This strategy included training rounds about an occurred error to prevent its recurrence in future, controlling nurses' practice to prevent the recurrence of prior errors,

and getting feedback from junior nurses to prevent the recurrence of prior errors. According to the participants, although such training rounds may need great amount of time and energy, nurses eagerly participate in them because they know that these rounds are alternatives to the reporting of their errors.

#### **Training rounds for preventing the recurrence of prior errors**

Participants attempted to prevent the recurrence of the same error through providing nurses with training about that error during shift handover or bedside practice. In their opinion, such rounds are effective in preventing errors and improving patient safety and hence are a good alternative for formal error reporting.

*Around eight nurses, from both the night and the morning shifts, attend shift handover. During shift handover in several successive days, I talked to them about an error. Now, I think that all of them have understood how to change dressing without cutting the percutaneous endoscopic gastrostomy tube (a female nurse manager).*

*During the training rounds, I talked about an error occurred in a shift and explained about how to prevent it. Such rounds have both educational and preventive purposes and thereby, make nurses not commit prior errors. Moreover, as these rounds are an alternative to error reporting, nurses are encouraged to correct their practice (a female head nurse).*

#### **Getting feedback from junior nurses to prevent the recurrence of prior errors**

Nurse managers attempted to put a junior and a senior nurse in the same shift to help the junior nurse develop his/her experience under the supervision of the senior nurse. Moreover, they attempted to allocate patients with varying health problems to all nurses to develop

their experience in care delivery. In addition, in case of a nursing error by a junior nurse, nurse managers sometimes avoided correcting the error and required the nurse to individually correct it. They followed the error and got feedback from the nurse until the error was corrected.

*In the monthly work schedule, I put a junior nurse and a senior nurse in a same shift. Junior nurses know that they should solve their problems through consulting their senior colleagues. Most of the times, the senior nurse resolves the problems of the junior nurse. After a while, the junior nurse should help the senior nurse in his/her tasks to promote his/her learning and to return the senior nurse's favors (a male head nurse).*

#### **Highlighting errors to prevent their recurrence**

During the training rounds, nurse managers greatly focused on prior errors. They believed that although errors are inevitable, their recurrence can be prevented through highlighting them and providing staff with explanations about them.

*I frequently tell my staff to read medical orders one by one and to write them in the Kardex. I also frequently highlight that they should always check serum creatinine level whenever gentamicin is prescribed (a female nurse manager).*

#### **Controlling nurses' practice to prevent errors**

Nurse managers had found that pure training was ineffective in preventing the recurrence of nursing errors. Thus, they had tightened their supervision and control over nurses' practice to prevent errors.

*As long as I don't trust my staff, I strictly control their practice in order to improve their carefulness about work and thereby, to prevent errors. Strict control also helps me detect potential errors and prevent their occurrence (a female head nurse).*

#### **Alternative disciplinary measures instead of error reporting**

Nurse managers used alternative disciplinary measures instead of error reporting to reduce the occurrence and recurrence of nursing errors. The two subcategories of this category were using leverage instead of error reporting and informal management of errors instead of error reporting.

#### **Using leverage instead of error reporting**

Instead of formal reporting of nurses' errors, nurse managers preferred to manage errors, retain nurses in the profession, and promote their obedience through using leverage such as requiring nurses to do more shifts or rejecting their requests for leave or work schedule change. They highlighted that they preferred informal NEM methods instead of formal error reporting.

*A nurse infused intravenous mannitol solution using an ordinary infusion set. In order to promote her carefulness, I allocated her an extra evening shift. My nurses accept this strategy to error management because formal error reporting can affect their per-case payment (a male head nurse).*

#### **Informal management of errors instead of error reporting**

Instead of using formal error management strategies such as error reporting, our participants attempted to informally manage nursing errors. According to them, the informal NEM methods improved intimacy and collaboration among nurses.

*I attempt to personally solve intra-ward problems. If I want to report all errors in the ward through the written format, each day I should spend some time on error writing. Moreover, written error reporting can seriously affect my staff's morale so that they may never forget it (a male head nurse).*

*Compared with formal error reporting and per-case payment reduction, informal methods are more effective in ensuring patient safety because the effects of informal methods appear very soon, while payment reduction happens every six months (a male nurse).*

## **DISCUSSION**

The findings of this study showed that nurse managers used protective disciplinary exchange to manage nursing errors. Protective disciplinary exchange not only protected nurses against the consequences of formal error management, but also promoted their obedience, encouraged their active participation in ward activities, made them accept managers' decisions, and created a friendly atmosphere in the ward. Error management through protective disciplinary exchange is similar to the assumptions of the Conservation of Resources Theory which holds that individuals are willing to acquire and maintain what is valuable for them and hence, anything which prevents them from acquiring and maintaining such thing will cause them tension.<sup>[18]</sup> Our findings indicated that both nurse managers and nurses perceived nursing errors as threats to their positions. Thus, nurse managers tried to use informal NEM strategies to protect nurses against formal disciplinary actions, promote their obedience and collaboration, and, thereby, maintain nurses' positions and their own. Nurse managers' strategies for protective disciplinary exchange were overlooking nurses' errors to promote their obedience, prioritizing nursing care measures to reduce errors, error-prevention training rounds during shift handover instead of error reporting, and alternative disciplinary measures instead of error reporting.

Through protective disciplinary exchange, nurse managers in the present study established relationships with their staff and promoted their collaboration. According to the Member–Leader Exchange Theory, manager–employee developmental relationship is a social–emotional resource, which facilitates empowerment and promotes commitment among employees.<sup>[19]</sup> Our participants believed that due to nurses' heavy workload and high occupational stress, nursing errors were inevitable. Such belief facilitated their relationships and exchange with their staff.

One of our participants' supportive strategies for NEM was to overlook nurses' errors to promote their obedience. They felt that organizational policies were not strong enough to support nurses and, hence, individually attempted to support and protect nurses through overlooking their errors. Overlooking nursing errors is possible in an organizational forgiveness atmosphere. Such climate can also promote nurses' emotional learning and their interpersonal relationships.<sup>[20]</sup> Overlooking errors is consistent with the flexibility to error approach,<sup>[12]</sup> which holds that informal and flexible responses to errors can considerably improve service quality and staff motivation and, hence, suggests rapid responses to errors through informal strategies.<sup>[21]</sup>

Alternative disciplinary measures instead of error reporting were another supportive strategy used by our participants for protective disciplinary exchange. Our participants noted that formal error reporting can cause different negative consequences for nurses and, hence, attempted to manage nursing errors through alternative protective strategies such as requiring nurses to do more shifts or rejecting their requests for leave or work schedule change. Alternative disciplinary measures helped nurse managers establish strong relationships with nurses and caused nurses to improve the quality of their services. This strategy is consistent with the punishment-free discipline,<sup>[22]</sup> which repairs damaged professional relationships and helps employees manage their negative feelings induced by those damages.<sup>[23]</sup> In line with our findings, a former study reported that as a job resource, managerial support for hospital nurses reduced job demands and encouraged nurses for learning and development.<sup>[18]</sup>

A global consensus exists among all health-care managers that the reporting of errors can reduce their occurrence and facilitate their management.<sup>[24]</sup> Yet, our findings indicated that managers did not greatly value formal error reporting because nurses' did not like their errors to be formally reported to senior managers. Accordingly, our participants held error-prevention

training rounds, got feedback from junior nurses, and controlled their nurses' practice to reduce error occurrence and recurrence. Such approach to NEM, which roots in nurse managers' protective perception of nurses' conditions and their acceptance of nursing errors, can ensure patient safety and improve nurses' work conditions. Holding error-prevention training rounds is consistent with the assumptions of the error-prevention approach to error management.<sup>[25]</sup> This approach focuses on the prevention of error recurrence in future through analyzing and learning from prior errors.<sup>[26]</sup> In this approach, employees are encouraged to learn from errors, establish relationships about their errors with their same-level colleagues, consider errors as learning opportunities, and develop their error-related experiences.<sup>[27]</sup>

Due to the longstanding problem of staff shortage in low-income countries, managers in these countries use innovative strategies to circumvent their limitations.<sup>[28]</sup> Our findings showed that nurse managers attempted to ensure patient safety and reduce their nurses' workload through prioritizing nursing care measures. As a compensation for nursing staff shortage and heavy workload, this strategy can enhance nurses' job motivation and ensure patient safety. A former study also reported the use of compensation for improving nurses' performance and motivation.<sup>[29]</sup>

## CONCLUSION

This study shows that despite strict control and supervision systems in hospital settings, the work conditions of nurses increase the likelihood of nursing errors and thereby can face them with disciplinary measures and legal problems. Nurse managers consider nursing errors as threats to their own positions and nurses' and feel that their valuable resources are at risk. Therefore, they resort to protective disciplinary exchange to maintain their nurses' positions and in turn their own positions. Protective disciplinary exchange entails strategies such as overlooking some errors, using alternative disciplinary measures, creating an organizational forgiveness atmosphere, and showing flexibility to errors.

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## Conflicts of interest

There are no conflicts of interest.

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