

What Nursing Students Hope from Clinical Mistakes

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ABSTRACT

Background: Nursing students are vulnerable to committing mistakes in clinical practice due to various factors. These factors include the quality of supervision received and interpersonal dynamics. This study examined students' expectations if they make mistakes during clinical placement.

Methods: A qualitative descriptive study design was employed in this study. Purposive sampling was adopted to recruit twelve undergraduate nursing students, and semi-structured interviews were conducted between October 2022 and December 2022. A thematic analysis strategy was utilised to analyse the data.

Findings: Three themes were identified, namely: (1) The importance of supervision, (2) A dedicated clinical mentor, and (3) The value of reflective practice.

Conclusion: The study showed that most nursing students emphasised the importance of clinical supervision from experienced nurses to handle clinical mistakes effectively. The findings emphasised the crucial role of the clinical mentor's presence during the students' clinical tasks. Furthermore, the students also expressed the significance of the student's continued engagement in reflective practice.

Keywords: Students; Nursing;; Mentors; Brunei; Motivation; Clinical.

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INTRODUCTION

Nursing students often perceive that their clinical mentor does not tolerate mistakes (1). In addition, nurse educators are held to view mistakes in hospital contexts with scepticism, particularly when they can potentially harm patients. Nurse educators also reported that mentors unconsciously reacted to students who made mistakes when confronted (2). On the contrary, students desire that their instructors acknowledge their mistakes when conducting clinical procedures. Research has shown that engaging in such learning activities can enhance students' self-confidence, composure, and academic achievement (3).

Meanwhile, while it is not unusual for nurses to assist in rectifying mistakes, it is paramount that nursing students possess a comprehensive understanding of mistakes management. Empirical evidence suggests that a significant proportion of nursing students are unable to formulate an effective strategy for resolving the situation when faced with clinical mistakes during their clinical rotations (4). For instance, a qualitative study involving 68 nursing students reported that of the mistakes identified, only 18.3% were corrected and disclosed; 16.3% were corrected but failed to disclose; 15.8% reported but were unable to rectify the mistakes; 4.0% were unable to rectify the mistakes but failed to disclose; 26.5% were identified but not corrected; and 8.1% were discovered by another individual and remained unfixable. This finding suggests that most students could not rectify the mistakes (5). It was common for nursing students and registered nurses to fail to report clinical mistakes that occurred within the ward (5). Fear of punishment, disgrace and culpability for mistakes within the healthcare culture are cited as additional factors contributing to the reluctance to disclose these mistakes (6).

On the other hand, nursing students have described that their interactions with their clinical mentors have improved, whereby they underscored the cruciality of mentors in facilitating students' academic and clinical development (7). In addition, students also emphasised that the responsiveness and respect of mentors towards students are crucial for effective mentoring and the development of student confidence, both of which can reduce the number of clinical mistakes on the ward (2). The nursing students also reported that they

experienced a heightened sense of reassurance when accompanied by nursing educators for assistance and support (8). This study confirmed the findings of Ta'an et al. (6), who suggested that education and experience are critical factors in reducing clinical mistakes. Nurse educators should employ teaching strategies that foster theoretical understanding among students and influence professional conduct to establish a safe climate throughout classroom instruction and future clinical placements. Further consideration should also be given to organising pre-clinical and clinical seminars or workshops to foster a safe culture among students. Furthermore, imparting a non-punitive method to nursing undergraduates is imperative, wherein reporting incidents is perceived as a means of progress (9). Thus, this study examined students' expectations if they make mistakes during clinical placement.

METHOD

Study Design

A qualitative descriptive study design was adopted as it was the most suitable approach to examine students' viewpoints on what they hope for from clinical mentors when they make mistakes.

Sample and setting

The students were recruited using a purposive sampling strategy. The inclusion criteria were undergraduate nursing students from the Universiti Brunei Darussalam. Next, only students who are 18 years old and above and have completed at least one clinical experience rotation were included in the email interview. All eligible students were recruited through the gatekeepers, the Nursing Programme Leader and the Course Coordinator, who helped distribute the recruitment poster, invitation email and the Participant Information Sheet (PIS).

Data collection

After obtaining ethical approval, the research team deliberated the interview guide, drawing inspiration from relevant literature reviews (3,4,8). The interview questions were piloted on two nursing students. Based on the students' responses, the research team integrated additional prompts to explore the students' understanding of their approaches to clinical mistakes. The data were subsequently gathered

by sending an interview form comprising five open-ended questions in the English language via electronic mail. Each student was given a deadline to complete and submit the form within two weeks, with the option of requesting more time if necessary. Nevertheless, no one requested the additional time. The interviews started with the question: What are your approaches to handling clinical mistakes and the reasons for the identified approaches? These were followed by questions exploring effective strategies to avoid clinical mistakes. All interviews were carried out between October 2022 and December 2022. The collection and analysis of data proceed simultaneously. Data saturation was achieved following the twelve interviews when the students discussed no further information.

Data Analysis

The data was analysed and guided based on Braun and Clarke's (10) six-phase framework. Thematic analysis is a valuable technique for exploring the views of various research participants, showing similarities and contrasts, and uncovering unexpected findings. The analysis began with reviewing the students' responses multiple times to become conversant with and comprehend the collected data. The subsequent phase entails the generation of preliminary codes through the meaningful and systematic organisation of the data. Subsequently, the team searched for themes that shared comparable descriptors with the codes derived from the initial codes identified as potential themes. The themes that have been identified are examined and compared with the transcripts in the fourth phase. Identifying each theme constituted the fifth phase in defining the theme. In the final phase, the team commences documenting the final themes with report writing.

Trustworthiness

The interviews were guided by semi-structured interviews that allowed students to express their views. Open-ended questions, such as asking questions starting with "why" and "how", were employed to prompt longer responses and achieve credibility. Moreover, to enhance the quality of the results, the study's dependability was guaranteed by systematically repeating the data analysis steps. Meanwhile, direct quotes from the students were presented in the findings for conformability. The team coded, analysed, and categorised the data. In addition, further analysis

was carried out to ensure that data were assigned correctly to its sub-themes and themes. The students' broad age range and clinical experience contributed to the findings' transferability.

Ethical Consideration

The research was granted ethical approval from the PAPRSB Institute of Health Sciences Research Ethics Committee with the reference number UBD/PAPRSBIHSREC/2022/82. The participant information sheet and the consent form are attached to the invitation email. It was emphasised that participation was voluntary, and informed consent was obtained before the email interviews. The students were also informed about their rights to withdraw from the study, provided no data analysis had been completed. All data were treated with strict confidentiality. Students were given a Participant Identification Number (PIN), where this PIN was mentioned throughout the data analysis and reporting for privacy protection.

FINDINGS

A total of four male students and eight female students participated in the study. It was found that female students provided lengthier responses, while male students presented shorter responses. This may be associated with asserting that female expressive form usage may be greater than male (11). Additionally, the data indicates that a significant proportion of the participants were first-year students ($n=6$), second-year students ($n=4$), and third-year students ($n=2$). The responses provided by these students may differ based on their year of study. This is because students in their second and third years may have greater clinical exposure in specific domains than first-year students. **Table 1** presents the demographic information of the students. The students reported several approaches to avoiding and responding to clinical mistakes. In all interviews, three key themes were presented in the section. Quotes are used to exemplify the findings.

The importance of supervision

Most students highlight the need to employ approaches to prevent clinical mistakes. These approaches encompass the importance of consulting nurses for help on particular clinical procedures.

Table 1: Demographic data of students

Characteristics	n	Male (n= 4)	Female (n=8)
1. Current year			
- Year 1	6	2	4
- Year 2	4	1	3
- Year 3	2	1	1
2. Current semester			
- Semester 1	12	4	8
- Semester 2	0	0	0
3. Degree programmes			
- 4-years	8	2	6
- 3-years	3	2	1
- 2-year	1	0	1

"The first and most crucial thing to do if a clinical mistake occurs is immediately remedy it and alert the managers or nurses responsible for the problem." (Student 6)

"It is preferable to have nurses watch and observe you both when performing any procedures and attending to patients." (Student 12)

According to the students, clinical supervision enables the early identification of performance deficiencies, facilitating the identification of the underlying causes of the mistakes.

"Thanks to supervision, it is possible for the nurse to monitor my performance and identify what aspects of my performance are inadequate, which could be the reason for the mistake. From that angle, the nurse can point out my mistake and correct it." (Student 9)

Moreover, most students who responded to the question concerning preventative measures against clinical mistakes credited their mentor. All students agreed that guidance and observation from mentors and nurses are essential to ensure that clinical mistakes do not occur on the ward.

"It is my goal to make every effort, whenever possible, to seek assistance from the nurses to demonstrate and instruct me on how to perform the procedure, and I will also request that they observe me." (Student 5)

The students further emphasised the importance of supervision and the student's status as nursing students on the ward.

"When it comes to clinical procedures, I feel that supervision should continue to be a priority. This is

because supervision provides assistance in ensuring that there are as few mistakes as possible." (Student 11)

"When thinking about this, a student should not be arrogant about doing something on their own, especially if they have limitations in how they can do the clinical task. We must remember that patients have the right to receive safe care, no mistakes are to be made, and, most importantly, the clinical tasks must be supervised." (Student 7)

A dedicated clinical mentor

The presence of a clinical mentor is among the most effective approaches for mitigating clinical mistakes.

"It is always the most beneficial method to have supervision for the situation. The supervision that I receive from my mentor has helped me avoid making significant mistakes, and the fact that I frequently check in with them has resulted in a safer practice. I cannot emphasise this point enough." (Student 1)

A notable majority of the students agreed that having a mentor who can guide them through preventing clinical mistakes is vital. Many of them are aware of the reasoning that underpins its vital nature. Students have reported that a clinical mentor has the ability to enhance one's sense of confidence when carrying out procedures.

"There is a connection between having a mentor with years of expertise and having increased confidence in doing various treatments, particularly those that are tricky." (Student 3)

Furthermore, as reported by a student, the

presence of a mentor within the ward fosters a feeling of reassurance among the students.

"When surrounded by someone more knowledgeable, we have a sense of protection, which boosts our trust in ourselves and our capacity to cope with mistakes correctly." (Student 8)

Furthermore, most students believed that a mentor's presence is crucial for preventing and effectively handling clinical mistakes, as mentors possess the necessary expertise to provide adequate assistance.

"The presence of mentors allows students to receive guidance and assistance in refining their techniques. A further purpose of their presence is to draw attention to any deficiencies that students could have. Given that it gives the student a new perspective, I believe this is important." (Student 7)

"The students can be supervised by a mentor, who can also provide feedback regarding patient interactions." (Student 4)

The value of reflective practice

The utilisation of reflection serves as the approach employed by half of the students to resolve clinical mistakes. This approach allows students to avoid engaging in clinical mistakes. Instead, the reflective practice integrates the information they are taught into practical consideration.

"Whenever I am unsuccessful in a task, I immediately take some time to examine and reassess my strategy, my approach, and any other elements that might have played a role in my mistakes." (Student 5)

"Based on my previous experiences, I have found that reflection is always the most useful tool for me to deal with clinical mistakes." (Student 9)

One student characterises reflection as a cognitive process involving reconsidering the feelings experienced in a particular incident, aiming to draw lessons from any mistakes made.

"As for me, the feelings that I experienced throughout the mistake helped me remember it, and I reflected on those feelings to ensure that I did not make the same mistakes again." (Student 3)

When asked about their preference for reflection as a method, the students responded that it was the most straightforward and useful approach. Additionally, they expressed that by engaging in

reflective practice, they could acknowledge and learn from their mistakes and improve themselves.

"I always use reflection to recognise and acknowledge my mistakes, gain knowledge from those mistakes, and try to avoid repeating the same mistakes. I am going to look into myself and make an effort to improve." (Student 9)

Furthermore, students engage in reflection by attempting to recollect information that was discussed during class. One student indicated that reviewing set tasks and previously learned material or theoretical concepts is one of the steps they take to prevent clinical mistakes.

"To begin, I should recall the theoretical information. I must be aware that every step I am about to perform is one I have already completed and acquired the knowledge to perform." (Student 12)

Meanwhile, the students also asserted that before starting each shift, it is critical to underscore the significance of exercising continuous alertness to avoid clinical mistakes.

"Whenever I take a moment to reflect, I am reminded that I must always be alert before beginning my shifts." (Student 8)

DISCUSSION

This study posits that mentorship and supervision from staff nurses or mentors are necessary. Mentorship was a factor in most students' experiences managing clinical mistakes. Mentoring is essential in advancing clinical education, nursing practice, and a duty of care within the nursing profession. Mentorship fosters the growth of competencies, comprehension, and foundational tenets of the nursing vocation (12). Throughout their academic and professional development, students will participate in several mentorship relationships that equip them with the necessary competencies to establish connections with the professions. Over the course of an educator's profession, mentorship can manifest in a wide array of ways. This phenomenon can manifest in various settings, including interactions between students and mentors, experienced nurses and recently graduated staff, and the reciprocal influence of veteran nurses who invest their time mentoring and assisting novice nurses in their journey towards professional development (13).

An analysis of the initial theme reveals that students' assertion that performance deficiencies could be identified through supervision is corroborated by a mixed-methods study (14). A clinical mentor has to protect and support the student in challenging situations, including when the student commits mistakes, and to provide constructive guidance. One study underscored the significance of mentors providing student nurses with suitable and direct supervision to mitigate medication mistakes (15). For instance, Bam et al. (8) state that one contributing factor to clinical mistakes is the quality of supervision. The prevailing factor contributing to clinical mistakes committed by nursing students in the ward is the inadequate supervision provided by their mentors and nurses. Supervision facilitates the development of professional identities, values, and competencies among clinicians, offering avenues for professional advancement and reducing stress and exhaustion (16). According to the findings of a qualitative mixed-methods study, it is crucial and preferable for student nurses to receive guidance and support concerning supervisory tactics and constructive feedback (17).

In addition, the students in this study indicated that one method of preventing clinical mistakes is to request demonstrations of specific procedures and ask mentors or other staff nurses to walk them through them. Demonstration was the most frequently employed supervisory technique. The researchers initiated the students' clinical placement with demonstration-heavy supervision, during which they exemplified the execution of multiple tasks and gradually allowed them to perform tasks independently in the ward (17). Furthermore, the key preventive measure against clinical mistakes is to motivate nursing students to ask (18). By implementing this approach, mentors and students can enhance communication to prevent clinical mistakes (4).

Meanwhile, it was revealed that half of the students in this study indicated that they manage clinical mistakes through reflection, in addition to supervision. Nonetheless, this strategy emphasises post-event intervention. Engaging in reflective practice entails contemplating the methodology, approach, emotions, and additional facets that could have potentially contributed to the mistakes. Reflection intentionally considers a particular experience in light of relevant literature to attain comprehension and refine professional conduct (19). Frøiland et al. (18) conducted a qualitative mixed-method study, revealing that

students placed significant importance on reflective dialogues and clinical discussions. Mentors reported that students could integrate theoretical concepts with practical experience and gain insight into their theoretical knowledge through these dialogues. In addition, most students acknowledged the advantages of reflection concerning their individual and professional clinical development (20). Furthermore, nursing students' competence, empathy, and compassionate behaviour were enhanced through facilitated review. As stated previously, reminiscing constitutes an additional reflection type (21). As precautions against clinical mistakes, this strategy regarding recalling knowledge and ensuring familiarity with the procedure is supported by a focus group study conducted in Norway, emphasising the significance of mastering specific procedures to survive clinical placement. Combining theoretical knowledge, practical experience, and classroom instruction results in mastery (22).

LIMITATION

Despite the pilot study, the study showed that the depth of the students' responses could have been compromised during the email interviews. This was notably evident when several students provided short written responses accompanied by challenging-to-interpret body language and tones. Due to time constraints, the researcher could not elicit responses from the students to clarify the initial responses further.

CONCLUSION

This study finds that most nursing students emphasise the significance of supervision in the event of clinical mistakes. The strategies may include rapidly notifying the nurses of mistakes, soliciting advice regarding particular procedures, or requesting supervision throughout the procedure. In this study, the significance of the mentor's responsibilities and obligations as a nursing student must be explored further. Furthermore, the results suggest that having a mentor present is critical when operating in a clinical setting. Furthermore, it was found that half of the students stated that reflection serves as a productive approach to addressing clinical mistakes by enabling them to identify and assess their limitations. In addition, the students expressed that incorporating reflective practice into their clinical tasks is essential to mitigating clinical mistakes. Moreover, the findings suggest

that additional study with more wide-ranging sample size is necessary to explore strategies for strengthening the role of clinical mentors and supervision in preventing the incidence of clinical mistakes. Furthermore, understanding the value of reflective practice may justify providing students with a wide range of reflective tools.

CONFLICT OF INTEREST

There were no conflicts of interest.

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AUTHOR CONTRIBUTIONS

All authors' equal contributions in this study started from the proposal, data collection, analysis, final report, and manuscript development.

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