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Nurses' Compliance Towards Infection Control Practices at Sulu Sanitarium and General Hospital

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Abstract. This descriptive-correlational study assessed nurses' compliance towards infection control practices at Sulu Sanitarium and General Hospital with a sample size of 100, selected through non-probability sampling using purposive sampling. The study utilized statistical measures such as weighted mean, standard deviation, t-test for independent samples, One-way ANOVA, and Pearson's r. The findings of the study indicate that, on average, nursing personnel demonstrate compliance towards infection control practices. Additionally, variables such as gender, age, educational attainment, length of service, and appointment status were found not to significantly influence compliance towards infection control practices. Furthermore, it was observed that individuals who strongly agreed with the compliance towards infection control practices regarding awareness of knowledge and adherence to protocol were likely the same group who agreed with aspects such as training and communication, attitude and practices, and self-evaluation. These findings support the Health Belief Model (HBM), which suggests that cognitive processes influence nurses' behaviors in the context of infection control. In the framework of HBM, nurses' compliance is analyzed in terms of perceived susceptibility to infections, recognizing the risks faced in healthcare settings, and perceived severity, highlighting the consequences of non-compliance on both personal and patient health.

Keywords: Compliance; Infection control practices; Nursing personnel; Philippines.

1.0 Introduction

Healthcare-associated infections (HAIs), also referred to as nosocomial infections, are diseases that people contract while receiving medical care in a hospital or other healthcare facility. Numerous healthcare environments, such as clinics, long-term care homes, hospitals, and outpatient surgery centers, can experience these infections. HAIs may manifest during medical therapy and may be linked to operations, therapies, or exposure in a healthcare setting. HAIs are frequently diagnosed as bloodstream infections, lung infections, urinary tract infections, and surgical site infections. Pathogens such as bacteria, viruses, fungi, or others may be the cause. The use of invasive medical devices (such as ventilators or catheters), patients weakened immune systems, inadequate infection control procedures, and the existence of drug-resistant microbes are some of the factors that raise the risk of HAIs (Suleyman et al., 2018).

Ahmed et al. (2021) discussed that healthcare professionals generally comply with preventive measures to control healthcare-associated infections (HAIs) at a high rate, although additional education is needed, especially regarding hand cleanliness and personal protective equipment. Between 5 and 15% of hospitalized patients and 9–37% of patients admitted to Intensive Care Units (ICUs) are at risk for HAIs (Alhumaid et al., 2021). For instance, after receiving a needlestick injury from a patient who was infected with the source, the probability of contracting HAIs was 0.3% for HIV, 3% for hepatitis C, and 6-30% for hepatitis B (Al-Omari et al.,

2020). Meanwhile, Al Subaje (2020) stressed that 3 million of the 35 million Health Care Workers (HCWs) globally are exposed percutaneously to bloodborne pathogens (BBPs) annually, with about 2 million HCWs exposed to HBV, 0.9 million to HCV, and 0.17 million to HIV.

Regular healthcare services may also be hampered by the operational and capacity limitations imposed by hospital HAI management. In addition to its systemic effects, HAIs lower patients' and healthcare workers' quality of life. Severe infections can be lethal, emphasizing the importance of following strict infection control practices (Habboush, 2023). There is a substantial opportunity to reduce the financial strain on the healthcare system, improve patient outcomes, and enhance the general effectiveness of healthcare delivery by highlighting the preventability of HAIs through appropriate healthcare worker behavior and strict adherence to evidence-based infection control practices. Implementing stringent infection control practices, promoting hand hygiene, employing sterile techniques during medical operations, and closely monitoring the use of antimicrobial drugs are all part of the effort to prevent and control HAIs. Following infection control practices helps prevent HAIs. Measures like standard precautions (hand hygiene, wearing gloves and gowns, protecting one's eyes, cough etiquette, and safely disposing of sharp objects) and isolation precautions (contact, droplet, and airborne precautions) that prevent the risk of pathogen transmission are recommended and frequently used to prevent HAIs (Suleyman et al., 2018).

According to the World Health Organization (WHO), healthcare-associated infections (HAIs) affect millions of patients worldwide and contribute to increased morbidity, mortality, and healthcare costs (WHO, 2019). Effective infection control practices, including hand hygiene, proper use of personal protective equipment (PPE), and adherence to standard precautions, are essential in reducing the risk of HAIs.

Recent studies have emphasized the importance of nurses' compliance with infection control practices in preventing HAIs. A study by Squires et al. (2018) examined the compliance of nurses with infection prevention and control practices in acute care settings. The findings highlighted the need for ongoing education and training to enhance nurses' knowledge and understanding of infection control measures.

At a Philippine government hospital, where the researcher is currently employed as a nurse, the status of infection control practices necessitates a comprehensive review to ensure the highest standards of healthcare delivery. Though there are established infection control policies and guidelines, there may be variations in compliance among nursing staff that require further examination. Understanding the nuances of nurses' adherence to infection control protocols is essential, as it directly impacts patient outcomes and the overall standard of healthcare.

The research problem addressed in this study is the suboptimal compliance of nurses towards infection control practices. Despite the existence of guidelines and protocols, studies have shown that nurses' adherence to these practices can be inconsistent, leading to an increased risk of healthcare-associated infections (HAIs). HAIs not only pose a significant threat to patient safety but also contribute to increased healthcare costs and prolonged hospital stays.

The context of this research is the healthcare setting, specifically focusing on the role of nurses in infection control practices. Nurses are at the forefront of patient care and have direct contact with patients, making their compliance with infection control protocols crucial in preventing the transmission of infections. Understanding the factors that influence nurses' compliance and identifying potential interventions to improve adherence is vital in enhancing patient safety and reducing the incidence of HAIs.

To address the research problem, it is crucial to clarify the factors that contribute to nurses' non-compliance and understand the underlying reasons behind their behavior. By identifying these factors, interventions can be developed to enhance nurses' compliance with infection control practices. These interventions may include targeted education and training programs, improving the availability and accessibility of necessary resources, and fostering a supportive organizational culture that prioritizes infection control.

Furthermore, despite previous studies, there is still a lack of knowledge on the unique challenges that nurses encounter in various healthcare settings, particularly those with limited resources. This study fills that knowledge gap by shedding light on the specific conditions affecting nurses' compliance and emphasizing the urgent need for tailored interventions. Thus, the study aims to assess nurses' compliance with infection control practices in terms of awareness of knowledge, adherence to protocol, training and communication, attitude and practices, and self-evaluation.

2.0 Methodology

2.1 Research Design

This study employed a descriptive correlational design. A correlational study aims to determine whether variables are correlated with each other (Thakur, 2021). On the other hand, Cometa (2023) defines descriptive research as a study designed to illustrate or describe the participants of the study in a more precise way. In general, a descriptive correlational design is research that explains how variables affect each other.

2.2 Research Participants

The respondents for this study comprised nurses ranging from 23 to 50 years old and above, actively employed in a Philippine government hospital. A total of 100 participants were selected for this study within Sulu Sanitarium and General Hospital, utilizing the purposive sampling technique. This method was employed to target a specific group of individuals possessing qualities essential to the research objectives. Purposive sampling allows for the selection of participants based on specific criteria and is often used by researchers aiming for in-depth insights from cases or scenarios. This approach enabled the researcher to concentrate on nurses from diverse departments, including surgery, emergency, and general wards, ensuring a comprehensive understanding of compliance across various healthcare contexts within the specific setting of Sulu.

2.3 Research Instrument

The research study employed a questionnaire as a method of gathering data, utilizing an adapted questionnaire developed by Hammoud et al. (2021). To ensure its relevance to the current study and its local settings, the questionnaire underwent review by at least two experts from the faculty members of the graduate studies at Sulu State College – Graduate School.

2.4 Data Gathering Procedure

To initiate the data-gathering process, the researcher submitted a permission letter to the Chief of the Hospital, as well as to the respondents. Ensuring that the participants had a comprehensive understanding of their involvement, the researcher assured them that data collection would exclusively occur through a questionnaire. The study provided a detailed explanation of how the data would be used and safeguarded throughout the entire duration. Additionally, the researcher's contact information was provided to address any inquiries or additional concerns.

After obtaining consent from the Chief of the Hospital and participants in the specified area, the researchers proceeded with the study. The collected data was treated with the utmost confidentiality and used solely for educational and research purposes. Respondents remained anonymous to safeguard their worth and integrity. To gather information from the respondents, the researcher distributed the questionnaire form. The survey questions typically took 5 to 10 minutes to complete, allowing respondents ample time to answer. Guidance was provided to ensure participants fully and precisely understood the questions, and methods and instructions were read and clarified to eliminate any potential for misunderstanding in the questionnaire. Furthermore, the researcher addressed any queries that participants may have had. Respondent involvement was ensured through completing the survey and providing informed consent.

2.5 Data Analysis Procedure

The study utilized statistical tools, specifically SPSS, to analyze data generated by the survey questionnaire. Descriptive statistics, such as frequency counts and percentages, were employed to measure the demographic profile of respondents. Mean percentage scores were obtained to assess respondents' compliance with infection control practices. T-tests and Analysis of Variance (ANOVA) were used to determine significant differences in compliance based on demographic profiles. Pearson's r correlation was employed to assess the significance of

correlations between respondents' compliance and factors like awareness, adherence, training, attitude, and self-evaluation.

3.0 Results and Discussion

3.1 Demographic Profile of the Respondents

Table 1 presents the demographic profile of the nurse respondents. Among the 100 participants, 23 (23.0%) are male, and 77 (77.0%) are female. The age distribution indicates that 34 (34.0%) fall within the 30 years old and below bracket, 57 (57.0%) are aged 31-40, 8 (8.0%) are in the 41-50 range, and only 1 (1.0%) is 51 years old and above. In terms of education, 88 (88.0%) hold a BS Nursing degree, 11 (11.0%) have a master's degree, and only 1 (1.0%) has a doctorate. Regarding length of service, 45 (45.0%) have 3 years and below, 22 (22.0%) have 4-6 years, 21 (21.9%) have 7-9 years, and 12 (12.0%) have 10 years and above. In terms of employment status, 59 (59.0%) are job order, while 41 (41.0%) are permanent, indicating a higher proportion of nurses with job order status.

Table 1. Demographic profile of the respondents

	Frequency	Percentage
Gender		
Male	23	23.0%
Female	77	77.0%
Age		
30 years old & below	34	34.0%
31-40 years old	57	57.0%
41-50 years old	8	8.0%
51 years old & above	1	1.0%
Educational Attainment		
BS Nursing	88	88.0%
Master's degree	11	11.0%
Doctorate	1	1.0%
Length of Service		
3 years & below	45	45.0%
4-6 years	22	22.0%
7-9 years	21	21.0%
10 years & above	12	12.0%
Status of Appointment		
Job order	59	59.0%
Regular employees	41	41.0%

3.2 Compliance Towards Infection Control Practices

Awareness of Knowledge

Table 2. The extent of respondent's compliance towards infection control practices in terms of awareness of knowledge

	Statements	Mean	SD	Interpretation
1	I am aware of the infection control protocols at our hospital.	4.62	0.65	Strongly Agree
2	I am knowledgeable about the types of infections commonly encountered here.	4.59	0.59	Strongly Agree
3	I understand the importance of infection control in patient care.	4.79	0.43	Strongly Agree
4	I know the correct hand hygiene techniques recommended by our hospital.	4.84	0.40	Strongly Agree
5	I am familiar with the proper use of personal protective equipment (PPE).	4.84	0.39	Strongly Agree
Mean		**4.74**	**0.42**	**Strongly Agree**

Note: 4.5.0 – 5.0 (Strongly Agree), 3.50 – 4.49 (Agree), 2.50 – 3.49 (Neutral), 1.50 – 2.49 (Disagree), 1.00 – 1.49 (Strongly Disagree)

Table 2 outlines the extent of respondents' compliance towards infection control practices concerning awareness of knowledge. In this category, the respondents' assessment yields a total weighted mean score of 4.74 with a standard deviation of 0.42, indicating a rating of "Strongly Agree." This result suggests that the nurse respondents strongly believe they possess a conscious understanding and acknowledgment of infection control policies and procedures in their healthcare environment. They demonstrate knowledge gained through formal education, professional training, or experiences, reflecting a comprehensive understanding of infection control measures.

In line with these findings, Princeton et al. (2020) reported that only a few participants were familiar with PPE, emphasizing the crucial role of healthcare providers in ensuring public access to high-quality healthcare. The study underscores the importance of safeguarding healthcare professionals, including dentistry students who, as

frontline workers, need to take necessary precautions due to their susceptibility to infections while treating patients.

Adherence to Protocol

Table 3. The extent of respondent's compliance towards infection control practices in terms of adherence to protocol

	Statements	Mean	SD	Interpretation
1	I consistently follow hand hygiene protocols.	4.79	0.43	Strongly Agree
2	I use PPE when required.	4.81	0.42	Strongly Agree
3	I adhere to isolation precautions for infectious patients.	4.80	0.43	Strongly Agree
4	I dispose of hazardous materials following hospital guidelines.	4.78	0.44	Strongly Agree
5	I report potential infection control breaches promptly.	4.65	0.58	Strongly Agree
Mean		**4.77**	**0.40**	**Strongly Agree**

Table 3 illustrates the extent of respondents' compliance towards infection control practices concerning adherence to protocol. In this category, the respondents' assessment yields a total weighted mean score of 4.77 with a standard deviation of 0.40, indicating a rating of "Strongly Agree." This result suggests that nurse respondents strongly emphasize their adherence to established protocols and criteria for infection control in their daily clinical work.

Webster et al. (2020) highlight that factors influencing individuals' choices about adherence include their understanding of the illness and the isolation process, cultural customs, perceptions of the benefits and risks of quarantine, and practical issues such as running out of supplies and the financial consequences of unemployment. Variability in individuals' compliance with isolation during outbreaks underscores the importance of emphasizing cultural standards, promoting the perceived benefits of isolation for public health, and ensuring an adequate supply of essentials. Clear and prompt communication about isolation procedures is also crucial.

Training and Communication

Table 4. The extent of respondent's compliance towards infection control practices in terms of training and communication

	Statements	Mean	SD	Interpretation
1	I have received adequate training in infection control.	3.24	1.01	Neutral
2	I feel comfortable seeking clarification on infection control procedures.	3.99	0.76	Agree
3	I communicate effectively with colleagues regarding infection control.	4.21	0.62	Agree
4	I believe that ongoing education on infection control is essential.	4.67	0.59	Strongly Agree
5	I received regular updates and modifications to the infection control recommendations via efficient channel communication.	3.80	0.80	Agree
Mean		**3.98**	**0.56**	**Agree**

Table 4 depicts the extent of respondents' compliance towards infection control practices in the context of training and communication among nurses. In this category, the respondents' assessment yields a total weighted mean score of 3.98 with a standard deviation of 0.56, indicating a rating of "Agree." This result suggests that nurse respondents agree that they have undergone organized and methodical training sessions, workshops, or programs focused on infection control procedures. Additionally, they adhere to the principle of knowledge sharing through informal and formal interactions about infection control procedures in a medical setting.

In alignment with these findings, Alqahtani et al. (2020) affirm that a successful management training program can enhance healthcare quality by reducing healthcare-associated infections, improving patient experiences, and lowering medical expenses. Hand hygiene instruction, as emphasized by Schuchard et al. (2020), is crucial for better infection prevention, requiring targeted and highly applicable measures such as improved compliance with hand hygiene. McAlearney et al. (2022) highlight the strategic communication of knowledge about healthcare-associated infections (HAIs) and HAI prevention, underscoring the importance of using various strategic communication methods, including narrative, to enhance infection prevention efforts among healthcare professionals.

Attitude and Practices

Table 5. The extent of respondent's compliance towards infection control practices in terms of attitude and practices

	Statements	Mean	SD	Interpretation
1	I believe infection control practices enhance patient safety.	4.83	0.40	Strongly Agree
2	I actively participate in infection control audits.	3.58	1.22	Agree
3	I feel supported by hospital management in my infection control efforts.	4.06	0.66	Agree
4	I take responsibility for maintaining a clean and hygienic workspace.	4.59	0.55	Strongly Agree
5	I am proactive in identifying infection risks in the hospital.	4.42	0.65	Agree
Mean		**4.30**	**0.47**	**Agree**

Table 5 illustrates the extent of respondents' compliance towards infection control practices concerning attitudes and practices among nurses. In this category, the respondents' assessment yields a total weighted mean score of 4.30 with a standard deviation of 0.47, indicating a rating of "Agree." This result suggests that nurse respondents agree that they hold personal opinions, judgments, and feelings regarding infection control procedures used in their medical environment, indicating strong opinions, inclinations, and feelings about following infection control protocols.

This finding aligns with the results of AlJohani et al. (2021), who reported that staff attitudes were above average, and there was a high degree of awareness regarding security measures and adherence to surgical security procedures. Positive attitudes were found to be associated with greater conformity to needle safety precautions. Additionally, Huang et al. (2023) noted positive attitudes, unfavorable procedures, and uneven understanding regarding the prevention and management of urinary tract infections related to catheter use among healthcare personnel. Overcoming obstacles such as heavy workloads and understaffing, improving collaboration, and training, and utilizing information technological advances were identified as potential moderators to enhance healthcare workers' understanding and practices in infection prevention.

Self-evaluation

Table 6. The extent of respondent's compliance towards infection control practices in terms of self-evaluation

	Statements	Mean	SD	Interpretation
1	I believe my knowledge of infection control is up to date.	3.54	1.10	Agree
2	I am confident in my ability to prevent infections in the hospital.	4.34	0.62	Agree
3	I promptly address any breaches in infection control.	4.29	0.69	Agree
4	I believe infection control measures contribute to better patient outcomes	4.70	0.56	Strongly Agree
5	I believe in overall commitment to infection control practices.	4.67	0.57	Strongly Agree
Mean		**4.31**	**0.52**	**Agree**

Table 6 outlines the extent of respondents' compliance towards infection control practices concerning self-evaluation among nurses. In this category, the respondents' assessment yields a total weighted mean score of 4.31 with a standard deviation of 0.52, indicating a rating of "Agree." This result suggests that nurse respondents agree that they actively evaluate their performance and compliance with infection control guidelines in the medical environment.

These findings align with the assertion of Satria et al. (2022) that self-evaluation capacity (e-SPAR) serves as a valuable tool for nations to track their progress in meeting the core capacity requirements of the International Health Regulation (IHR), particularly in controlling infectious diseases to be prepared for potential epidemics. Furthermore, Wałaszek et al. (2018) highlighted that most of the Infection Control Nurse expert job description is dedicated to infection monitoring, emphasizing the importance of internal oversight in their role. Clarity in defining the professional duties and rights of Infection Control Nurses is crucial for them to effectively carry out their functions as nurses and midwives.

3.3 Difference in the Respondent's Compliance Towards Infection Control Practices When Grouped According to Demographic Profile

By Gender

Table 7. Differences in the respondent's compliance towards infection control practices in terms of gender

Sources of Variation		Mean	SD	Mean Difference	t	p-value	Interpretation
Awareness of Knowledge	Male	4.71	0.51	-0.02981	-0.300	0.765	Not Significant
	Female	4.74	0.39				
Adherence to Protocol	Male	4.68	0.50	-0.11395	-1.189	0.237	Not Significant
	Female	4.79	0.37				
Training and Communication	Male	4.20	0.49	0.28312*	2.158	0.033	Significant
	Female	3.92	0.57				
Attitude and Practices	Male	4.46	0.50	0.21412	1.925	0.057	Not Significant
	Female	4.25	0.46				
Self-Evaluation	Male	4.43	0.51	0.16465	1.351	0.180	Not Significant
	Female	4.27	0.51				

*Significant at alpha 0.05

Table 7 outlines the differences in respondents' compliance towards infection control practices when data are grouped according to demographic profile, specifically gender. The table indicates that, except for "Training and Communication," the mean differences in the categories under respondents' compliance towards infection control practices are not significant at the alpha level of 0.05. This implies that male and female nurse respondents do not differ significantly in their perceptions of compliance towards infection control practices.

These findings are in line with the affirmation of Desta et al. (2018), who noted that the prevention of infections, understanding, and implementation were correlated with sociodemographic characteristics and hospital characteristics. To enhance infection control practices, healthcare facilities and relevant parties should ensure the availability of policies, provide proper training for healthcare professionals, elevate educational standards for experts, implement preventive standards, and offer ongoing mentoring.

By Age

Table 8. Differences in the respondent's compliance towards infection control practices in terms of age

Sources of Variation		Sum of Squares	Df	Mean Square	F	p-value	Interpretation
Awareness of knowledge	Between Groups	0.865	3	0.288	1.696	0.173	Not Significant
	Within Groups	16.325	96	0.170			
	Total	17.190	99				
Adherence to protocol	Between Groups	0.670	3	0.223	1.385	0.252	Not Significant
	Within Groups	15.494	96	0.161			
	Total	16.164	99				
Training and communication	Between Groups	1.158	3	0.386	1.229	0.303	Not Significant
	Within Groups	30.130	96	0.314			
	Total	31.288	99				
Attitude and practices	Between Groups	0.749	3	0.250	1.114	0.348	Not Significant
	Within Groups	21.529	96	0.224			
	Total	22.278	99				
Self-evaluation	Between Groups	0.140	3	0.047	.172	0.915	Not Significant
	Within Groups	26.133	96	0.272			
	Total	26.274	99				

*Significant at alpha 0.05

Table 8 presents the differences in respondents' compliance towards infection control practices when data are grouped according to demographic profile, specifically age. The table indicates that the values of F-ratios and P-

values for all sub-categories under compliance towards infection control practices are not significant at the alpha level of 0.05. This suggests that, despite variations in age among nurse respondents, they do not differ in their perceptions of compliance towards infection control practices. In other words, age, whether younger or older (51 years and above), does not necessarily influence a nurse's perspective on compliance towards infection control practices compared to those in other age brackets.

These findings resonate with the research of Carlucci et al. (2020), which identified substantial variations in the propensity of various demographic categories to follow isolation orders. The study revealed that factors such as gender, education level, geographical location, middle age, and healthcare profession did influence adherence to isolation recommendations. Understanding these demographic trends can aid health policymakers in targeting specific groups for infection prevention and medical education, guiding communication strategies to mitigate the impact of illness, and facilitating effective dissemination of information.

By Educational Attainment

Table 9. Differences in the respondent's compliance towards infection control practices in terms of educational attainment

Sources of Variation		Sum of Squares	df	Mean Square	F	p-value	Interpretation
Awareness of knowledge	Between Groups	0.202	2	0.101	0.576	0.564	Not Significant
	Within Groups	16.989	97	0.175			
	Total	17.190	99				
Adherence to protocol	Between Groups	0.059	2	0.030	0.179	0.836	Not Significant
	Within Groups	16.105	97	0.166			
	Total	16.164	99				
Training and communication	Between Groups	0.388	2	0.194	0.608	0.546	Not Significant
	Within Groups	30.900	97	0.319			
	Total	31.288	99				
Attitude and practices	Between Groups	0.501	2	0.250	1.115	0.332	Not Significant
	Within Groups	21.778	97	0.225			
	Total	22.278	99				
Self-evaluation	Between Groups	0.009	2	0.004	0.016	0.984	Not Significant
	Within Groups	26.265	97	0.271			
	Total	26.274	99				

*Significant alpha .05

Table 9 outlines the differences in respondents' compliance towards infection control practices when data are grouped according to demographic profile, specifically educational attainment. The table indicates that the values of F-ratios and P-values for all sub-categories under compliance towards infection control practices are insignificant at the alpha level of 0.05. This implies that, despite variations in educational attainment among nurse respondents, they do not differ in their perceptions of compliance towards infection control practices. In other words, holding a doctorate may not necessarily give a nurse a more advantageous perspective on compliance towards infection control practices compared to those with a BS Nursing or master's degree, and vice versa.

These findings are consistent with the evaluation by Bekele et al. (2018), who identified certain shortcomings in nurses' adherence to infection control procedures despite their knowledge of the fundamentals of infection prevention. Factors such as lack of expertise, carelessness, and inadequate resources contributed to suboptimal adherence to preventative procedures.

By Length of Service

Table 10 delineates the differences in respondents' compliance towards infection control practices when data are grouped according to demographic profile, specifically in terms of length of service. The table indicates that the values of F-ratios and P-values for all sub-categories under compliance towards infection control practices are insignificant at the alpha level of 0.05. This implies that, despite variations in the length of service among nurse respondents, they do not differ in their perceptions of compliance towards infection control practices. In other

words, having 10 years of work experience may not necessarily provide a nurse with a more advantageous perspective on compliance towards infection control practices compared to those with fewer years of service (3 years & below, 4-6 years, and 7-9 years), and vice versa.

Table 10. Differences in the respondent's compliance towards infection control practices in terms of length of service

Sources of Variation		Sum of Squares	df	Mean Square	F	p-value	Interpretation
Awareness of knowledge	Between Groups	0.885	3	0.295	1.736	0.165	Not Significant
	Within Groups	16.306	96	0.170			
	Total	17.190	99				
Adherence to protocol	Between Groups	0.359	3	0.120	0.727	0.538	Not Significant
	Within Groups	15.805	96	0.165			
	Total	16.164	99				
Training and communication	Between Groups	0.909	3	0.303	0.957	0.416	Not Significant
	Within Groups	30.379	96	0.316			
	Total	31.288	99				
Attitude and practices	Between Groups	0.075	3	0.025	0.107	0.956	Not Significant
	Within Groups	22.204	96	0.231			
	Total	22.278	99				
Self-evaluation	Between Groups	0.199	3	0.066	0.245	0.865	Not Significant
	Within Groups	26.074	96	0.272			
	Total	26.274	99				

*Significant alpha .05

This finding aligns with the emphasis by Singh et al. (2023) on the importance of ongoing training for healthcare workers to retain an understanding of hospital infection management procedures and healthcare-associated infection (HAI) prevention. Annual training and educational components contribute to the continuous improvement of healthcare workers' knowledge and practices in infection control.

By Status of Appointment

Table 11 illustrates the differences in respondents' compliance towards infection control practices when data are grouped according to demographic profile, specifically in terms of the status of appointment. The table indicates that the values of mean differences for all categories under respondents' compliance towards infection control practices are not significant at the alpha level of 0.05. This implies that job orders and regular employees among nurse respondents do not differ significantly in their perceptions of compliance towards infection control practices. In other words, nurses with regular work status may not necessarily have a more advantageous perspective on compliance towards infection control practices compared to those with job order status, and vice versa.

Table 11. Differences in the respondent's compliance towards infection control practices in terms of the status of appointment

Source of Variation		Mean	SD	Mean Difference	t	p-value	Interpretation
Awareness of knowledge	Job order	4.77	0.43	0.08995	1.062	0.291	Not Significant
	Regular	4.68	0.40				
Adherence to protocol	Job order	4.81	0.39	0.09946	1.214	0.228	Not Significant
	Regular	4.71	0.42				
Training and communication	Job order	4.04	0.54	0.14312	1.256	0.212	Not Significant
	Regular	3.90	0.59				
Attitude and practices	Job order	4.34	0.45	0.11310	1.175	0.243	Not Significant
	Regular	4.23	0.51				
Self-evaluation	Job order	4.37	0.54	0.14998	1.440	0.153	Not Significant
	Regular	4.22	0.46				

*Significant at alpha 0.05

This finding is in line with the assessment by Thazha et al. (2022), who found high levels of understanding, favorable views, and sound infection control practices among healthcare professionals. The study highlighted various factors, including age, education, and nursing background, linked to more optimistic outlooks and better infection control practices. Similarly, Barratt and Gilbert (2021) emphasized the need for national standards and programs for personal protective equipment (PPE) use, which could contribute to improved performance and awareness of infection control practices on a broader scale.

3.4 Correlation Among the Subcategories Subsumed Under Compliance Towards Infection Control Practice

Table 12. Correlation among the sub-categories subsumed under the compliance towards infection control practice

Variables		Pearson r	p-value	N	Interpretation
Dependent	Independent				
Awareness of knowledge	Adherence to protocol	0.844**	.000	100	Very High
	Training and communication	0.364**	.000	100	Moderate
	Attitude and practices	0.438**	.000	100	Moderate
	Self-evaluation	0.416**	.000	100	Moderate

*The Correlation Coefficient is significant at alpha .05
Correlation Coefficient Scales Adopted from Hopkins, Will (2002):
0.0-0.1=Nearly Zero; 0.1-0.30=Low; .3-0.5 0=Moderate; .5-0.7-0=High; .7-0.9= Very High; 0.9-1=Nearly Perfect

Table 4 depicts the correlation among the sub-categories within the compliance towards infection control practices. The computed Pearson Correlation Coefficients (Pearson r) between these variables are found to be significant at the alpha level of 0.05. These results indicate that nurses who perceive strong compliance towards infection control practices in terms of Awareness of Knowledge and Adherence to Protocol are likely the same group of nurses who perceive compliance as Agreeing in terms of Training and Communication, Attitude and Practices, and Self-Evaluation. In general, the extent of sub-categories under the compliance towards infection control practices—Awareness of Knowledge, Adherence to Protocol, Training and Communication, Attitude and Practices, and Self-Evaluation—is moderately correlated.

4.0 Conclusion

The following are the conclusions drawn from the findings of this study:

- Nurses involved in this study are adequately represented in terms of gender, age, educational attainment, length of service, and appointment status.
- On average, nurses are compliant with infection control practices.
- Generally, variables such as gender, age, educational attainment, length of service, and appointment status do not mediate how nurses assess compliance with infection control practices among their peers.
- Generally, nurses who perceive strong compliance with infection control practices in terms of awareness, knowledge, and adherence to protocols are likely the same group of nurses who perceive agreement in compliance regarding training and communication, attitude and practices, and self-evaluation, respectively.
- This study appears to support Edward C. Green and Elaine Murphy's (2020) Health Belief Model (HBM), which elucidates those cognitive processes that influence nurses' behaviors in the context of infection control. In the HBM, nurses' compliance is examined through the lenses of perceived susceptibility to infections, acknowledging the risks they face in healthcare settings, and perceived severity, emphasizing the consequences of non-compliance on both personal and patient health.
- The results show that although most nurses follow established infection control procedures, there are still certain areas that need to be improved. Individual knowledge and attitudes as well as structural problems like resource availability and workload impact are among the factors that affect compliance.
- The study emphasizes the significance of continuing education and training for nurses in infection control procedures. It also emphasizes the necessity for hospital administration to provide enough resources and supportive work conditions that promote compliance.
- The importance of nurses in preventing hospital-acquired illnesses is highlighted by these findings, which also add to our understanding of infection control in healthcare settings. They also recommend areas for more study, like examining how particular treatments affect improving compliance rates.

- While the study is context-specific, the findings could potentially be transferred to other healthcare settings, benefiting a larger population. The fight against hospital-acquired infections is a collaborative effort, and this study reinforces the critical role that nurses play in this attempt.

Based on the above findings and conclusions, the following recommendations are forwarded in this study:

- Male and female nurses should be provided with equal opportunities to exercise their nursing knowledge and skills, as this study indicates that nurses, regardless of gender, have the same level of perceptions regarding compliance towards infection control practices.
- Nurses' demographic profiles, including gender, age, educational attainment, length of service, and appointment status, should not hinder their practices towards infection control in the hospital.
- Nurses should receive additional training on compliance with infection control practices. Continuous Education and Training: It is recommended that infection control practitioners receive regular and up-to-date training sessions. This ensures that all nurses have up-to-date knowledge and abilities for preventing hospital-acquired infections.
- Adequate Resources: The hospital management should guarantee that there are enough resources available for infection control, such as personal protective equipment and sanitizing materials.
- Supportive Work Environment: Efforts should be made to reduce nursing workload and stress levels, as these might affect compliance. A supportive work environment that prioritizes employee health and well-being will have an indirect positive impact on patient care.
- Frequent Audits: To spot non-compliance and take immediate action, regular audits of infection control procedures should be carried out.
- Feedback Mechanism: A system for nurses to submit feedback on infection control procedures should be implemented. This could assist discover practical compliance issues and viable solutions.
- Researchers in the field of healthcare and nursing are encouraged to conduct studies parallel to this one, but with the inclusion of other individual variables such as nurses' work environment, leadership styles, communication proficiency, work engagement, and work anxiety in different settings. To better understand the long-term patterns in compliance and investigate the effects of particular interventions on raising compliance rates, more study is advised.

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7.0 Conflict of Interests

The author declares no conflicts of interest

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9.0 References

Ahmed, N. J., Haseeb, A., Elazab, E. M., Kheir, H. M., Hassali, A. A., & Khan, A. H. (2021). Incidence of Healthcare-Associated Infections (HAIs) and the adherence to the HAIs' prevention strategies in a military hospital in Alkharj. Saudi Pharmaceutical Journal, 29(10), 1112-1119.

Al-Omari, A., Al Mutair, A., Alhumaid, S., Salih, S., Alanazi, A., Albarsan, H., & Al Subaie, M. (2020). The impact of antimicrobial stewardship program implementation at four tertiary private hospitals: results of a five-years pre-post analysis. Antimicrobial Resistance & Infection Control, 9(1), 1-9.

Alhumaid, S., Al Mutair, A., Al Alawi, Z., Alsuliman, M., Ahmed, G. Y., Rabaan, A. A. & Al-Omari, A. (2021). Knowledge of infection prevention and control among healthcare workers and factors influencing compliance: a systematic review. Antimicrobial Resistance & Infection Control, 10(1), 1-32.

Habboush, Y., Yarrarapu, S. N. S., & Guzman, N. (2024). Infection control. In StatPearls. StatPearls Publishing. http://www.ncbi.nlm.nih.gov/books/NBK519017/

Suleyman, G., Alangaden, G., & Bardossy, A. C. (2018). The role of environmental contamination in the transmission of nosocomial pathogens and healthcare-associated infections. Current infectious disease reports, 20, 1-11.

Alhumaid, S., Al Mutair, A., Al Alawi, Z., Alsuliman, M., Ahmed, G. Y., Rabaan, A. A., ... & Al-Omari, A. (2021). Knowledge of infection prevention and control among healthcare workers and factors influencing compliance: a systematic review. Antimicrobial Resistance & Infection Control, 10(1), 1-32.

AlJohani, A., Karuppiah, K., Al Mutairi, A., & Al Mutair, A. (2021). Narrative Review of Infection Control Knowledge and Attitude among Healthcare Workers. Journal of epidemiology and global health, 11(1), 20–25. https://doi.org/10.2991/jegh.k.201101.001

Alqahtani, A. N., Almaghrabi, R. H., Albaadani, M. M., & Almossa, K. (2020). Impact of infection control training program in improving the quality of healthcare. European Journal of Medical and Health Sciences, 2(5).

Barratt, R., & Gilbert, G. L. (2021). Education and training in infection prevention and control: Exploring support for national standards. Infection, disease & health, 26(2), 139–144. https://doi.org/10.1016/j.idh.2020.12.002

Bekele, I., Yimam, I., & Akele, G. J. I. R. (2018). Adherence to Infection prevention and factors among nurses in jimma university medical center. Immunome Res, 14(2), 1-7.

Carlucci, L., D'ambrosio, I., & Balsamo, M. (2020). Demographic and attitudinal factors of adherence to quarantine guidelines during COVID-19: the Italian model. Frontiers in psychology, 11, 559288.

Desta, M., Ayenew, T., Sitotaw, N., Tegegne, N., Dires, M., & Getie, M. (2018). Knowledge, practice and associated factors of infection prevention among healthcare workers in Debre Markos referral hospital, Northwest Ethiopia. BMC health services research, 18(1), 1-10.

Elkholy, A. A., Grant, R., Assiri, A., Elhakim, M., Malik, M. R., & Van Kerkhove, M. D. (2020). MERS-CoV infection among healthcare workers and risk factors for death: retrospective analysis of all laboratory-confirmed cases reported to WHO from 2012 to 2 June 2018. Journal of infection and public health, 13(3), 418-422.

Huang, A., Hong, W., Zhao, B., Lin, J., Xi, R., & Wang, Y. (2023). Knowledge, attitudes and practices concerning catheter-associated urinary tract infection amongst healthcare workers: a mixed methods systematic review. Nursing open, 10(3), 1281–1304. https://doi.org/10.1002/nop2.1384

McAlearney, A. S., MacEwan, S. R., Gregory, M. E., Sova, L. N., Hebert, C., & Gaughan, A. A. (2022). Identifying management practices for promoting infection prevention: Perspectives on strategic communication. American journal of infection control, 50(6), 593–597. https://doi.org/10.1016/j.ajic.2021.11.025

Princeton, B., Santhakumar, P., & Prathap, L. (2020). Awareness on preventive measures taken by health care professionals attending COVID-19 patients among dental students. European journal of dentistry, 14, S105-S109.

Satria, F. B., Tsai, F. J., & Turbat, B. (2022). Analyzing self-evaluation capacity scores related to infectious disease control in International Health Regulations during the first year of COVID-19 pandemic. Scientific Reports, 12(1), 15025.

Singh, S., Kaur, K., Saini, R. S., Singh, S., Aggarwal, H. K., & Chandra, H. (2023). Impact of structured training program about Hospital Infection Control practices on Knowledge and Perception of nursing students at public and private nursing teaching institute of Northern India- An interventional study. Journal of education and health promotion, 12, 168. https://doi.org/10.4103/jehp.jehp_1471_22

Thazha, S. K., Cruz, J. P., Alquwez, N., Scaria, B., Rengan, S. S., & Almazan, J. U. (2022). Infection prevention and control awareness, attitudes, and practices among healthcare professionals in South India. Journal of infection in developing countries, 16(4), 659–667. https://doi.org/10.3855/jidc.14746

Wałaszek, M., Różańska, A., Szczypta, A., Bulanda, M., & Wójkowska-Mach, J. (2018). Polish infection control nurses - Self-assessment of their duties and professional autonomy in different types of hospitals. Polish infection control nurses – Self-assessment of their duties and professional autonomy in different types of hospitals. Medycyna pracy, 69(6), 605–612. https://doi.org/10.13075/mp.5893.00719

Webster, R. K., Brooks, S. K., Smith, L. E., Woodland, L., Wessely, S., & Rubin, G. J. (2020). How to improve adherence with quarantine: rapid review of the evidence. Public health, 182, 163-169.

Squires, J. E., Linklater, S., Grimshaw, J. M., Graham, I. D., Sullivan, K., Bruce, N., ... & Brehaut, J. C. (2018). Understanding practice: factors that influence physician hand hygiene compliance. *Infection Control & Hospital Epidemiology*, 39(02), 144-151.

World Health Organization. (2019). Health care-associated infections fact sheet. Retrieved from https://doi.www.who.int/gpsc/country_work/gpsc_ccisc_fact_sheet_en.pdf