

CHAPTER 1

INTRODUCTION

1.1. Background

Pneumonia is a lower respiratory tract infection that remains a major health problem due to its high morbidity and mortality. This disease is characterized by an inflammatory process in the lung parenchyma, causing the alveoli to fill with fluid or exudate, impairing gas exchange and respiratory function. This condition often leads to increased secretion production , resulting in nursing problems such as ineffective airway clearance , characterized by coughing, shortness of breath, difficulty expelling sputum, and additional breath sounds.

clearance is a common nursing problem in pneumonia patients. The accumulation of secretions that cannot be optimally removed can cause airway obstruction, reduce oxygenation , worsen shortness of breath, and increase the risk of complications. Therefore, effective nursing interventions are needed to assist with the mobilization and removal of secretions to maintain a patent airway.

One non-pharmacological treatment that can be provided is chest physiotherapy. Chest physiotherapy, which includes percussion, vibration, and postural drainage techniques , aims to loosen secretions from the respiratory tract, making them easier to expel through effective coughing. Several studies have shown that chest physiotherapy can increase sputum production, improve breathing patterns, and help address ineffective airway clearance in patients with pneumonia.

In addition to chest physiotherapy, inhalation therapy using peppermint can also be used as a complementary therapy. The menthol content in peppermint provides a soothing sensation to the respiratory tract, helps reduce airway obstruction, and facilitates the expulsion of secretions . Research shows that peppermint inhalation therapy can help

reduce shortness of breath and improve airway clearance in patients with respiratory disorders due to accumulation of secretions .

Pneumonia remains a leading cause of morbidity and mortality due to infectious diseases globally and in Indonesia. According to the Indonesian Health Survey (SKI) (2023) , the prevalence of pneumonia diagnosed by healthcare workers in Indonesia reached approximately 2.1%, with infants and the elderly being the most vulnerable to complications. Pneumonia is a lower respiratory tract infection that causes inflammation of the lung parenchyma, disrupting ventilation and gas exchange. This condition often leads to increased secretion production , leading to ineffective airway clearance nursing problems.

At the regional level, pneumonia remains a significant health problem in Jombang Regency. Data from the Jombang Regional General Hospital (RSUD) shows that between January and August 2025, 1,263 pneumonia patients were treated, with an average of 150–200 patients per month, and 227 patients reportedly died from the disease. Furthermore, pneumonia is one of the most common illnesses treated at RSUD Jombang, particularly among children and the elderly.

The high incidence of pneumonia causes various nursing problems, one of which is ineffective airway clearance due to the accumulation of secretions in the respiratory tract. If not properly managed, this condition can lead to impaired oxygenation , increased work of breathing, and even respiratory failure. Therefore, effective nursing interventions are necessary to help clear secretions and maintain airway patency .

One non-pharmacological intervention that can be performed is chest physiotherapy, which includes percussion, vibration, and postural drainage . This procedure has been shown to help mobilize secretions , making them easier to expel through effective coughing. Additionally, peppermint inhalation therapy containing menthol can provide a decongestant effect, improve breathing comfort, and help reduce airway obstruction caused by secretions .

Based on the high incidence of pneumonia in Indonesia and Jombang Regency and the importance of handling the problem of ineffective airway

clearance , the author is interested in conducting a Final Scientific Paper for Nurses with the title "Provision of Chest Physiotherapy and Peppermint Inhalation Therapy to Patients with Ineffective Airway Clearance with a Medical Diagnosis of Pneumonia in the Gatot Kaca Room of Jombang Regional Hospital."

1.2. Formulation of the problem

Based on the background above , the problem formulation is How is the Delivery of Chest Physiotherapy and Peppermint Inhalation Therapy to Patients with Ineffective Airway Clearance with a Medical Diagnosis of Pneumonia in the Gatot Kaca Room, Jombang Regional Hospital.

1.3. Research purposes

1.3.1. General purpose

This study aims to determine nursing care for pneumonia patients with ineffective airway clearance nursing problems in the Gatot Kaca Ward, Jombang Regional Hospital.

1.3.2. Special purpose

1. Conducting data assessment and analysis on pneumonia patients with ineffective airway clearance in the Gatot Kaca Room, Jombang Regional Hospital.
2. Formulating nursing diagnoses in providing nursing care to pneumonia patients with ineffective airway clearance in the Gatot Kaca Room, Jombang Regional General Hospital.
3. Developing a nursing care plan for each nursing diagnosis in pneumonia patients with ineffective airway clearance in the Gatot Kaca Room , Jombang Regional Hospital.
4. Carrying out nursing care actions on pneumonia patients with ineffective airway clearance in the Gatot Kaca Room, Jombang Regional Hospital.
5. Conducting nursing evaluations on pneumonia patients with ineffective airway clearance in the Gatot Kaca Room, Jombang Regional Hospital.

1.4 Benefits of Research

1.4.1. Theoretical Benefits

This research is expected to increase knowledge and enrich scientific studies in the field of medical- surgical nursing, particularly regarding the application of chest physiotherapy and peppermint inhalation therapy as non-pharmacological interventions to address ineffective airway clearance in patients diagnosed with pneumonia. Furthermore, the results of this study are expected to serve as a reference for the development of nursing science and further research related to airway management in patients with respiratory system disorders.

1.4.2. Practical Benefits

1. For Healthcare Institutions

This research is expected to be a consideration for health workers, especially nurses, in providing evidence-based nursing care. practice in pneumonia patients with ineffective airway clearance . The results of this study can also be used as an alternative non-pharmacological intervention to improve the quality of care and accelerate patient recovery.

2. For Educational Institutions

This research is expected to add to the literature and learning materials available for nursing students regarding the application of chest physiotherapy and peppermint inhalation therapy in pneumonia patients. Furthermore, the results can be used as a reference in academic activities, research, and the development of evidence-based nursing practice.

3. For Patients

This research is expected to help improve airway clearance in pneumonia patients by more effectively removing secretions , reducing shortness of breath, improving breathing comfort, and supporting the healing process. Furthermore, patients and their families can gain knowledge about non-pharmacological measures that can help maintain respiratory function and prevent complications from secretion buildup .

4. For Researchers

This research is expected to improve the knowledge, skills, and experience of researchers in providing nursing care to pneumonia patients with ineffective airway clearance problems and implementing chest physiotherapy interventions and peppermint inhalation therapy based on evidence-based nursing practice .