



## **Assignment Title**

“How effective are nurse-led infection prevention strategies in reducing surgical site infections among patients undergoing surgeries in New Zealand?”

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## Student Declaration

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| <b>Name:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Anita Kumari |                   |              |
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| <b>Comments:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |              |                   |              |

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## **Task 1: Identifying research issue and formulating research question**

### **Title of the research**

**“How effective are nurse-led infection prevention strategies in reducing surgical site infections among patients undergoing surgeries in New Zealand?”**

The identified research issue in this research study is  
 “Nurse-Led Infection Prevention Strategies to Reduce Surgical Site Infections during patients undergoing surgeries in New Zealand”

### **Introduction and background**

The nurse-led infection control strategies in the OT (operation theatre) focus on the meticulous adherence to the statutory infection control standards and protocol in terms of ensuring high levels of patient safety (Kasa et al., 2023). Surgical site infection (SSI) has become a major healthcare issue in recent years in New Zealand, which leads to deterioration of health and the development of antibiotic resistance in patients. A recent health report on the global prevalence of SSI shows that nearly 0.5-4% of patients admitted to the OT are at risk of SSIs each year (ncbi.nlm.nih.gov, 2025). The major reason associated with SSIs is the lack of adherence to the proper infection control protocol during and after the operations. The lack of skills and professional expertise in adhering to the nurse-led infection control standard leads to the occurrence of SSI (surgical site infections), which not only interfere with patients' safety but also raise questions on the integrity and accountability of the healthcare system to ensure patient safety. According to Qvistgaard et al. (2019), Surgical Site Infections (SSIs) are serious threats to patient safety and raise healthcare costs-thus making it imperative that preventive procedures are ensured in all surgical settings. Despite the different guidelines provided around the globe, preventive measures for these infections have been inconsistently implemented. The main determinants for SSIs include bacterial load in the OR, communication in the OR, and adherence to hygienic procedures. OR nurses are responsible for promoting the application of aseptic principles, yet there are challenges to preventing SSIs: resistance to antibiotics, lack of evidence-based support for some care bundles, and hierarchical configurations within surgical teams. The prevention of SSIs will require systematic multidisciplinary collaboration that balances patient safety, cost, and professional values.

WHO sets the Surgical Safety Checklist that focuses on key areas that nurses need to focus on to achieve the patients' safety OT by adhering to the nurse-led infection control

standards, are proper hand hygiene (HH), anti, antimicrobial prophylaxis, skin antisepsis, proper surgical attire, patients education and maintenance of safe environment (Zahid, Masih & Kaleem, 2025). Nurses who assist surgeons in undergoing surgeries in the OT need to maintain hand hygiene to reduce the risk of contamination of germs on patients' bodies. The hand hygiene policy should be strictly followed in terms of avoiding the risk of SSIs in OT by washing hands with soap and water for at least 30 seconds. The nurses must use proper hand washing and sanitiser to maintain hand hygiene while touching patients' pre- and post-operative conditions. Antimicrobial prophylaxis is the most useful drug that should be administered to avoid the risk of SSI during the surgery. Nurse-led infection control also informs patients regarding the hand hygiene and infection prevention process that they must use in any care setting to avoid the transmission of germs from one body to another (Munday et al. 2020). During surgeries, nurses take the lead in interventions to prevent SSIs, for which patients are at high risk because of the prolonged and complex nature of the surgeries. Each stage of SSI prevention must be addressed in a systematic and evidence-based manner. Nurses in the OT take on an essential role in maintaining sterility by implementing and ensuring the use of aseptic techniques within the surgical teams. Enforcement of proper hand hygiene, sterile field maintenance, and correct draping and gowning procedures are some of the interventions they apply, all contributing to reducing the risks of bacterial contamination (Qvistgaard et al. 2019).

### **Research questions by using PECO**

The PECO framework allows researchers to frame the appropriate research questions by analysing the 4 variables and elements of the research study. Their research elements are population (P), Exposure (E), comparison (C), and Outcomes (O). Following PECO, too, is used to frame the research question

- Population (P): Nurses working in operating rooms during surgical procedures/Patients undergoing surgeries in New Zealand
- Exposure (E): Exposure of infection of the patient undergoing surgery/having a set of aseptic practices to follow and good organizational support (e.g., stable teams, leadership, and feedback mechanisms)
- Comparison (C): Not having a set of aseptic practices and having poor organizational support

- Outcomes (O): Measurable reduction of surgically-related SSI rates and professionally perceived self-efficacy

The chosen research question, using the above PECO tools, is:

***“How effective are nurse-led infection prevention strategies in reducing surgical site infections among patients undergoing surgeries in New Zealand?”***

### **Research rationale**

The selection of this topic is highly justified and presents an in-depth discussion on the prevalence of SSI in New Zealand's OT due to the lack of compliance with the infection control protocol. In New Zealand, the prevalence of SSIs increases with time in OT due to the poor adherence to the nurse-led infection control standards, which adversely impacts the post-operative health and well-being of patients (Filipe et al. 2024). The recent healthcare data shows that, across the globe, nearly 0.5-6% people are affected by the SSI due to the poor adherence to hand hygiene policies, infection control protocol, and adaptive techniques standards in the OT. In this context, the selection of this topic is highly justified and relevant to the current context of SSI, which will provide a clear knowledge of the effective insurance-led intervention that modern orthopaedic surgeons and nurses will use to manage the risk of SSI.

### **Task 2: Critical commentary on the merits of different paradigms and methodologies in terms of answering your research question**

In the research, a paradigm is considered in effective ways of overarching worldview or the belief system that forms how easily it can perceive reality, the nature of the knowledge, and the methods utilized to acquire it (researchgate.net, 2016). It covers the philosophical stance that supports the inquiry, which influences whether the knowledge is viewed as objective and quantifiable or subjective and interpretive. On the other hand, a methodology is the systematic framework of the notable procedures, designs, and techniques adopted to examine a research question within a given paradigm. It dictates how the data is gathered, analysed, and interpreted to generate meaningful findings. The two articles selected for this discussion utilise the distinct paradigms and methodologies, which offer different perspectives and points of view on the efficacy of nurse-led interventions in healthcare. The first article, ***“Intraoperative prevention of surgical site infections as experienced by operating room nurses. International Journal of Qualitative Studies on Health and Well-being,”*** manages its notable alignment, which effectively acknowledges that while the reality

of the objective remains, it can only be approximated due to the notable measurement limitations and the probable biases. The article highlights the multidimensional prevention of SSIs, integrating both intellectual and organizational strategies. OR nurses keep watch over sterile fields while intervening when those guidelines are violated and working toward open communication among teams. Yet, the absence of structured feedback and scant evidence supporting interventions performed routinely could result in uncertainty. Dynamics within the team influence outcomes, where trust, experience, and respect are among the requirements in safe intraoperative care. Leadership legitimizing OR nurses' role, ensuring team stability, and establishing arenas for evidence-based quality improvement is a must for the long-term prevention of SSI (Qvistgaard et al. 2019).

The second article, ***“National survey of operating room nurses’ aseptic techniques and interventions for patient preparation to reduce surgical site infections, 19(4), 438-445,”*** highlights an assumption that the reality is objective, quantifiable, and discoverable through overall empirical observation and controlled experimentation. The key interventions during the surgery are skin disinfection, use of sterile materials, temperature maintenance, and aseptic techniques. The study claimed that the skin antiseptics for the patient were chlorhexidine in 70% ethanol, 93.5% of the time, in accordance with recommendations by authorities such as CDC and NICE. Apart from proper skin preparation, all procedures reduce bacterial colonization, which is very central in the surgical procedures, where deep infections may cause catastrophic complications. Likewise, given the compliance levels of 97.4% and 83.8%, respectively, for single-use sterile drapes and sterile gowns, and acceptance of 73% for double-gloving-OR nurses, proves to be the mainstay in securing aseptic integrity in surgery. These highly effective methods constitute a sufficient barrier against microorganisms, protecting from contamination in extremely sensitive procedures involving implants or neural pathways (Wistrand et al. 2018).

At a certain point in time, while critically managing comparisons of the two, the value of the postpositivist systematic review lies in its significant ability to inform policy and large-scale healthcare strategies by synthesizing the findings from multiple settings and populations. It effectively addresses the longer-term and system-phased outcomes, which are essential for managing the strategic improvements in the transitional care models. Nonetheless, the breadth of this approach can dilute the context-driven insights and mask the practical nuances of direct patient care. On the other hand, the positivist experimental study offers accurate and context-specific evidence that can be readily integrated in the critical care settings. Its strength is in producing the actionable and the intervention-level

recommendations that can be integrated into effective nursing protocols with a slight delay. For a research question focused specifically on the immediate management of postoperative symptoms such as thirst and oral dryness, the second article is more directly pertinent and useful. Its controlled design effectively ensures that the observed effects can be attributed to the nurse-led intervention with high levels of confidence, which offers clear guidance for clinical practice. As evidence-based medicine becomes implemented into the healthcare services, the convergence of information technology and medical technology becomes extensively relevant to effectively controlling the costs of healthcare and improving notable patient outcomes (ebSCO.com, 2024).

Temperature regulation was equally a nurse-promoted intervention, with nurses frequently giving application of heating with warm blankets and warmed fluids, thus preventing perioperative hypothermia-being a known risk factor for SSI. However, local warming to incisions and use with preheated antiseptics practices remained inconsistent, given a lack of standardised guidelines and certainly needs more focus in the future (Wistrand et al. 2018). Research on the methods of prevention may take the form of the randomized-controlled trial or the observational study, or may use more informal methods of evaluation. The most rigorous design tests the effects of the program on a group that receives the intervention and compares the significant results with a second group that did not receive the intervention (ebSCO.com, 2024). The role of nurses is most effective when combined with clear communication, strong leadership, and good situational awareness. Qvistgaard et al., (2019) note the importance of operating theatre nurses as the coordinators since they can prioritise identifying and actioning potential breaches of protocol. For example, improper use of gloves or contamination during instrument handling. This role protects the patient from infection and prevents SSIs, which mainly occur due to the ingress of microorganisms. Nonetheless, the hierarchical structure in an operating theatre may reduce the ability of the nurses to enforce protocol, thus impacting their effectiveness. Nurses who receive support from leadership and possess appropriate legitimacy tend to be more effective in enforcing protocol, which relies on collaborative behaviour from the team. For instance, supporting the literature on research methods accentuates that RCTs are considered the gold standard for testing the overall efficiency in controlled conditions, whereas systematic reviews and meta-analyses are indispensable for developing data-driven guidelines and informing best practices. Therefore, while the first article strengthens the understanding of long-term,

systemic impacts, the second article is ultimately the most helpful for the focus of the current research due to its direct applicability, the strong internal validity, and notable ability to produce the actionable findings for the instant patient care.

### **Task 3: Critical appraisal of the chosen article**

#### **The title and abstract**

The title of the article 2, “*National survey of operating room nurses' aseptic techniques and interventions for patient preparation to reduce surgical site infections*”, is highly concise and accurate in presenting the purpose of this research. According to Wistrand et al. (2018), data relating to efficacy can be influenced by the availability of guidelines or adherence to them. High compliance and infection prevention rates occurred with clear evidence-based protocols. Some practices could vary in the absence of directives to adversely affect the outcomes, such as for adhesive drape uses and how often gloves are expected to be changed. This further highlights the need for standardization and specialization of protocols for use in neuro-orthopaedic theatres where infection control needs arguably precise attention. Nurse-led measures do go a long way in preventing SSIs that are well trained, strictly adhering to national or international guidelines, and equipped with adequate materials. Considering that neuro-orthopaedic patients are vulnerable to infections that can cause devastating disabilities or even death, there must be reinforcement in evidence-based nursing practice, continuous education, and in addressing unexplored grey areas such as intervals for changing of gloves and warming protocols so that the surgical safety processes may be further optimized.

According to Wistrand et al. (2018), in the prevention of surgical site infections, nurse-led interventions bear key significance, especially pertinent to a setting such as neuro-orthopaedic operating theatres, where surgical procedures are marked by complexity and an unusually high risk of infections. A national Swedish survey on operating room (OR) nurses' practices has established that nurse-led interventions, when grounded in evidence and with unwavering fidelity to guidelines, have been modelled as reducing surgical site infections. As suggested by Williams, Boylan & Nunan (2020), while critically appraising any research articles, it is necessary to determine whether the research presents clear descriptions of the aims and research objectives. The objectives of the researcher are to assess the thirst intensity and the dry mouth at pre- and post-interventions, comparing the health problems between the

control groups and study groups, and analysing the link between the dry mouth and thirst intensity of post-operative patients in the surgical unit.

While analysing the abstract of the chosen research, it can be stated that this research successfully presents a concise summary of the entire study in its abstract. As suggested by Tod, Booth & Smith (2022), an abstract is an important element of a research study that presents a clear understanding of the main research. The abstract of this research article allows readers to directly go to the core content of the research paper, such as presenting a clear, short, but relevant background, proper methods and materials, and a suitable and brief conclusion. The abstract of this chosen article presents a clear conclusion, which is highly useful to know the major outcomes that this research addressed in this study. However, there are also some drawbacks that are identified in this abstract, such as a lack of sufficient description of the findings, and the hypothesis poses questions on the integrity and reliability of the abstract.

### **Structuring**

While analysing the structure of the research study in article 2, it is seen that the literature review of this article presents a clear scope, motivation, and relevance of the study to the modern context of nurse-led intervention in managing SSIs. According to Williams, Boylan & Nunan (2020), a literature review is a well-structured and well-drafted review of existing literature that must present the feasibility of the study by presenting its scope and reliability. However, the chosen research article lacks a comprehensive discussion of the literature, which poses questions on the validity of findings. Although methods, methodology and the results are presented comprehensively, there is limited evaluation of the existing literature in this quantitative research. Moreover, this quantitative research article lacks a separate literature review segment, which reduces the robustness and applicability of findings to future research on the SSI and its management. The effectiveness of interventions is determined by the ability to collaborate with the team. The research conducted by Qvistgaard et al. (2019) indicates that when the members of the team have worked together for a long time, they tend to work well together, follow the infection control procedures, and lower the chances for surgical site infections. On the other hand, when there tends to be adjustments in the team, and the means of communication are ineffective, the chances of risks increase. Therefore, the role of the nurse is effective when supported and integrated in an interdisciplinary manner with respect from the institutions.

According to Tod, Booth & Smith (2022), hypothesis formation and testing are two major aspects that must be addressed in a quantitative and qualitative research article. This

research lacks a discussion of its hypothesis, and there is no description of how to achieve the null or scientific hypothesis. Rather than presenting hypotheses, this quantitative research presents only objectives, which may question the validity and credibility of its research findings. According to Wistrand et al. (2018), the national survey of Swedish OR nurses provides important insight in understanding the level of compliance to aseptic technique to prevent SSIs. The findings suggest greater than 90% compliance with the principles and guidelines: 93.5% said they used chlorhexidine-related skin disinfectant, 97.4% used single-use sterile drapes, and 83.8% adhered to single-use sterile gowns. Double-gloving was practiced by 73%, reasonably consistent with best practice recommendations. However, there appears to be a divergence in practice in scenarios where no guidelines existed or where available guidelines were ambiguous. For instance, practices related to glove change widely differed, with more than half opting for adhesive plastic drapes whose efficacy had been questioned in several studies. Another crucial deficiency concerned temperature management: while warming blankets were the common choice of most respondents, local warming over incision sites was rarely practiced, despite evidence suggesting the importance of normothermia to SSI risk reduction.

### **The sample**

The research has truly lashed out at one big concern involving postoperative care, the management of thirst intensity coupled with dry mouth situations in surgical patients. It uses a randomized controlled trial design with pre- and post-tests for measurements, thus rigorously evaluating nurse-based interventions. Using a simple, cost-effective intervention like cold sterile swabs and cold water spray portrays the application of the intervention in the hospital setting. The results seem promising and indicate a relatively high level of reduction of thirst and dryness levels in the intervention group compared to the control group. Yet the study, while proving the intervention to be somewhat successful, is not without its shortcomings: postoperative patients undergoing general surgery at one hospital only were recruited for testing, and so the study's results cannot be generalized to a larger cohort of patients. Further, although application of statistical tests such as ANOVA enhances the analysis, confounding factors that could be taken into account affecting the outcome, like levels of hydration or use of some medications, are not put in the limelight (Rajeshkumar et al. 2025). The other notable catch is the self-reported nature of the survey data, raising the possibility of reporting bias, wherein nurses may have overestimated their own compliance. Besides, sources of education and training were highly variable, meaning clinical traditions might have at least sometimes had precedence over evidence-based practices. The absence of

guidelines in one area or another signals the risk of occasional disparity across hospitals in terms of patient safety outcomes. All in all, the results culturally celebrate the high level of compliance by Swedish OR nurses while highlighting the need for the development of clearer and more inclusive national standards that will guarantee uniform, evidence-based SSI prevention (Wistrand et al. 2018).

According to Bahru et al. (2025), the quantitative research methodology provides several advantages, especially in measuring the eventfulness of Surgical Site Infection (SSI) and working backward into identifying related factors through the study. Some of the significance of quantification in this regard includes having a large group of 236 surgical patients for robust statistical evidence for the prevalence of SSI, such that the findings can be generalized in the study area. Through quantitative means of logistic regression analysis and so on, it becomes possible to pinpoint significant factors of SSIs, whereby age, smoking history, and duration of operation were among those factors that could be significantly identified. These are measurable variables, which means they can be directly associated with infection occurrences so that measures in preventive strategies can be evaluated. Besides, statistical tests carried out through SPSS guarantee reliability in the studies undertaken, shedding clear insight into the relationship among patient demographics, surgical elements, and the rate of SSI. This is essential in providing evidence-based recommendations for improving infection prevention protocols within surgical settings. According to Tafere et al. (2024), the research involves quantitative methods in order to measure nurses' knowledge and practices in infection prevention objectively. Using structured surveys and statistical tools such as logistic regression, the study quantifies the factors influencing infection control practices across 219 nurses. According to Qvistgaard et al. (2019), there is strong nurse leadership, but some issues remain. Operating Room nurses are less likely to comply with regulations due to insufficient evidence on the effects of some care bundles and a lack of reliable data on SSI rates. In addition, infection control nurses find that their ability to intervene is constrained because traditional hierarchies tend to favour surgical pace over infection control. Continuous training, formal authority, and dedicated platforms for collaborative quality improvement must be provided to optimize nurses' effectiveness, which organisations must implement.

### **Data collection**

The gathering of data was very polished and well-structured. The researchers used a socio-demographic questionnaire together with the Numerical Pain Rating Scale (NRS) for

thirst and the Challacombe scale for dryness to collect data on participants' pre- and post-intervention states. These instruments are deemed best to measure the intensity of thirst and dryness of the mouth, which are the primary outcomes of interest in the study. The sample size of 60 candidates, selected randomly from postoperative patients, renders a good base for statistical analysis. The random assignment of participants to study and control groups guarantees the validity of the results, thereby reducing possible biases. The study design with pre- and post-test measurements allows a clear view of the comparison of outcomes before and after the intervention. The data were collected as phenomenological open-ended interviews with 15 operating room nurses from seven different hospitals in Sweden. The approach provided deep and rich narratives; however, the small sample size, coupled with the narrow geographical focus, limits the applicability of the findings. There may be recall bias or social desirability bias due to the dependence on self-reported experiences. The use of verbatim transcription and reflexive questioning, nevertheless, enhanced the credibility. There is a lack of observational triangulation that makes it difficult to bridge the gaps between subjective experiences and real clinical practices (Qvistgaard et al. 2019). The data were collected through a web-based survey that consisted of 32 questions and was sent out to 2,264 Swedish OR nurses, of whom 890 provided valid responses. The wide distribution of the survey enabled the data collection to cover many specializations and viewpoints while collecting sufficiently large data to perform analysis with rigorous statistical methods. The self-administered nature of the survey, combined with the response rate of 43% can be a source of concern with regard to self-reporting bias and non-response bias, respectively. The questions were tested prior to the scheduled data collection to alleviate ambiguity; however, dependence on closed-ended questions could have resulted in weaker data collection. The study's standardization is helpful in light of its cross-country study of guideline adherence in Sweden (Wistrand et al. 2018). The structured approach would produce reliable and valid data for statistical analysis, which would be used to evaluate the knowledge deficit among nurses and plan their educational interventions.

The data in the study are well described, giving a clear presentation of the study population and variables and statistical methodology used. Socio-demographic characteristics, wound, and operation-related factors considered for analysis enrich the data capture and represent the complexity of factors associated with surgical site infections (SSI). The data-collecting tool, a structured checklist, was adapted from the literature, thus placing it within an existing framework. Such an intervention enhances the validity of the measure

for further comparisons with other studies. However, the stronger the instrument would be with greater emphasis on the collection tool's source and validation procedure, going beyond just the collection method (Bahru et al. 2025). As per Habtewold et al. (2024), the data for this research were collected through a self-administered structured questionnaire comprising 60 questions, aphoristically divided into four sections. These concerned the socio-demographic details, the working environment, and nurses' knowledge and practices of sterile techniques. The questionnaire was pre-tested with a small number of nurses, and any ambiguous items were subsequently adjusted to enhance validity and reliability. The instrument, adapted from literature, has also undergone a thorough test of validity and reliability with a Cronbach's alpha presented appropriately to support such reliability and consistency. In ethical considerations, review and consent were gained appropriately; the study went through the Institutional Review Board, with voluntary informed consent of participants in alignment with ethical conduct.

### **Data analysis**

The data garnered were analysed by SPSS software, version 22, along with appropriate tests, such as Chi-square, independent t-tests, and One-way repeated measures ANOVA. Such methods effectively make comparisons between study and control groups pre- and post-intervention. Cronbach's alpha for measurement tools ranged from 0.82 to 0.92, hence indicating a good score for reliability. As indicated by One-way ANOVA, a dramatic reduction in thirst intensity and dryness in the study group was reported, which validates the effectiveness of the nurse-led intervention. Ajil et al. (2024) used descriptive statistics such as means and standard deviations in reporting participants' demographic characteristics, whereas inferential statistics of the Chi-square test, independent t-test, and One-way ANOVA were used to test for the effectiveness of nurse-led interventions. Thus, with variables being categorical and continuous, these analyses were appropriate to make comparisons between groups. Parametric tests were applied to data that were normally distributed. Reliability for all instruments was tested with Cronbach's alpha, which ranged between 0.82 and 0.92, indicating good internal consistency (Rajeshkumar et al. 2025).

In the study by Tafere et al. (2024), descriptive statistics were used to summarize nurses' knowledge and practices in infection prevention, knowledge and practice being the two variables considered. Numbers of responses, percentages, and means were calculated. On the contrary, according to Ajil et al. (2024), inferential statistics, especially the logistic regression methods, were used in order to examine the relationship among various factors

with the knowledge of infection prevention and practice. The selection of statistical tests was appropriate for the cross-sectional design and research questions, and the obtained results highlighted significant associations.

### **Findings**

The study showed that the nurse-led intervention decreased thirst intensity and dryness of the mouth in postoperative patients. The study group got a 45.7% reduction in thirst and a 24% reduction in dryness, while the control group had only minimal or negligible changes. One-way repeated measures ANOVA confirmed that these differences were highly significant ( $P=0.001$ ). Moreover, demographic and clinical variables, such as age and duration of surgery, were associated with variations in thirst and dryness scores (Rajeshkumar et al. 2025). The study provides insight into the knowledge of nurses in relation to practices associated with preventing complications due to health care. For the study on the prevention of complications of CVCs in ICUs, a considerable majority of nurses (93.3%) used the internet and social media to gather information, indicating recognition of non-conventional educational sources. Nonetheless, about 40% of the nurses showed poor knowledge, indicating an immediate need for training to improve patient care and safety (Jasim et al., 2025). According to Habtewold et al. (2025), practice gaps regarding sterile techniques are common in low-resource settings. Globally, 58.3% of nurses with good knowledge is consistent with trends; however, 56.1% of nurses with good practice is somewhat low, indicating an incongruity of knowledge and practice. The study is sufficiently detailed for interpretation of results; however, the limitations of this study, such as the self-reporting aspect and lack of qualitative data, could weigh on the accuracy of the outcomes. It was discovered that there was a gap in supervision and a lack of availability of guidelines, hence the need for improvement in these areas. The researcher underscored training and guidelines as a way to improve the standards of healthcare, particularly in infection control.

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## Appendices/Appendix A: Assignment Support

Provide the details on what support services you utilised below.

We encourage you to use the subject librarians and learning advisors to achieve the best possible grade for your assignment.

*Click relevant boxes to record student support services used for this assignment.*

|                                                                                                                                        |                                                                                                                                                                        |
|----------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> I did not access any learning services<br><input type="checkbox"/> I used subject librarians/library helpdesk | <input type="checkbox"/> I met with a learning advisor<br><input checked="" type="checkbox"/> I used another source of support ( <i>please provide details below</i> ) |
|----------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### Details:

I used the learning resources provided in the CINAHL database. It helps in collecting reliable data concerning the topic.



### Appendix B: Search Strategy Template

Complete this template to form a search strategy on the topic you want to research and to record your results.

#### Step 1:

**Write down the title of your assignment/dissertation / query – Use a PICO/PECO framework to do this.**

**Title: “How effective are nurse-led infection prevention strategies in reducing surgical site infections among patients undergoing surgeries in New Zealand?”**

**Framework (PECO)**

- Population (P): Nurses working in operating rooms during surgical procedures/Patients undergoing surgeries in New Zealand
- Exposure (E): Exposure of infection of the patient undergoing surgery/having a set of aseptic practices to follow and good organizational support (e.g., stable teams, leadership, and feedback mechanisms)
- Comparison (C): Not having a set of aseptic practices and having poor organizational support
- Outcomes (O): Measurable reduction of surgically-related SSI rates and professionally perceived self-efficacy

#### Step 2:

**Now, break down your title into separate concepts (you may have a few of these).**

1. Nurse-led intervention
2. Infection of surgical sites
3. Neuro-orthopaedic operating theatres
4. Infection control

**Step 3:**

**Make a list of possible keywords for each of your concepts. Try and think of plurals, synonyms (different words with the same meaning), and English / American spellings.**

|                                                                                                                     |                                                                                                                          |
|---------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| <b>Topic 1:</b><br><br>1. knowledge<br><br>2. perceived barriers<br><br>3. ill patients                             | <b>Topic 2:</b><br><br>4. post-operative patients<br><br>5. sterile technique<br><br>6. perceived practice               |
| <b>Topic 3:</b><br><br>7. central venous catheters (CVCs)<br><br>8. Intensive care units<br><br>9. public hospitals | <b>Topic 4:</b><br><br>10. community-dwelling<br><br>11. infection prevention<br><br>12. transitional care interventions |

**Step 4:**

**Now, combine your keywords using Boolean operators (AND, OR, \*) to create a search string.**

Topic 1

(knowledge AND ill patients OR perceived barriers)

Topic 2

(sterile technique AND post operative patients OR perceived practice)

Topic 3

(intensive care units AND public hospitals OR central venous catheters (CVCs))

Topic 4

(infection prevention AND transitional care interventions OR community-dwelling)

**Conduct your search then evaluate your search results and alter your search strategy accordingly.**

### Step 5:

**Record your search results**

| Date       | Data base | Number of results |
|------------|-----------|-------------------|
| 11/08/2025 | CINAHL    | 20                |

### Appendix C: Technology Declaration

| Technology Type         | Technology/Application                                                                                                                                                                                                                                          | Notes<br>(add additional comments) |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|
| <b>Device</b>           | <input checked="" type="checkbox"/> PC<br><input type="checkbox"/> Mac<br><input type="checkbox"/> Other (please specify in notes)                                                                                                                              |                                    |
| <b>Internet Browser</b> | <input checked="" type="checkbox"/> Google Chrome<br><input checked="" type="checkbox"/> Microsoft Edge<br><input type="checkbox"/> Safari<br><input type="checkbox"/> Mozilla Firefox<br><input type="checkbox"/> DuckDuckGo<br><input type="checkbox"/> Brave |                                    |

| Technology Type                                                                                          | Technology/Application                                                                                                                                                                                                                                                                                   | Notes<br>(add additional comments) |
|----------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|
|                                                                                                          | <input type="checkbox"/> Other (please specify in notes)                                                                                                                                                                                                                                                 |                                    |
| <b>Reference Manager</b>                                                                                 | <input type="checkbox"/> None<br><input type="checkbox"/> EndNote<br><input type="checkbox"/> Mendeley<br><input checked="" type="checkbox"/> EasyBib.com<br><input type="checkbox"/> ReadCube<br><input type="checkbox"/> Zotero<br><input checked="" type="checkbox"/> Other (please specify in notes) | My Bib.com                         |
| <b>Word Processing Application</b>                                                                       | <input checked="" type="checkbox"/> Microsoft Word<br><input type="checkbox"/> Google Docs<br><input type="checkbox"/> Pages (MAC)<br><input type="checkbox"/> WPS office<br><input type="checkbox"/> Other (please specify in notes)                                                                    |                                    |
| <b>Grammar Assistance</b><br><br>(These programs all have AI engines. You may only use these programs if | <input type="checkbox"/> None<br><input checked="" type="checkbox"/> MS Editor (grammar check only)<br><input type="checkbox"/> MS Copilot<br><input checked="" type="checkbox"/> Grammarly                                                                                                              |                                    |

| Technology Type                                                                                                                                                                             | Technology/Application                                                                                                                                                                                                                                                                                                            | Notes<br>(add additional comments) |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|
| specified in the assessment information document)                                                                                                                                           | <input type="checkbox"/> Grammarly GO<br><input type="checkbox"/> Ginger<br><input type="checkbox"/> Hemingway<br><input type="checkbox"/> QuillBot<br><input type="checkbox"/> Writer<br><input type="checkbox"/> ProWritingAid<br><input type="checkbox"/> Wordtune<br><input type="checkbox"/> Other (please specify in notes) |                                    |
| <b>Other Technology Used</b>                                                                                                                                                                | <input type="checkbox"/> Other (please specify in notes)                                                                                                                                                                                                                                                                          |                                    |
| <b>Declaration:</b>                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                   |                                    |
| <input checked="" type="checkbox"/> (Click on box to tick)<br><br>I declare that I have ticked to indicate all the relevant technology used to produce this assignment from the list above. |                                                                                                                                                                                                                                                                                                                                   |                                    |
| <b>Name:</b>                                                                                                                                                                                | Anita Kumari                                                                                                                                                                                                                                                                                                                      | <b>Date:</b> 29/08/2025            |