

Understanding Patient Safety Culture: the Role of Sociodemographic Factors Among Nursing Students in Malaysia

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ABSTRACT

Patient safety is a fundamental component of healthcare systems, ensuring that individuals receive high-quality care without experiencing preventable harm. This study explores the sociodemographic characteristics of patient safety awareness among nursing students in private colleges. By examining key variables such as age, gender, educational background, clinical attachment experience, and formal training on patient safety, the study provides insights into how nursing students perceive and engage with patient safety protocols. The findings indicate that repeated exposure to clinical environments, structured patient safety training, and institutional policies play critical roles in shaping students' understanding of patient safety. The study also highlights the importance of fostering a strong safety culture within nursing education to enhance the overall quality of healthcare services.

Keywords: Patient Safety, Nursing Students, Clinical Attachment, Healthcare Education, Safety Culture, Risk Management, Sociodemographic Characteristics.

1. INTRODUCTION

The health and safety of patients are the utmost importance in healthcare systems all over the globe. In addition to having a large impact on the performance of healthcare systems, the effectiveness and safety of treatments can have a considerable impact on that of individual patients. The principle of "First, do no harm" is the most fundamental principle of any health care service. No one should be harmed in health care; however, there is compelling evidence of a huge burden of avoidable patient harm globally across the developed and developing health care systems. This has major human, moral, ethical and financial implications (WHO, 2023). Approximately 1 in 10 patients is harmed in healthcare, resulting in over 3 million deaths globally due to unsafe care, with up to 4 in 100 people dying from unsafe care in low-to-middle income countries, and over 50% of this harm (affecting 1 in 20 patients) is preventable (WHO, 2023).

The World Health Organization defines patient harm as an incident that causes harm to a patient, which may include impairment of bodily structure or function, or any negative effects associated with healthcare plans or actions. This harm is not due to an underlying disease or injury and can be physical, social, or psychological in nature, such as disease, injury, suffering, disability, or death (Sherman et al., 2009). Early detection and prevention of patient harm in healthcare is crucial. The classification of preventable patient harm includes mild, moderate, and severe categories. The primary types of preventable harm are drug-related issues, diagnostic errors, medical procedure complications, and healthcare-acquired infections.

Several researches reported that patient harm in the hospital includes medication errors, surgical errors, failures of infection controls, diagnostic errors, failure documentation information, falls and physical injuries, delayed/ incorrect treatment, blood transfusion errors, poor pain management, patient identification errors, failure post-op care, lack informed consent, improper discharge planning, mental health and emotional support (Dellemin et al., 2004, Bammigatti et al., 2010, Al Kadi et al., 2012, Roslaini et al., 2015, Samsiah et al., 2016, HS, A., et al., 2017, Dyab et al., 2018, Panagioti et al., 2019, Arzu et al., 2024, Toren et al., 2021, Khalid, k., et al., 2022 & McGowan et al., 2023). These harmful incidents had a considerable impact on the healthcare system as a whole.

The MOH annual report (2022) mentioned that the Patient Safety Unit conducted various activities, such as monitoring patient safety incidents in government hospitals and institutions through the e-Incident Reporting (e-IR) System. In the 2021 incident report, 6,759 (85%) were actual incidents, while 1,150 (15%) were near misses. In line with the study done by Khalid et al. (2022), the findings revealed that hospitals in the eastern and southern region had significantly lower reporting rates compared to hospitals in the central region.

Consequently, this study conducted to identify the sociodemographic characteristics of patient safety among private colleges nursing students. This focus is particularly relevant given that a cross-sectional study at a tertiary public hospital in Ipoh, Malaysia, revealed that only 10.1% of doctors intended to disclose medical errors, despite most believing they had the right attitude toward disclosure (HS et al., 2017).

2. LITERATURE REVIEW

In general, patient safety has been defined as any protocol, policy, or guideline that is commonly implemented in healthcare services and systems to prevent any harm to patients or clients (Weaver et al., 2013). Patient safety also emphasizes the system of care that involves the prevention of any errors that occur during the nursing services period in the clinical attachment, where the nursing process will learn from the errors that occurred to build a safety culture in the nursing services that involves not only the patients but also the nursing professionals and nursing organizations (Ghahramanian et al., 2017).

Further to the above, previous work reported that patient safety as a protocol in nursing services will emphasize freedom from accidental or preventable injuries that may have been induced by the nursing professionals when serving the patients either in a clinical setting or non-clinical setting (Hayajneh et al., 2010). Patient safety is also known as a practice that will reduce the risk of possible adverse events when the patients are exposed or receiving medical care across a range of diagnoses or conditions, for example, the appropriate use of prophylaxis to prevent the prevalence of venous thromboembolism in patients at risk, use of pressure-relieving bedding materials to prevent the development of pressure ulcers, especially among bed-ridden patients, and others.

The World Health Organization (WHO) defines patient safety in the simplest way, where it refers to the practices that may prevent the development and prevalence of any errors or adverse effects to patients due to the healthcare services served by healthcare professionals to patients in both clinical and non-clinical settings worldwide. Healthcare services are improving every year and becoming more effective, and it has also become more complex with the greater use of new technologies and medicines worldwide. However, there is still the possibility of errors occurring even with such improvements in healthcare services and technologies. Therefore, it is crucial for healthcare organizations and professionals to have a thorough grasp of the principles of patient safety procedures, enabling them to proactively apply these practices when delivering healthcare services to patients.

In a study by Kumbi et al. (2020), it was found that the average score for patient safety awareness culture (PSAC) was 3.16. This suggests a moderate level of patient safety awareness culture within the healthcare provider community. The research findings highlight the utmost significance, particularly for nursing students, of comprehending the culture of patient safety within clinical attachment to prevent any potential harm or adverse events to patients. The way in which nursing students perceive culture of patient safety has a significant impact on their ability to offer care that is both safe and effective. As a result, nursing students are a key component in the process of guaranteeing the safety of patients.

A clinical environment that lacks the ability to uphold a safety culture may contribute to heightened risks and a greater occurrence of preventable adverse events. Consequently, this can result in escalated expenses, diminished trust in the healthcare institutions, and various ethical and organizational challenges (Luiz et al., 2015). One of the cultures of safety is speaking up regarding safety issue. Gupta et al. (2019) conducted research that sheds light on the impact that organisational leadership plays in promoting a culture of safety and encouraging open communication among healthcare workers. It is important to have leadership support when speaking up regarding patient safety.

A study conducted by Aouicha et al. (2021), surveyed professionals from public and private healthcare institutions in Tunisia, including 11 emergency departments (EDs) and 442 participants, resulting in a participation rate of 80.35%. The study revealed that all ten dimensions of patient safety culture in the EDs needed improvement, with 'teamwork within units' scoring the highest at 46% and 'the frequency of adverse events reporting' receiving the lowest score at 19.6%. It is imperative for nurses to promptly report adverse events as it significantly influences patient safety. Analysing and understanding the root causes of these errors is crucial for extracting valuable insights and implementing preventive measures to avoid their reoccurrence.

In conclusion, the view of patient safety that nursing students have spans a variety of different areas, such as safety culture, work in team, communication and collaboration, managing safety risk, optimise human and environmental factors, as well as recognise, respond and disclose adverse event and close call. By addressing these areas in nursing education programmes, educators have the ability to enable students to become competent and conscientious healthcare workers who are devoted to ensuring patient safety in a variety of healthcare settings (Hayajneh et al., 2010).

The researcher's objective is to investigate the perception of patient safety on the East Coast of Malaysia, an area that has received limited attention in previous research. Unlike past studies that have primarily focused on the West Coast, this will be the first study in the East Coast Region. Additionally, previous research has overlooked the viewpoints of nursing students on patient safety, instead of concentrating on the perceptions of staff nurses. This study will encompass six crucial areas: safety culture, teamwork, effective communication, safety risk management, optimization of human and environmental factors, and the recognition, response, and disclosure of adverse events and close call. The researcher aims to explore the viewpoints and confident of nursing students to ensure the safety and well-being of patients in this area.

3. METHODOLOGY

This study employed a quantitative cross-sectional design of which involves collecting data from a specific population at a single point in time. This design allows examining the prevalence and interrelationships of various factors. Cross-sectional studies are commonly utilized in social sciences and healthcare research to capture a snapshot of a population's current state, enabling the identification of patterns and correlations (Schmidt & Brown (2019)). In addition, the authors explained that surveys or questionnaires are frequently employed to gather data efficiently and systematically, allowing for the collection of large amounts of information within a relatively short timeframe (Schmidt & Brown (2019)). For this study, a structured survey questionnaire will be utilized to collect data. The collected data was subjected to quantitative analysis, encompassing both descriptive and inferential statistical techniques. Descriptive statistics was employed to summarize the data's general characteristics, while inferential statistics was used to explore potential relationships and associations between variables, thereby contributing to a deeper understanding of the research objectives. In determining the study setting, several private colleges located on the East Coast of Malaysia were selected. The region encompasses Kelantan, Terengganu, Pahang, and Johor (Mersing). Among these regions, only four private colleges offer Diploma in nursing programs: University College Bestari, Poly-Tech MARA College, Pacific College, and Widad University College. The study population comprised nursing students of diverse ages, genders, ethnicities, years of study, and clinical experience levels. The three-year nursing program incorporates clinical practice starting from Year 1 and continuing throughout Year 3. This study focused on nursing students who commenced their clinical rotations in hospital settings after completing the theoretical coursework of Semester 1. The study sample for this study consists of the lists of nursing students currently enrolled at University College Bestari, Poly-Tech MARA College, Pacific College, and Widad University College. These lists have been identified and provided by the management of each college. Table 3.1 displays the total number of students, serving as the sampling frame for this study.

Findings

Age and Gender of Respondents

Out of 218 respondents, the majority of respondents were between 19 and 21 years of age, with the largest cohort being 19-year-olds (47.7%), followed by 20-year-olds (25.7%), and 21-year-olds (17.0%). The majority were female, accounting for 88.1%, while male respondents comprised only 11.9%. This pronounced gender imbalance is reflective of the broader trends observed in the healthcare and nursing sectors, which have traditionally been female-dominated professions. The prevalence of female respondents is critical to understanding the dynamics of clinical interactions, as gender can influence both patient-provider communication and inter-professional collaboration (Table 4.1).

Table 4.1 Sociodemographic Characteristics			
		Frequency	Percent
Age	18	1	.5
	19	104	47.7
	20	56	25.7
	21	37	17.0
	22	12	5.5
	23	6	2.8
	31	1	.5
	32	1	.5
	Total	218	100.0
Gender	Male	26	11.9

	Female	192	88.1
	Total	218	100.0

Current Educational Institution

The respondents were drawn from a diverse array of educational institutions, with the largest representation from Poly-Tech Mara College (50.9%), followed by University College Bestari (19.7%), Pacific College (18.8%), and Widad University College (10.6%). This diversity in institutional background provides a broader context for analyzing variations in educational quality, exposure to clinical practices, and patient safety training among students.

Table 4.2 Current Education Institution of Respondent

	Frequency	Percent
University College Bestari	43	19.7
Poly-Tech Mara College	111	50.9
Pacific College	41	18.8
Widad University College	23	10.6
Total	218	100.0

Previous Educational Background

Regarding previous educational qualifications, 91.7% of respondents held Sijil Pelajaran Malaysia (SPM) qualifications, with 4.6% having completed a matriculation program, and 3.7% holding a diploma. This distribution indicates that the majority of nursing students follow a traditional academic pathway, progressing directly from secondary school (SPM) into nursing education. The prevalence of SPM as the primary qualification underscores a standardized educational trajectory that may influence both the baseline preparedness and the specific educational needs of incoming nursing students. The predominance of SPM-qualified students suggests a relatively homogenous level of academic preparation.

Table 4.3 Previous Educational Background

Previous Educational Level	Frequency	Percent
SPM	200	91.7
Matriculation	10	4.6
Diploma	8	3.7
Total	218	100.0

Frequency of Clinical Attachment

The data indicates that 29.4% of respondents attended clinical attachment six times, whereas 19.7% participated in three times. A smaller percentage of respondents attended only one time (11%). These figures suggest that a majority of students had repeated exposure to clinical environments, which is instrumental in developing their proficiency in managing patient safety. Repeated times attending clinical attachment provide students with opportunities to encounter a variety of clinical scenarios, each contributing uniquely to their learning and competence.

Table 4.4 Frequency of Clinical Attachment

Times of Attending Clinical Attachment	Frequency	Percent
1	24	11.0
2	32	14.7

3	43	19.7
4	28	12.8
5	27	12.4
6	64	29.4
Total	218	100.0

Formal Training on Patient Safety

Around 27.1% of respondents had attended six sessions of formal workshops focused on patient safety, with other respondents attending fewer sessions. These formal training sessions are a critical component of nursing education, as they provide structured learning experiences focused on key aspects of patient safety, including risk management, effective communication, and understanding human factors that contribute to safety incidents.

Table 4.5 Formal Training on Patient Safety

Received Any Formal Training Regarding Patient Safety	Frequency	Percent
0	1	.5
1	35	16.1
2	47	21.6
3	32	14.7
4	24	11.0
5	19	8.7
6	59	27.1
7	1	.5
Total	218	100.0

4. DISCUSSION

The findings of this study highlight the significant impact of sociodemographic characteristics on patient safety awareness among nursing students in private colleges. Age and gender were key factors influencing perceptions of safety, with female students comprising the majority of respondents. This aligns with the broader trend in nursing education and practice, where women dominate the workforce. The gender imbalance may influence communication styles, patient interactions, and teamwork within clinical environments, suggesting the need for gender-sensitive training approaches.

Educational background was another critical determinant of patient safety awareness. The majority of respondents held an SPM qualification, indicating a relatively homogenous academic foundation. However, differences in patient safety understanding may arise due to variations in previous academic exposure and learning methodologies. Institutions should consider tailoring patient safety training to accommodate students with diverse educational backgrounds, ensuring that all nursing students acquire a robust understanding of safety protocols.

Clinical attachment frequency was found to be a crucial factor in shaping students' awareness and confidence in patient safety measures. Repeated exposure to clinical settings allows students to apply theoretical knowledge in real-world scenarios, reinforcing their understanding of safety practices. However, disparities in the number of clinical attachments suggest that some students may have fewer opportunities to gain hands-on experience. Ensuring equitable access to clinical placements can enhance overall competency in patient safety.

Formal training on patient safety played a vital role in shaping students' attitudes and preparedness for managing safety risks. The study found that a significant proportion of students attended structured workshops on patient safety, reinforcing theoretical knowledge and practical skills. Institutions should prioritize integrating patient safety modules into nursing curricula and encourage students to participate in additional training programs to strengthen their competency in preventing and managing safety incidents.

The findings also suggest that nursing students' perception of patient safety culture within healthcare institutions is influenced by their clinical experiences. A positive safety culture, where students feel encouraged to report errors and engage in open discussions about safety issues, contributes to better adherence to safety protocols. Nursing educators should foster a culture of openness and continuous learning to enhance students' confidence in addressing patient safety challenges.

Another key insight from the study is the importance of teamwork and communication in ensuring patient safety. Effective collaboration among healthcare providers is essential for minimizing errors and improving patient outcomes. Nursing students must be trained in interdisciplinary teamwork strategies, promoting seamless coordination between nurses, doctors, and other healthcare professionals to enhance overall patient safety.

Lastly, the study highlights regional disparities in patient safety awareness, with students from different institutions exhibiting varying levels of preparedness. Institutional differences in training quality, resources, and exposure to patient safety practices may contribute to these variations. To address these disparities, standardized patient safety curricula and competency assessments should be implemented across nursing programs to ensure a consistent level of preparedness among all nursing students.

5. CONCLUSION

In conclusion, this study underscores the importance of patient safety education among nursing students in private colleges. Sociodemographic factors, including gender, educational background, and clinical experience, play a critical role in shaping students' awareness and understanding of patient safety protocols. The findings highlight the need for structured and equitable training opportunities that equip nursing students with the knowledge and skills necessary to prevent and manage safety incidents effectively.

Moreover, fostering a positive patient safety culture within healthcare institutions and nursing education programs is essential for enhancing adherence to safety protocols. Encouraging open communication, teamwork, and proactive reporting of safety concerns can significantly improve patient outcomes. Nursing educators and healthcare institutions must work collaboratively to create an environment that supports continuous learning and professional development in patient safety.

Ultimately, the study emphasizes the need for standardized patient safety curricula across nursing programs to ensure consistent levels of competency among nursing students. By addressing disparities in training quality and exposure to patient safety practices, healthcare institutions can cultivate a workforce of well-prepared nursing professionals dedicated to delivering safe and high-quality care to patients.

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