

PERI-OPERATIVE INFECTION CONTROL PRACTICES OF OPERATING ROOM NURSES AMONG HOSPITALS IN RINCONADA

ABSTRACT

Surgical site infections (SSIs) represent a significant healthcare concern, contributing to increased morbidity, mortality, and costs. This study examined perioperative infection control practices among operating room nurses in Rinconada hospitals, analyzing the relationship between demographic profiles and infection prevention practices across all surgical phases.

A descriptive research design was employed using a structured questionnaire administered to 53 operating room staff nurses through total enumeration. Data were analyzed using percentage technique, weighted mean, and chi-square test to determine associations between demographic variables (age, sex, task performed, length of service, and training) and infection control practices during pre-operative, intraoperative, and post-operative phases.

The respondents were predominantly female (81.13%), aged 18-24 years (28.30%), with 1-5 years of service (47.17%). Most performed ward nurse duties (48.78%) and possessed basic life support training (47.17%). All perioperative phases demonstrated high adherence to infection control practices: pre-operative (weighted mean=4.19), intraoperative (weighted mean=4.14), and post-operative (weighted mean=4.18). Chi-square analysis revealed significant relationships ($p < 0.05$) between infection control practices and age ($\chi^2 = 38.50$), task performed ($\chi^2 = 25.86$), length of service ($\chi^2 = 36.02$), and training attended ($\chi^2 = 50.63$). Sex showed no significant relationship ($\chi^2 = 7.28$, $p > 0.05$).

Operating room nurses in Rinconada hospitals demonstrate consistently high adherence to infection control practices across all perioperative phases. Age, task assignment, service duration, and training significantly influence infection control implementation, while sex does not. These findings underscore the importance of targeted, experience-based training programs and standardized protocols. A comprehensive Peri-Operative Management Guide is recommended to maintain best practices, enhance staff competency through tailored education, and establish systematic monitoring systems to further reduce SSI rates and improve patient outcomes.

Keyword: *peri-operative, infection control, practices, operating nurses*

Introduction

Infection is the most dangerous variable in any operation or surgical procedure in the Operating Room. More people die from the complications and infections that result from surgery than from the surgery itself. Despite the advances in modern medicine, infection is a specter that hangs over every patient and surgeon's head when a procedure begins. Microbial agents are spread in different ways in a healthcare setup. The agents that can spread are contact, droplets, airborne transmission, vehicle-borne transmission, and vector-borne transmission of infectious agents, which can occur

47 either between people or in the hospital's environment, or within the patient
48 himself. Surgical site infections are a result of microbial invasion in a sterile atmosphere.

49 Moreover, Infections can lead to serious medical complications, including sepsis,
50 organ dysfunction and failure, long-term disability, or even death. Infections can also
51 increase the cost of care and treatment, impede patients' recovery, and reduce their
52 quality of life. Infections can spread to other patients, healthcare workers, and visitors
53 through various routes. Given the severe consequences of infection, taking preventative
54 measures is essential to keep patients and healthcare personnel safe in and out of the
55 operating room.¹ Healthcare-associated infections are one of the most serious risks to
56 patients' health and tend to be a significant concern for healthcare practitioners around
57 the world. Surgical site infection is one of the most commonly reported infections in
58 hospitals. It is currently a major cause of illness and mortality worldwide. Preventing
59 infections is the key factor in improving care and ensuring the safety of both the patient
60 and the healthcare worker. Surgical safety is of utmost importance to prevent major and
61 life-threatening complications leading to undue loss of life and patient morbidity. The
62 operating room is a facility within a hospital where surgical procedures are carried out in
63 an aseptic environment. A highly sterile, aseptic, and restricted area in a hospital
64 setting,

65 The World Health Organization has taken a leading role in eliminating
66 healthcare-associated harms and has compiled guidelines to address factors that
67 contribute to surgical site infections *in preoperative, intraoperative,*
68 *and postoperative care.* Preparation of the surgical team nurses have an essential role
69 in *Pre-operative*, ensuring that the patient is prepared mentally and physically for
70 surgery, *Intraoperative*, a sterile technique to decrease the chance of cross-infection by
71 ensuring safety and comfort during surgical procedures and *Post-operative*, patients
72 receive care immediately after surgery which the nurse's role is to monitor patients
73 recovery by controlling pain, watching for infection and assessing for post-operative
74 complications that may arise. The care will last for the
75 duration of the patient's hospital stay and may continue at the patient's home.

76 Furthermore, maintaining a clean operating environment is essential because
77 many intraoperative risk factors contribute to the development of Surgical Site Infection.
78 Very little has changed over the years regarding the surgical rituals of scrubbing,
79 gowning, and gloving, perhaps because of a lack of scientific data or ethical
80 considerations.

81 In the Philippines, surgical site infection (SSI) prevention and management
82 strategies have never been standardized over the years. Several international foreign
83 bodies' published guidelines are either contradictory or unsuitable for local adaptation.
84 The 1987 Constitution, Article II,³ Section 15 declares that "The State shall protect and
85 promote the right to health of the people and instill health consciousness among them."
86 In addition, Section 12 also states that "establish and maintain an effective food and
87 drug regulatory system and undertake appropriate health, manpower development, and
88 research, responsive to the country's health needs and problems."

89 In addition, the Department of Health (DOH) is tasked to become the technical
90 authority on health in its entirety. The primary responsibility of the Department of Health
91 is to provide national policy direction and to develop national health plans, technical
92 standards, and guidelines. It also provides specialized or tertiary health care services as

well as technical assistance to other health providers, particularly Local Government Units (LGU). Promotion of the health and well-being of every Filipino, in collaboration with other health providers and stakeholders; prevention and control of disease among at-risk populations; Protection of individuals, families, and communities exposed to health hazards and risks; and Treatment, management, and rehabilitation of those afflicted with disease and disability.⁴

As focused on the prevention and control of disease among at-risk populations, the Philippine College of Surgeons, in collaboration with the Philippine Hospital Infection Control Society, Philippine Hospital Infection Control Nurses Association, and Operating Room Nurses Association of the Philippines, Inc., published the country's first guidelines on the prevention and management of surgical site infections in 2017. As a result of their specificity to the Philippine healthcare system's situation and experience, it is anticipated that these recommendations will provide surgeons and other healthcare professionals with improved guidance. While there are still aspects of care with divergent recommendations (such as systemic immunosuppressive therapy), the majority of concordant and discordant recommendations have been reconciled through the expert panel's deliberation and consensus. Consequently, it is anticipated that these guidelines will increase the quality of care provided by health facilities and reduce the prevalence and incidence of SSI in the country.

To ensure the utmost safety of employees, particularly operating room nurses in Rinconada, it is vital to conduct a study on infection control practices to prevent surgical site infections in operating rooms. In this view, the researcher's primary goal is to identify and formulate strategies that can be proposed especially those who are mostly in operating rooms to prevent surgical site infections and suggest practices to alleviate the chances of acquiring such infections. The researcher's main aim is to to reduce the risk of surgical site infections, by formulating a systematic approach to be adopted by staff nurses based on proper knowledge regarding the status of the patient, type, & time of the operation, personnel involved, and the health care facilities available during a surgical procedure.

Methodology

The study mainly focused on determining the perioperative infection control practices of operating room nurses among hospitals in Rinconada. A quantitative descriptive research design was used in the study.

Descriptive research is a way of conducting research or examining data that focuses on describing and summarizing numerical data. The main goal of this method is to give a complete and exact picture of the features of a phenomenon or sample by collecting and analyzing quantitative data this way, like counts or measurements.

The principal research instrument used by the researcher was the surveyquestionnaire which gave the perception of the respondents on determining the the peri-operative infection control practices of operating room nurses among hospitals in Rinconada.

Respondents

The respondents of the study were OR nurses with at least one year of clinical experience from five hospitals in Rinconada namely the following: Sta.

Table 1. Respondents of the Study

| Hospitals in Rinconada | Number of Respondents |
|---|-----------------------|
| Sta. Maria Josefa Hospital Foundation, Inc. | 15 |
| Villanueva—Tanvhuling Medical Hospital | 13 |
| Our Lady of Mediatrix Hospital | 10 |
| Medical Mission Group Hospital | 10 |
| CHMSC Lourdes Hospital | 5 |
| Total | 53 |

Maria Foundation Hospital, Villanueva-Tancguling Medical Hospital, Our Lady of Mediatrix Hospital, Medical Mission Group, and CHMSC Lourdes Hospital were contacted and were included in this study.

To gather the data, the researchers used a questionnaire checklist, in which respondents submitted their answers. Structured interviews and observation were used in this study. Operating room nurses answered the questionnaires.

The questionnaire was the main instrument used to determine the relevant data and information prepared by the researchers. It is a systematic compilation of questions that are submitted to a sample drawn from the population from which information is desired.

Results and Discussion

Profile of the Respondents

Table 2 shows the respondents' profile by age, sex, task performed, length of service, and training and seminars.

Age. Of the 53 respondents, 15, or 28.30 percent, were 18-24 years old, followed by 25-29 years old with 11, or 20.75 percent, 35-39 years old with 10, or 18.87 percent, and 30-34 years old with 9, or 16.98 percent. Four or 7.55 percent of the respondents were 40-45 years old, three or 5.66 percent were 46-50 years old, and the remaining one or 1.89 percent were 50 years old and above.

Sex. 43 or 81.13 percent of the respondents were female and ten or 18.87 percent was male.

Task Performed. The respondents can perform either of the different task. Respondents who performed as ward nurse accounts 40 or 48.78 percent, circulating

nurse with 19 or 23.17 percent, scrub nurse with 16 or 19.51 percent and seven or 8.54 percent as post anesthesia care nurse.

Length of Service. Of the 53 respondents, twenty-five or 47.17 percent served 1-5 years, 16 or 30.19 percent less than 1 year, 10 or 18.87 percent length of service was 6-10 years, three or 5.66 percent served 16 years and above, while the other one or 1.89 percent was already 11-15 years.

Trainings and Seminars. Of the respondents, 25 or 47.17 percent have basic life support training, 15 or 28.30 percent with advance cardiac life support training. Respondents with no trainings and seminars and with Lactation management training has five or 9.43 percent each, and the remaining three or 5.66 have Operating Room Nurses Association of the Philippines.

Table 2. Profile of the Respondents

| Profile | Frequency | Percentage |
|----------------------------|-----------|---------------|
| Age | | |
| 18 - 24 years old | 15 | 28.30 |
| 25 - 29 years old | 11 | 20.75 |
| 35 - 39 years old | 10 | 18.87 |
| 30 - 34 years old | 9 | 16.98 |
| 40 - 45 years old | 4 | 7.55 |
| 46 - 50 years old | 3 | 5.66 |
| 50 years and above | 1 | 1.89 |
| | 53 | 100.00 |
| Sex | | |
| Female | 43 | 81.13 |
| Male | 10 | 18.87 |
| | 53 | 100.00 |
| Task Performed | | |
| Ward Nurse | 40 | 48.78 |
| Circulating Nurse | 19 | 23.17 |
| Scrub Nurse | 16 | 19.51 |
| Post Anesthesia Care Nurse | 7 | 8.54 |
| | 82 | 100.00 |
| Length of Service | | |
| 1- 5 years | 23 | 43.40 |
| Less than1 year | 16 | 30.19 |
| 6 - 10 years | 10 | 18.87 |
| 16 years and above | 3 | 5.66 |
| 11 - 15 years | 1 | 1.89 |

| | | |
|--|-----------|---------------|
| | 53 | 100.00 |
| Trainings and Seminars | | |
| Basic Life Support | 25 | 47.17 |
| Advance Cardiac Life Support Training | 15 | 28.30 |
| Lactation Management Training | 5 | 9.43 |
| None | 5 | 9.43 |
| Operating Room Nurses Association of the Philippines | 3 | 5.66 |
| | 53 | 100.00 |

Perioperative Infection Control Practices of Operating Room Staff Nurses

The following tables discuss the perioperative infection control practices of operating room staff nurses during pre-operative, intra operative and post operative.

Pre-Operative. Table 3 shows the respondents' perioperative infection control practices during pre-operative.

Table 3
Perioperative Infection Control Practices of Operating Room Staff Nurses during Pre-Operative

| Indicator | WM | Interpretation | Rank |
|--|------|-----------------------|------|
| 1. Disinfect the surfaces in the operating room and all medical equipment. | 4.21 | Very Highly Practiced | 4 |
| 2. Making adjustments to medication | 4.08 | Highly Practiced | 8.5 |
| 3. Scheduling tests and exams, and physical and psychological preparation. | 4.08 | Highly Practiced | 8.5 |
| 4. Cardiopulmonary cleared | 4.17 | Highly Practiced | 6 |
| 5. All jewelry should be removed, and artificial nails must not be worn as these are associated with enhanced hand colonization with bacteria and fungi. | 4.30 | Very Highly Practiced | 2 |
| 6. Nothing per Orem advised to patient | 4.28 | Very Highly Practiced | 3 |
| 7. Patient gown on | 4.40 | Very Highly Practiced | 1 |
| 8. Personal Hygiene of the patient | 4.19 | Highly Practiced | 5 |

observed

| | | | |
|--|------|------------------|----|
| 9. Pre-operative preparation done (a.SS Enema b. Cleansing Enema) | 4.15 | Highly Practiced | 7 |
| 10. Antibiotic-coated sutures may decrease SSI rates but are only a weak recommendation. | 4.06 | Highly Practiced | 10 |

| | | |
|------------------------------|-------------|-------------------------|
| Average Weighted Mean | 4.19 | Highly Practiced |
|------------------------------|-------------|-------------------------|

Very highly practiced were patient gown on with the highest weighted mean of 4.40, followed by all jewelry should be removed, and artificial nails must not be worn as these are associated with enhanced hand colonization with bacteria and fungi with weighted mean of 4.30, nothing per orem advised to patient with a weighted mean of 4.28 and disinfect the surfaces in the operating room and all medical equipment with weighted mean of 4.21.

Highly practiced pre-operative infection control practices were personal hygiene of the patient observed with weighted mean of 4.19, then cardiopulmonary cleared with a weighted mean of 4.17, pre-operative preparation done (a.SS Enema, b. Cleansing Enema) with weighted mean of 4.15, making adjustments to medication with a weighted mean of 4.08 together with scheduling tests and exams, and physical and psychological preparation and last ranked was antibiotic-coated sutures may decrease SSI rates but are only a weak recommendation have a weighted mean of 4.06

The pre-operative infection control was highly practiced with an average weighted mean of 4.19

Intra-Operative. Table 4 shows the perioperative infection control practices of operating room staff nurses during intra operative. The operating staff nurses highly practiced the infection control with an average weighted mean of 4.14.

Table 4
Perioperative Infection Control Practices of Operating Room Staff Nurses during Intra Operative

| Indicator | WM | Interpretation | Rank |
|---|------|-----------------------|------|
| 1. Hand hygiene is critical to infection control | 4.13 | Highly Practiced | 6 |
| 2. Wearing proper surgical attire | 4.20 | Very Highly Practiced | 2.5 |
| 3. Keep personnel to a minimum in the OR during a procedure. | 4.15 | Highly Practiced | 5 |
| 4. Limit idle conversations as this creates dispersion of bacteria. | 4.06 | Highly Practiced | 10 |
| 5. Keep doors closed, to maintain OR field sterility | 4.17 | Highly Practiced | 4 |
| 6. Counting of instruments, sponges and needles before the procedure and before closing the incision site | 4.23 | Very Highly Practiced | 1 |
| 7. Sterile drapes must be placed on the | 4.20 | Very Highly Practiced | 2.5 |

patient and on any equipment included in the sterile field

| | | | |
|--|------|------------------|---|
| 8. Operating lights handled with a foot pedal or reached above eye level. | 4.11 | Highly Practiced | 7 |
| 9. The utility of delayed primary closure of the contaminated surgical site. | 4.09 | Highly Practiced | 8 |
| 10. Applications of pressure irrigation at the time of incision closure. | 4.08 | Highly Practiced | 9 |

Average Weighted Mean

4.14

Highly Practiced

Counting of instruments, sponges, and needles before the procedure and before closing the incision site got the highest weighted mean of 4.23, followed by two indicators with a weighted mean of 4.20, which were wearing proper surgical attire and sterile drapes must be placed on the patient and on any equipment included in the sterile field. These three practices were very highly practiced by operating staff nurse during intra-operative.

The 4th rank was keeping doors closed, to maintain OR field sterility with a weighted mean of 4.17, followed by keep personnel to a minimum in the OR during a procedure with a weighted mean of 4.15, hand hygiene is critical to infection control with a weighted mean of 4.13 and operating lights handled with a foot pedal or reached above eye level with 4.11. The utility of delayed primary closure of the contaminated surgical site, applications of pressure irrigation at the time of incision closure, and limiting idle conversations as this creates dispersion of bacteria were also highly practiced by the operating room nurses with weighted means of 4.09, 4, 08 and 4.06, respectively.

Post-Operative. Table 5 shows the perioperative infection control practices of the respondents during post operative.

Monitor the patient's temperature, breathing, blood pressure, pulse rate and oxygen saturation got the highest weighted mean of 4.42 and ask the patient to take deep breaths to assess their lung function got a weighted mean of 4.21 which both interpreted as very highly practiced. Highly practiced were Watch for signs of

Table 5
Perioperative Infection Control Practices of Operating Room Staff Nurses during Post Operative

| Indicator | WM | Interpretation | Rank |
|---|------|-----------------------|------|
| 1. Monitor the patient's temperature, breathing, blood pressure, pulse rate and oxygen saturation | 4.42 | Very Highly Practiced | 1 |
| 2. Ask the patient to take deep breaths to assess their lung function | 4.21 | Very Highly Practiced | 2 |
| 3. Check the surgical site for signs of bleeding or infection | 4.15 | Highly Practiced | 7 |
| 4. Watch for signs of an allergic | 4.19 | Highly Practiced | 3 |

reaction

| | | | |
|--|-------------|-------------------------|-----|
| 5. Keep patient warm under droplight to prevent hypothermia and chills | 4.17 | Highly Practiced | 4.5 |
| 6. Ambulate patient as ordered to prevent pulmonary embolism | 4.11 | Highly Practiced | 9.5 |
| 7. Instruct and maintain the use of spirometer for lung expansion | 4.11 | Highly Practiced | 9.5 |
| 8. Monitor patient urine output | 4.15 | Highly Practiced | 7 |
| 9. Neuro assessment, including LOC, GCS, motor and sensory assessment | 4.15 | Highly Practiced | 7 |
| 10. Pain management and wound care | 4.17 | Highly Practiced | 4.5 |
| Average Weighted Mean | 4.18 | Highly Practiced | |

an allergic reaction with a weighted mean of 4.19, followed by keep patient warm under droplight to prevent hypothermia and chills and ambulate patient as ordered to prevent pulmonary embolism, both with 4.17. Check the surgical site for signs of bleeding or infection, monitor patient urine output and neuro assessment, including LOC, GCS, motor and sensory assessment, all got with a weighted mean of 4.15. Last ranked were ambulate patient as ordered to prevent pulmonary embolism and instruct and maintain the use of spirometer for lung expansion, both with a weighted mean of 4.11.

The post-operative infection control was highly practiced by operating room staff nurses with an average weighted mean of 4.18

Relationship between the Profile and the Perioperative Infection Control Practices of Operating Room Staff Nurses

Table 6 shows the test of significant relationship in the respondent's perioperative infection control practices to their profile in terms of age, sex, task performed, length of service and trainings and seminars. Other variables present the computed value, tabular value at 0.05, decision on hypothesis and the interpretation from among the profile of the total population of the study across all the perioperative infection control practices.

Table 5
Relationship between the Profile and the Perioperative Infection Control Practices of Operating Room Staff Nurses

| Profile | Computed Value | Tabular Value | Decision on H_0 | Interpretation |
|------------|----------------|---------------|-------------------|-----------------|
| Age | 38.50 | 36.42 | Rejected | Significant |
| Sex | 7.28 | 9.49 | Accepted | Not Significant |

| | | | | |
|---------------------------------|-------|-------|----------|-------------|
| Task Performed | 25.86 | 21.03 | Accepted | Significant |
| Length of Service | 36.02 | 31.41 | Rejected | Significant |
| Trainings & Seminars | 50.63 | 46.42 | Rejected | Significant |

has significance to the perioperative infection control practices of operating room staff nurses.

Further, sex computed value of 7.28 was lesser than the tabular value of 9.49 at 0.05 level of significance. Therefore, null hypothesis is accepted. This suggests that age does not affect the perioperative infection control practices of operating room staff nurses.

Peri-Operative Management Guide Proposed to Enhance the Prevention of Infection

Perioperative management is a critical aspect of preventing SSIs and enhancing patient outcomes. By following these evidence-based guidelines, healthcare providers can reduce the risk of SSIs and improve patient outcomes. Surgical site infections (SSIs) are a significant concern in healthcare, leading to increased morbidity, mortality, and healthcare costs.

To combat this, a Peri-Operative Management Guide can be a powerful tool for hospitals to establish best practices and reduce infection rates.

Summary

This study aimed to determine the the peri-operative infection control practices of operating room nurses among hospitals in Rinconada. Specifically, it sought to answer the following: 1. What is the profile of the respondents in terms of: a. Age, b. Sex, c. Task performed, d. Length of Service, e. Trainings/seminars attended; 2.What are the preventive practices of operating room nurses during: a. Pre-Operative, b. Intra Operative c. Post Operative; 3 Is there a significant difference between the profile of the respondents and the preventive practices of operating room nurses? and 4. What peri-operative management may be proposed to enhance the prevention of infection?

This study used a descriptive method research design. The researcher used the questionnaire as the primary data collection tool. Statistical too used were Percentage Technique, Weighted Mean and the Chi-square Test.The respondents of the study were fifty-three staff nurses who were rotated in Operating Room of the hospitals in Rinconada and gathered through total enumeration.

Findings

The following were the findings of the research study:

1. The demographic profile of the respondents, revealed that as to:

Age. Out of the 53 respondents, 15 or 28.30 percent were 18-24 yearsold, followed by 25-29 years old with 11 or 20.75 percent, 35-39 years old with 10 or 18.87 percent, and 30-34 years old with nine or 16.98 percent. Four or 7.55 percent of the respondents were 40-45 years old and three or 5.66 percent were 46-50 years old, while the remaining one or 1.89 percent was 50 years old and above.

Sex. 43 or 81.13 percent of the respondents were female and ten or 18.87 percent was male.

Task Performed. The respondents can perform either of the different task. Respondents who performed as ward nurse accounts 40 or 48.78 percent, circulating nurse with 19 or 23.17 percent, scrub nurse with 16 or 19.51 percent and seven or 8.54 percent as post anesthesia care nurse.

Length of Service. Of the 53 respondents, twenty-five or 47.17 percent served 1-5 years, 16 or 30.19 percent less than 1 year, 10 or 18.87 percent length of service was 6-10 years, three or 5.66 percent served 16 years and above, while the other one or 1.89 percent was already 11-15 years.

Trainings and Seminars. Of the respondents, 25 or 47.17 percent have basic life support training, 15 or 28.30 percent with advance cardiac life support training. Respondents with no trainings and seminars and with Lactation management training has five or 9.43 percent each, and the remaining three or 5.66 have Operating Room Nurses Association of the Philippines.

2. The perioperative infection control practices of operating room staff nurses were: The pre-operative infection control was highly practiced with an average weighted mean of 4.19. The operating staff nurses highly practiced the infection control with an average weighted mean of 4.14. Postoperative infection control was highly practiced by operating room staff nurses, with an average weighted mean of 4.18.

3. The result of statistical data showed that age, task performed, length of service and trainings and seminars with computed values of 38.50, 25.86, 36.02 and 50.63 were higher than the tabular value of 36.42, 21.03, 31.41 and 46.42, respectively at 0.05 level of significance. Therefore, null hypothesis is rejected. This implies that age, task performed, length of service and trainings and seminar has importance to the perioperative infection control practices of operating room staff nurses. Further, sex computed value of 7.28 was lesser than the tabular value of 9.49 at 0.05 level of significance. Therefore, null hypothesis is accepted. This suggests that age does not affect the perioperative infection control practices of operating room staff nurses.

4. Perioperative management is a critical aspect of preventing SSIs and enhancing patient outcomes. By following these evidence-based guidelines, healthcare providers can reduce the risk of SSIs and improve patient outcomes. Surgical site infections (SSIs) are a significant concern in healthcare, leading to increased morbidity, mortality, and healthcare costs.

Conclusion

Based from the findings of this research, the following conclusions were drawn:

1. Majority of the respondents were female. Almost half already served 1-5 years, performed task as ward nurse and with basic life support training. Mostly were 18-24 years old.

2. The perioperative infection control practices of operating room staff nurses during pre-operative, intra operative and post operative were all highly practiced.

3. Among the profile that shows significant relationships to the perioperative infection control practices of operating room staff nurses were the age, task performed, length of service and trainings and seminars. Sex shows a no significant relationship.

371 4. A Peri-Operative Management Guide can be a powerful tool for hospitals to
372 establish best practices and reduce infection rates.
373

374 **Recommendations**

375 In light of the findings and conclusions, the following recommendations were
376 formulated.

377 1. Tailor training programs for operating room staff nurses based on their age,
378 2. tasks, experience, and prior training. Emphasize infection control practices
379 across pre-operative, intraoperative, and postoperative phases.

380 3. Organize regular seminars and workshops to update staff nurses on the latest
381 infection control guidelines and best practices. Encourage participation in advanced
382 training courses to enhance their knowledge and skills in perioperative infection control.

383 4. Implement a system for monitoring and evaluating the adherence of staff
384 nurses to infection control practices. Provide constructive feedback and support to help
385 them improve their practices and maintain high standards of care.

386 5. Develop standardized operating procedures for infection control in the
387 perioperative setting. Ensure that these procedures are easily accessible, regularly
388 updated, and followed consistently by all staff members.

389 6. Foster a culture of collaboration and teamwork among operating room staff
390 nurses to promote a shared responsibility for infection control. Encourage open
391 communication, mutual support, and a commitment to maintaining a safe and sterile
392 environment.
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