INFECTION PREVENTION MEASURES AND BARRIERS TO COMPLIANCE AMONG NURSING STUDENTS OF THE UNIVERSITY OF BOHOL

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ABSTRACT

Infection prevention measures encompass a range of strategies and actions to reduce the risk of acquiring or transmitting infections. Conversely, barriers to compliance refer to factors or obstacles that impede adherence to recommended infection prevention practices among nursing students. Understanding these factors is crucial for developing targeted interventions to improve infection control practices and ultimately enhance patient safety among nursing students at the University of Bohol. This quantitative correlational research study was conducted to determine the infection prevention measures practiced and the barriers to compliance among the two hundred forty-eight

randomly selected nursing students of the University of Bohol. The data were subjected to the Chi-Square Test and Spearman Rank Correlational Test, which revealed no significant relationship between the respondents' demographic profile and infection prevention measures. In contrast, results revealed a significant relationship between the respondents' demographic profile and barriers to compliance. It further revealed no significant correlation between the infection prevention measures and barriers to compliance. The findings imply the need for universal compliance, emphasizing the complexity of factors influencing healthcare practices. These findings underscore the importance of targeted interventions to enhance overall infection prevention practices among nursing students.

INTRODUCTION

An infection occurs when a microbe, such as a bacterium, fungus, or virus, enters a person's system and causes damage. The immune system can often stop these pathogens from multiplying in the body. If not, severe damage can result (CDC, 2023). Infection prevention measures are crucial to prevent the transmission of infections from one person to another, as they can cause mild to severe health problems. It affects all aspects of healthcare, including hand hygiene, injection safety, the use of personal protective equipment (PPE), and the hospital's infection control standards and decontamination procedures. Infection prevention measures are crucial for patients' safety and play a vital role in safeguarding the health and well-being of nursing students. These practices reduce the risk of infection, support better physical and psychological health, enhance confidence, and establish a solid professional foundation. Nurses are among the front-line healthcare professionals essential to ensuring patient safety by strictly adhering to infection control procedures.

Barriers to compliance in infection prevention have implications for nursing management, which puts the lives of healthcare workers at risk from infectious diseases. Compliance with infection prevention measures is essential for the safety of healthcare workers, nursing students, and patients. There are different types of barriers, including individual, environmental, and organizational. The most reported barriers were work overload, shortages of PPE, and handwashing agents (Abed Alah, Abdeen, Selim, Hamdani, Radwan, Sharaf, Al-Katheeri & Bougmiza, 2021).

According to the World Health Organization (2022), good hand hygiene practices and other cost-effective measures can prevent up to 70% of infections. In 2020 and 2021, essential health services were disrupted in 44% and 26% of countries, respectively, due to the inadequate availability of Infection Prevention and Control (IPC) supplies and the improper implementation of best practices. An estimated 50% of healthcare facilities lacked basic water supplies, 63% lacked essential sanitation services, 26% lacked hand hygiene facilities at points of care, and 60% lacked systems to manage healthcare waste

safely. The 2020 Global Water, Sanitation, and Hygiene (WASH) report provided a striking picture: 1.8 billion people were using healthcare facilities lacking essential water services, and 800 million were using facilities without toilets. The average hand hygiene compliance level was 40% up to 2009 and 41% between 2014 and 2020. According to the WHO (2022), compliance with appropriate hand hygiene guidelines averaged 40% to 50% without interventions, but it could be as low as 20%. The Philippine Statistics Authority (2020) reported that almost 94% of Filipino families have a handwashing facility, mainly a fixed unit in the dwelling unit. Most of these families have access to water, bar soap, and liquid soap for hand washing. However, according to a United Nations Children's Fund (2017) report, access to essential water services is more likely among the wealthiest households, with only 80% of the poorest quintile having access.

The researchers aimed to determine the infection prevention measures practiced by 2nd- to 4th-year nursing students at the University of Bohol and the barriers that affect their compliance during Related Learning Experiences. The results of this study will serve as a basis for future studies and as a guide for formulating action plans to mitigate barriers to compliance. Furthermore, emphasizing the importance of these measures in nursing education and ensuring their implementation during Related Learning Experiences is essential to nursing students' overall health and success as they prepare for careers in healthcare.

Related Literature. Hand hygiene, as defined by the Centers for Disease Control and Prevention, is the cleaning of one's hands to significantly reduce the number of pathogens on them. Maintaining high levels of hand hygiene compliance is considered one of the most effective measures to minimize the transmission of pathogenic organisms in healthcare settings and reduce the incidence of HAIs (de Kraker, Tartari, Tomczyk, Twyman, Francioli, Cassini, & Pittet, 2022). Mentors should be aware of their impact on students' performance, act as hand hygiene advocates, encourage students to follow established norms, and provide regular feedback to ensure student compliance throughout clinical placements (Sundal, Aune, Storvig, Aasland, Fjeldsaeter, & Torjuul, 2017).

Moreover, Personal Protective Equipment (PPE) is also an essential component of IPC. Adherence to appropriate PPE use is challenging due to inadequate education on its usage, technical difficulties, and tolerability of PPE in the workplace (Honda & Iwata, 2016). Effective use of PPE includes properly removing and disposing of contaminated PPE to prevent infection for the wearer and others. Another vital aspect of IPC that healthcare workers must follow to reduce the risk of infectious disease transmission is disinfection. Rutala & Weber (2019) described eliminating most or all disease-causing microorganisms on non-living objects as disinfection. Findings from the Krause, Dolák, & Froňková (2021) study revealed that 68.5% of nurses understood how to decontaminate work surfaces without biological material present. Based on

the study's findings, we can conclude that nurses have adequate knowledge in some areas; however, frequent training in decontaminating selected items and spaces used in nursing practice is required. Furthermore, vaccination is also essential in preventing the spread of infectious diseases.

The University of Florida College of Nursing (2009) developed a policy that states all College of Nursing students must complete immunizations before experiencing clinical exposure. In clinical settings, there is a higher risk of exposure to and transmission of infectious diseases and blood-borne pathogens. Specific procedures are required to minimize health risks to students and protect patients and healthcare providers.

Boyce, Allegranzi, and Pittet (2017) reported that several studies have found that doctors, technicians, and other healthcare personnel typically have lower hand hygiene compliance rates than nurses. This low compliance with infection prevention and control measures has negative consequences for workers, patients, and institutions, including occupational accidents, healthcare-associated infections, and institutional damage (Askarian, Honarvar, Tabatabaee & Assadian, 2004). Moreover, according to Ayat & Sami (2022), due to a loss in awareness of the dangers of communicable illnesses and a lack of compliance with infection prevention and control methods, nurses and other healthcare professionals face an increasing risk of exposure to new and re-emerging infectious diseases.

Although there are few studies examined how the attitudes and behavior impact the compliance to infection prevention measures, the environmental barriers in healthcare settings include inappropriate ward layout, lack of facilities, equipment availability (Lee, C., Lee, M., Lee, S., Park, 2018; Henderson, Willis, Roderick, Bail, Brideson, 2020), ineffective personal protective equipment, and the type of department or hospital a nurse works in (Al-Rawajfah, Hweidi, Alkhalaileh, Khader, Alshboul, 2013; Kim & Hwang, 2020). Also, issues such as a lack of isolation spaces and outdated hospital design were reported as possible barriers to adherence to infection prevention and control activities, according to Lee et al. (2018) and Henderson et al. (2020). Findings by Abdelati, Ali, Yousif, and El-Berdan (2018) revealed that emergencies, inadequate supplies and equipment, insufficient infection control measures, and a lack of periodic training courses for infection control hindered the implementation of these measures.

Barriers can be individual, environmental, or organizational. Personal obstacles to adhering to infection prevention and control (IPC) guidelines encompass factors such as an individual's capability and willingness to comply, local guidelines that may seem excessive or challenging to follow, insufficient support from management, inadequate knowledge about infections and personal protective equipment (PPE) usage, personal values that may conflict with guidelines, concerns about self or family contracting a disease, a sense of responsibility towards patients, limited access to and confidence in PPE, and a commitment to providing high-quality patient care (Houghton, Meskell,

Delaney, Smalle, Glenton, Booth, Chan, Devane & Biesty, 2020).

To address these barriers to infection prevention compliance, several strategies can be implemented. According to Bahegwa, Hussein, Kishimba, Hokororo, German, Ngowi, Eliakimu, & Ngasala (2022), healthcare workers should participate in facility and working-unit IPC meetings and on-the-job training to broaden their knowledge and improve their performance. It is crucial to educate nursing students in infection control techniques throughout their undergraduate program, beginning at the start of their clinical practice. This approach can significantly improve their competence and commitment to standard precautions (Darawad & Al-Hussami, 2013). Moreover, Ayele, Tezera, Demissie, and Woretaw (2022) stated that training and seminars can help nursing students become more aware of the standard precautionary measures and the consequences of non-compliance. The Department of Health, guided by Administrative Order No. 2016-0002, stresses the importance of educating and training healthcare workers and monitoring their adherence to the guidelines to ensure the effective implementation of the IPC programs.

Nurses spend the most time with patients, putting them at the highest risk of HAI exposure and causing cross-infection in patients (English, Langley, McGeer, Hupert, Tellier, Henry, Halperin, Johnston & Pourbohloul, 2018). Thus, nursing students are no exception (Cruz, 2019). Nursing students are at risk of acquiring and transmitting healthcare-associated infections (HAIs) due to their direct contact with patients and body fluids. They have direct contact with patients and perform diverse procedures that may involve contact with the patient's body fluids to develop their skills during clinical practice training (Souza-Borges, Ribeiro & Oliveira, 2014). A study by Sharma & Bachani (2023) reveals that medical students have limited knowledge and incorrect beliefs about standard precautions. Kim & Oh (2015) also revealed that nursing students witnessed many instances of failure to comply with established measures. In contrast, a study of Brosio, Kuhdari, Stefanati, Sulcaj, Lupi, Guidi, Bergamini, & Gabutti (2017) observed that nursing students have sufficient knowledge in this area. One factor that limits compliance is the limited in-person experiences for students, especially those who are products of online learning (King Goode, Rohde, Lucas, & Will, 2022).

Since infection prevention measures are crucial in healthcare settings, especially for nursing students who play a special role in patient care, the researchers conducted a study among nursing students of the University of Bohol focusing on infection prevention measures and barriers to compliance. The findings will highlight the importance of adhering to infection prevention measures. It is also essential to identify and address barriers to compliance with infection prevention measures among nursing students to ensure safe, high-quality healthcare. The impact of these measures on nursing students must be understood to enable necessary improvements. Additionally, overlooked demographics must receive the support they require as soon as possible.

Related Studies. Sharma & Bachani (2023), in their cross-sectional

study entitled "Knowledge, Attitude, Practice, and Perceived Barriers for the Compliance of Standard Precautions among Medical and Nursing Students in Central India," found that among the six hundred participants of their study, seventy-five percent of nursing students and fifty-one percent of medical students could not select the correct definition of standard precautions (SPs) from the given options. Sixty-five percent of medical students and eighty-two percent of nursing students were clueless about the term post-exposure prophylaxis. Results below 25% indicated a poor understanding of hazard symbols and personal protective equipment. Even though 85% of people had good theoretical knowledge of hand hygiene, only 30% practiced it. On the other hand, 64% of participants considered that using hand rub eliminated the need for handwashing, even for soiled hands. Sixteen percent of the participants also believed using Personal Protective Equipment (PPE) might offend patients. In addition, poor knowledge and high workload were other crucial barriers to compliance with SPs. In contrast, the study highlights a know-and-do gap, as participants' knowledge needed to be applied. Poor information and incorrect beliefs about SPs also deterred the application among aspiring healthcare professionals.

A study by Brosio, Kuhdari, Stefanati, Sulcaj, Lupi, Guidi, Bergamini, & Gabutti (2017), entitled "Knowledge and Behavior of the Nursing Students on the Prevention of Healthcare-Associated Infections," reports that nursing students already have a good level of preparation in the first year of the course. However, all 339 students attending all three years of the same academic year in the Standard Precaution (SP) area have sufficient knowledge. Moreover, inadequate awareness of the fundamental need to wear gloves was noted in all patients. Only the third student reached a barely acceptable score for proper Hand Hygiene (HH). Students need to learn the appropriate use of alcohol-based solutions, particularly in replacing traditional and surgical handwashing. On top of that, nursing students and medical, physiotherapy, and assistant radiology students need more knowledge about healthcare-associated infections (HAIs). The information on preventing HAI should be addressed with nursing students to broaden their understanding of HAI and their role in reducing it and boosting compliance with preventive measures.

The study, titled "Clinical Experiences as Related to Standard Precautions Compliance Among Nursing Students: A Focus Group Interview Based on The Theory of Planned Behavior," conducted by Kim & Oh (2015), aimed to investigate how nursing students adhere to standard precautions (SP) in clinical settings. The study revealed that many nursing students worked in vulnerable environments, risking exposure to pathogens. Although nursing students emphasized the importance of SP, they reported witnessing numerous instances of noncompliance with established measures. The study identified several reasons for noncompliance with standard precautions among nursing students. These themes included attitudes, subjective norms, perceived behavioral control, and intention. The study suggested that removing these

barriers could help nursing students perform their duties in a safe clinical environment.

RESEARCH METHODOLOGY

The study employed a descriptive-correlational design and a quantitative approach, which are based on two studies completed by Kim and Park in 2021, namely "Compliance with Infection Prevention and Control Practice among Prospective Graduates of Nursing School in South Korea" and Sandra Enyonam Akagbo in 2017 entitled "Knowledge of Standard Precautions and Barriers to Compliance among Healthcare Workers in the Lower Manya Krobo District, Ghana." The study was conducted in the University of Bohol's nursing department. Located in Tagbilaran City, this private, nonsectarian, coeducational institution offers primary and higher education. It is particularly well-known for its exceptional academic performance in the nursing program. The respondents of this study were nursing students at the University of Bohol officially enrolled in the second semester of S.Y. 2023-2024. Included in the study were the level II, III, and IV nursing students who were having their related learning exposure at the hospital and community settings, because this increases the application of infection prevention measures through their related learning practices —excluded from the study were level I nursing students who were not exposed to any area of the related learning experience. Using a technique called stratified random sampling with a margin of error of 5% at a 95% confidence interval, 248 out of the 693 nursing students were selected as respondents for this study.

Table 1. *Distribution of Respondents*

Respondents	Total Number of Male Students	Total Number of Female Students	Sample Size Of Male Students	Sample Size Of Female students	Percent of Distribution
Level II	69	305	25	109	54%
Level III	37	161	13	58	29%
Level IV	21	100	7	36	17%
Total	127	566	45	203	100%

Researchers used two standardized tools to assess nursing school graduates' compliance with infection prevention measures. The study used the Infection Prevention Measures questionnaire from Kim and Park's 2021 study (Cronbach's alpha = 0.72) and the Barriers to Compliance tool from Akagbo's 2017 study (Cronbach's alpha = 0.80). The questionnaire was divided into three sections: demographics, attitudes, and applications. Part 1 comprises the respondents' demographic profiles, including age, sex, year level, and section.

The researchers used a survey to gather data from the respondents.

Part 2 of the tool aims to assess respondents' attitudes and the extent to which they apply infection prevention measures during the Related Learning Experience, and it consists of a 17-item questionnaire. The instrument uses a 3-point Likert scale: 1 = Never, 2 = Sometimes, and 3 = Always.

Scale	Symbol	Description	Meaning	Interpretation
3	A	Always	I consistently practice this infection prevention measure.	Very Good Infection Preventive Measure
2	ST	Sometimes	I occasionally practice this infection prevention measure.	Good Infection Prevention Measures
1	N	Never	I never practice this infection prevention measure.	Poor Infection Prevention Measures

Part 3 of the questionnaire addresses the barriers respondents faced in applying infection prevention measures during the Related Learning Experience, comprising 11 items. This instrument uses a 4-point Likert scale: 4 = Always, 3 = Often, 2 = Sometimes, and 1 = Never.

Scale	Symbol	Description	Meaning	Interpretation
4	A	Always	I consistently encounter this compliance barrier.	High Barrier
3	O	Often	I frequently experience this barrier to compliance.	Moderate Barrier
2	S	Sometimes	I sometimes experience this barrier to compliance.	Slight barrier
1	N	Never	I do not experience this compliance barrier.	Not a Barrier

The Vice President of Academic Affairs, Dean of the College of Nursing, and research adviser approved the study before the standardized questionnaire was presented face-to-face to randomized respondents. Before conducting the survey, the researchers secured respondents' informed consent, maintained anonymity during data processing, and protected privacy rights. In addition, the respondents secured the study's approval from the Ethics Review Committee to ensure that the study's goals were not misrepresented and exaggerated. The research-related communication was conducted honestly and transparently.

Normality tests were run on the gathered data to determine the most suitable statistical analysis, in which the Spearman Rank Correlation was used to test for relationships among constant variables; the results revealed that the variables were skewed. Moreover, Chi-Square was also applied to analyze the

relationship between the variables.

Tests of Normality						
	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Age	.197	248	.000	.716	248	.000
Infection Prevention Measures Overall Mean	.157	248	.000	.789	248	.000
Barriers to Compliance Overall Mean	.076	248	.002	.963	248	.000
a. Lilliefors Significance Correction						

The different statistical treatments used frequency and percentage distributions to calculate respondents' demographics. The mean statistical treatment was used to assess respondents' infection prevention methods, including cross-infection prevention, use of protective devices, decontamination of spills and used instruments, and disposal of sharps and wastes. Barriers to compliance were assessed using the Mean statistical treatment. Spearman's Rank Correlation and Chi-Square Tests were used to determine the relationship between respondents' profiles and infection prevention measures, as well as between respondents' profiles and barriers to compliance. Finally, Spearman's Rank Correlation was applied to examine the relationship between respondents' infection prevention measures and the barriers to their compliance.

RESULTS AND DISCUSSION

Demographic Profile. Results revealed that, in terms of age, 128 respondents (51.6%) are between 20 and 24 years old, and 115 (46.4%) are between 19 and 20 years old. There are four respondents aged 25 to 29 (1.6%), and only one aged 30 or older (0.4%). Regarding sex, 203 respondents (81.9%) were female students, and 45 (18.1%) were male students. As for the year level, the data revealed that the second year had the largest number of respondents, accounting for 134 (54.0%) of the total population. Next in line was the third year with 71 (28.6%), followed by the fourth year with 43 (17.3%).

Infection Prevention Measures. The infection prevention measures were divided into four subtopics: prevention of cross-infection, use of protective devices, decontamination of spills and used instruments, and disposal of sharps and waste. Table 3 presents respondents' responses regarding the infection prevention measures practiced during the Related Learning Experience.

Data show that respondents practiced very good infection prevention

measures during the Related Learning Experience, with an overall composite mean of 2.79.

Summary of the Infection Prevention Measures. Of the four subtopics under infection prevention measures, decontamination of spills and used instruments ranked first, as nursing students consistently cleaned up blood-contaminated devices with disinfectant and decontaminated surfaces and devices after use. This finding is supported by a study by Rutala and Weber (2019), which revealed that the CSSD achieved a compliance rate of 86%, indicating strong performance. This suggests that the department has implemented an effective decontamination and sterilization program.

This is followed by the prevention of cross-infection, where nursing students demonstrated washing their hands before and after caring for patients, and immediately after removing medical gloves. Hand hygiene practices are paramount in reducing the cross-transmission of microorganisms, hospital-acquired infections, and the risk of occupational exposure to infectious diseases (Toney-Butler, Gasner, & Carver, 2023). Effective prevention of cross-infections leads to more significant healthcare experiences and outcomes.

Sharps and waste disposal ranked third, as gaps in recapping needles remain after injection. The findings relate to the study by Samadder, Saha, Chowdhury, Khatun, Mittra, and Sultana (2021), which highlights that most respondents clearly understood medical and sharp medical waste. As future healthcare workers, we must prioritize safety, and student nurses must practice proper disposal of waste and sharps; not only does this help prevent injuries and the spread of infections and diseases, but it also keeps healthcare workers, patients, and the environment safe.

Lastly, the use of protective devices ranked lowest, as students sometimes wear eye shields or goggles when splashing of bloody discharge/fluid occurs. These findings relate to the study of Prakash, Shetty, Thiagarajan, Gulia, Pandrowala, Singh, Thorat, Patil, Divatia, Puri, and Pramesh (2020), which reveals that the most common area of noncompliance was with eye protection, with 45 out of 567 respondents citing discomfort, poor visibility, and frequent fogging as the reasons. As nursing students, it is essential to adhere to these standard protocols, including wearing masks and other personal protective equipment, and to understand their purpose, as they help stop the spread of disease and keep the patient and the healthcare worker safe.

Barriers to Compliance. Respondents' responses to the question about barriers to compliance. Results revealed that respondents are sometimes impeded by barriers to compliance, which include exposure to infection that was unanticipated, compliance interferes with the ability to provide care, and patient care demands do not allow ample time to comply with standard precautions; however, wearing PPE that might cause fear in patients was the least considered barrier to their compliance. This aligns with the study by Berwick, Benison, Masters, Robinson, Tan, Martin, and Okonkwo (2021), which found that patients, especially children, most often report feeling

pleased and protected when healthcare providers wear full PPE.

Relationship between respondents' profiles and infection prevention measures. The data suggest that there are no statistically significant differences in compliance with infection prevention measures by age, sex, year level, or section. This result indicates that, regardless of age, sex, year level, or section, individuals in the study group exhibit similar levels of adherence to infection prevention protocols. Regarding the variable "Age and Infection Prevention Measures," the results of the Spearman's Rank Correlation Test indicate a result of -0.71 for the statistical test value and a p-value of 0.268, which is higher than the significance level of 0.05, indicating that there is no statistically significant relationship between age and infection prevention measures.

For the second variable, the chi-square statistic is 0.690. However, the p-value (0.708) is greater than the 0.05 significance level, indicating no statistically significant relationship between sex and adherence to infection prevention measures. Patel (2022) further emphasizes that sex differences in health-seeking behaviors and risk perceptions can influence adherence to infection prevention measures. Sociocultural factors, such as gender norms and roles, may also shape individuals' attitudes toward health-related behaviors.

For the last variable, the Chi-Square Test yields a test statistic of 6.217 and a p-value of 0.184, which is greater than the significance level of 0.05. This means the observed deviation is not statistically significant, suggesting no significant relationship between respondents' year level and their compliance with infection prevention measures. This implication was supported by Bazaid, Aldarhami, Binsaleh, Sherwani, and Althomali (2020), who found that awareness and understanding of infection prevention measures may vary among different educational levels. Higher levels of education are often associated with better health literacy, which can positively influence adherence to preventive measures. The relationship between respondents' profiles and the barriers to compliance is also examined. Table 1 revealed a significant relationship between the respondents' profiles and the barriers to compliance, as indicated by Age, Sex, Year Level, and Section. This indicates that respondents' profiles are related to the barriers to compliance they experience. This finding aligns with the study by Salwa et al. (2022), which found that HCWs became more compliant with IPC guidance as age increased. Regarding barriers to compliance among nursing students, older students face fewer barriers, whereas younger students encounter more. Salwa et al. (2022) also found that gender was substantially correlated with compliance with IPC guidelines. Female HCWs and nurses demonstrated much higher compliance with IPC guidelines than male HCWs, as women tend to pay closer attention to detail and perceive greater risk.

Table 1. *Relationship between respondents' profiles and the barriers to compliance n= 248*

Variables	Statistical Treatment Used	Statistical Test Value	P-Value	Decision	Interpretation
Age and Barriers to Compliance	Spearman's Rank Correlation Test	-.143	.024	Reject the null hypothesis	There is a significant relationship between age and barriers to compliance.
Sex and Barriers to Compliance	Chi-Square Tests	8.637	.035	Reject the null hypothesis	There is a significant relationship between sex and barriers to compliance.
Year Level and Barriers to Compliance	Chi-Square Tests	18.437	.005	Reject the null hypothesis	There is a significant relationship between year level and barriers to compliance.

Correlation between the respondents' infection prevention measures and the barriers to their compliance. Table 2 shows the correlation between the respondents' infection prevention measures and the barriers to their compliance. After subjecting the data to Spearman's rank correlation test, the obtained p-value is 0.861, which is not significant at the 0.05 level. This means no significant relationship exists between infection prevention measures and barriers to compliance. Thus, it failed to reject the null hypothesis. This finding contradicts the study by Abed Alah et al. (2021), which revealed that barriers to compliance in infection prevention have implications for nursing management, putting the lives of healthcare workers at risk from infectious diseases.

Table 2. *Correlation between the respondents' infection prevention measures and the barriers to their compliance n= 248*

Variables	Statistical Treatment Used	Statistical Test Value	P-Value	Decision	Interpretation
Infection Prevention Measures and Barriers to Compliance	Spearman's Rank Correlation Test	-.011	.861	Failed to reject the null hypothesis	There is no significant relationship between infection prevention measures and compliance barriers.

CONCLUSIONS

While the majority of respondents demonstrated very good infection prevention measures during their Related Learning Experience, such as handwashing and proper disposal of contaminated materials, there remains a gap in safe needle handling practices, and under the second subtopic of infection prevention measures, wearing eye shields or goggles when exposed to the splashing of bloody discharge or fluids ranks as the lowest infection

preventive measure used, as they cause discomfort, poor visibility, and frequent fogging when worn. Barriers to compliance, including unanticipated exposure to infection, interference with patient care duties, and time constraints, suggest opportunities to improve infection control protocols. Moreover, the lack of a significant relationship between demographic profiles and infection prevention measures suggests the need for universal compliance with protocols regardless of individual characteristics. In addition, the significant relationship between demographic profiles and barriers to compliance can be anchored to the Health Promotion Model by Nola Pender, which considers that an individual's characteristics and experiences can affect subsequent actions regarding infection prevention measures. This finding suggests the need for more targeted, equitable, and effective interventions. Finally, the absence of a significant correlation between infection prevention measures and compliance barriers underscores the complexity of the factors influencing healthcare practices and the need for comprehensive strategies to address compliance challenges beyond mere guideline provision.

RECOMMENDATIONS

The following recommendations are proposed to enhance infection prevention and barriers to compliance:

1. Nursing students must be disciplined and strictly adhere to infection prevention measures, as exposure to infection is not measurable and predictable.

2. Nursing students may join a comprehensive training program highlighting time management skills to address the perceived barrier of compliance that interferes with the ability to provide care and the perceived limited time for compliance with standard precautions.

3. Nursing students should be provided opportunities for practical simulations and hands-on experiences to reinforce understanding and competency in infection prevention measures.

4. Clinical Instructors are advised to incorporate discussions and case studies about reinforcing the significance of proper recapping of needles and offering guidance and support to students in identifying and overcoming challenges encountered during Related Learning Experiences.

5. Patients should be educated about infection prevention measures and encouraged to actively participate in efforts to minimize the risk of transmission within healthcare settings, including practicing proper hand hygiene and cough etiquette.

6. Family members should be informed about infection prevention practices and encouraged to support their loved ones in adhering to recommended protocols during healthcare interactions and hospital stays.

7. Researchers may conduct public health campaigns to educate about infection prevention using local media, social networks, and community leaders. They may collaborate with international corporations and partnerships to share best practices and resources.

8. Future researchers may conduct parallel studies to investigate further the relationship between infection prevention measures and barriers to compliance, aiming to develop evidence-based strategies for improving compliance in healthcare settings.

9. Proposed Action Plan: "A Proposed Program for the Enhancement of Nursing Students' Infection Prevention Measures and Barriers to Compliance." This proposed program aims to equip students with the necessary understanding and skills to effectively implement infection control protocols in clinical settings during Related Learning Experiences.

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