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Description Of Sleep Quality Of Patients With Chronic Obstructive Pulmonary Disease (COPD) Who Were Treated In The Jasmine Room At The Arifin Achmad Regional General Hospital Riau Province

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ABSTRACT

Various Lung Diseases will still be a public health problem. COPD or Chronic Obstructive Pulmonary Diseases (COPD) is a disease characterized by partially reversible and progressive inhalation flow obstruction associated with an abnormal inflammatory response from the lungs to exposure to harmful particles or gases (Black, JM & Hawk, JH 2014). Respiratory disease generally affects sleep, especially clients with chronic lung disease such as emphysema with clinical symptoms of short breathing. Most COPD patients report that their sleep is often disturbed due to shortness of breath, coughing and excessive secretion production, especially at night. The study design used was descriptive. The population in this study were COPD patients in the jasmine room at Arifin Achmad Hospital, Riau province. Sampling was taken by purposive sampling as many as 30 respondents. The instrument in this study to assess the quality of the bed using the PSQI questionnaire. The results showed that the sleep quality of lung disease patients treated in the jasmine room at Arifin Achmad Hospital was in the bad category, namely 23 people (77%). This research is expected to be a reference in providing nursing interventions for COPD sufferers who experience sleep disorders.

Key words: COPD, sleep quality

INTRODUCTION

Various Lung Diseases will still be a public health problem. The morbidity of lung and respiratory infections is still very high and lung disease is one of the causes of death in the community. Along with the development of industrialization and the increasing number of motorized vehicles, it will cause air pollution and can damage the lungs (Association of Indonesian Lung Doctors (PDPI, 2015).

COPD or *Chronic Obstructive Pulmonary Diseases* (COPD) is a disease characterized by a partially reversible respiratory obstruction. and progressives associated with an abnormal inflammatory response of the lungs to exposure to harmful particles or gases *(Black, JM & Hawk, JH 2014).*

From an epidemiological study of Chronic Obstructive Pulmonary Disease (COPD) in the United States in 2015 showed that the prevalence of COPD was 10 , 1% and the mortality rate for this

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disease is the fourth most common cause of disease, while the prevalence of COPD in Southeast Asian countries is estimated to be 6.3% with the highest prevalence in Vietnam and China (Oemiati, 2013).

Respiratory disease generally affects sleep, especially clients with the disease. Chronic lung such as emphysema with symptoms k short breathing lines. Most COPD patients report that their sleep is often disturbed due to shortness of breath, cough and excessive production of secretions, especially at night (Aydin, 2014). Hasanah's research results (2015) show that the correlation between shortness of breath and sleep quality is significant and the Spearman correlation value is 0.652 which shows the relationship between shortness of breath and sleep quality shows a strong and positive pattern, meaning that the higher the degree of shortness of breath the worse the quality of sleep.

Poor sleep quality in patients with pulmonary disease occurs as a result of many factors including age, disease severity, medications, depression and other underlying sleep disorders. When the client sleeps, there will be changes in physiological organs including the respiratory system in the form of changes in breathing patterns, decreased minute ventilation and changes in oxygen saturation (Aydin, 2014).

Sleep is part of healing and repair. The need for sleep is essential to everyone's quality of life. Each individual has different sleep needs in quantity and quality (Potter & Perry, 2012).

Sleep can be a cause of worsening respiratory function and conversely changes in respiratory function will also affect sleep quality. When the client sleeps, there will be changes in the physiological organs including the respiratory system in the form of changes in breathing patterns, decreased minute ventilation and changes in oxygen saturation (Arifin, 2014).

Inadequate sleep and poor sleep quality can cause physiological and psychological balance disorders. Physiological impacts include decreased daily activity, tiredness, weakness, poor muscular coordination, slow healing, decreased immune system and instability of vital signs (Briones et al., 1996; Dawson & Lack, 2000; Karota, 2005). Psychological impacts include depression, anxiety and decreased cognitive function (Aydin, 2014).

Generally, patients who are hospitalized will experience poor sleep quality than when they were at home. Sleep problems in patients with pulmonary diseases such as COPD, Asthma, will affect the quality of life. Poor sleep quality can contribute to exacerbations or even the risk of death (Aydin, 2014).
Identifying and treating the patient's sleep rest disorder is an important goal for the nurse. Nurses must understand the nature of sleep, factors that affect sleep and sleep habits of patients to help patients get adequate sleep and rest needs (Perry & Potter, 20015). Without adequate rest and sleep, the ability to concentrate, make decisions and participate in daily or nursing activities decreases and increases irritability. A person who gets enough

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sleep feels that his strength has recovered. Some sleep experts believe that the feeling of restoring energy with good quality sleep will give time to repair and heal the body's systems (Hidayat, 2006).

Given the importance of good sleep quality for patients with lung disease during hospitalization, it is necessary to conduct research to determine how the patient's sleep quality is described in hospital.

RESEARCH METHOD This

type of research is descriptive. The population in this study were patients with chronic obstructive pulmonary disease who were treated in the jasmine room at Arifin Achmad Hospital. The sample in this study amounted to 30 respondents. The sample was selected using the sampling technique in this study using *purposive sampling method*.
Collecting data in this study using the PSQI questionnaire. Respondent data that has been collected are then processed using a computerized system. This analysis was performed using thetest *chi square.*

RESULTS AND DISCUSSION

In this study the respondents were observed based on the patient's age, education level and length of illness. Distribution of respondents based on age, education level and length of illness of patients at Arifin Achmad Hospital, Riau province can be seen in the following table:

Table 1

Frequency Distribution of Respondents by Age, Gender, Education Level and Length of Sickness of Patients with COPD at Arifin Achmad Hospital, Riau Province in 2020

General Data	Category	Frequency	Percentage%
Age	Early Adult (21-40)	5	17
	Middle Adult (41-60)	25	83
	Total	**30**	**100**
Education Level	Low(Not School, SD & SMP)	18	60
	Senior High School	12	40
	Total	**30**	**100**
Duration of illness	<5 Years	16	53
	> 5 Years	14	47
	Total	**30**	**100**
Gender	Male	16	53
	Female	14	47
	Total	**30**	**100**

From the results of Table 1 it can be seen that of the 30 respondents there were respondents who belonged to early adulthood, namely 5 people (17%), while the middle adults were 25 people (83%). Meanwhile, based on the level of education, it can be seen that of the 30 respondents the majority are low-educated (not in school, elementary and junior high school) as many as 18 people (60%), and 12 people (40%) highly educated, and for the duration of shortness of illness experienced by patients with the disease. COPD from 30 respondents with a long illness <5 years as many as 16 people (53%), then as many as 14 people (47%)> from 5 years, the results obtained from

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male respondents were 16 people (53%) and female genitalia as much as 14 people 47%.

Based on general data, most of them are middle adults, according to Riskesdas (2018), in Riau province, the prevalence of COPD incidence is 25.1% with adult patients aged 30-55 years.
This study is different from I Made Mertha's 2018 study, with the title of the effect of giving deep breathing exercises on oxygen saturation in COPD patients. It was found that the mean age of COPD patients in the treatment group was 59 years, and in the control group the average age of patients was 60 years. According to Novarin C, 2015 which states that changes in the structure of a person's breathing begin in middle adulthood. Increasing age will cause chest wall elasticity, alveolar elasticity, and lung capacity to decrease and bronchial gland thickening (Novarin C, et al, 2015). These changes have an impact on increasing susceptibility to disease and easy infection of the respiratory tract, thus triggering the appearance of mucus which can obstruct the respiratory tract.

The result of education level shows that COPD patients with low education level are 18 people (60%). The level of education affects a person's perception to be more accepting of new ideas and technology (IDHS, 1997). Education is also one of the factors that influence a person's perception. Because it can make it easier for someone to make decisions and act. According to Notoadtmojo, 1997 in Ratna Eka Puspita Sari, 2010, education is an activity or learning process to develop or improve certain abilities so that educational goals can stand alone.
According to Wied Hary 1996 in Ratna Eka Sari 2010, the level of education also determines whether or not a person can easily absorb and understand the knowledge they acquire, in general the higher a person's education the better his knowledge.
The duration of suffering from COPD was 16 people (53%) who had suffered less than 5 years. The duration of suffering is the time span between the patient's first diagnosis and the present time which is stated in years (Fauzia, 2018). The results of this study were the same as Agustina Maunaturrohmah's research entitled The Relationship of Long Suffering with Physical Comfort in COPD Patients in the Cempaka Pavilion Room at Jombang Hospital, where 17 people (85%) of patients had COPD for less than 5 years. However the research results.
The longer the COPD patient experiences acute shortness of breath, the more it affects the patient's oxygen level or oxygen saturation, which decreases, which will also affect the results of rapid breathing, shortness or shallow breaths, and shortness of breath.

The majority of sex is male as many as 16 people (53%). A study conducted by Suprayitno et.al (2017) shows that male respondents are all smokers and have a history of smoking with moderate criteria, namely 200-600 cigarettes per year. The smoking habit is one of the factors that can reduce respiratory function in a person. The more cigarettes smoked and the longer the smoking history, the greater the risk of developing COPD.

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Overview of sleep quality in COPD patients

The frequency distribution of the description of the quality of sleep in COPD patients in the Jasmine room at Arifin Achmad Hospital can be seen in the following table:

Table 2
The frequency distribution of respondents based on the description of the sleep quality of COPD patients before theintervention at *tripod position* RSUD Arifin Achmad Riau Province 2020

Classification	Frequency	Percentage (%)
Poor	23	77%
Good	7	23%
Total	**30**	**100**

Based on the analysis results obtained an average score Sleep quality of lung disease patients as measured by using the *Pittsburgh Sleep Quality Index* (PSQI) found that 23 respondents (77%) had poor sleep quality, and 7 respondents (23%) had good sleep quality.

Sleep is the basis for the maintenance and adaptation of body functions in addition to providing energy for subsequent activities and recovery, sleep also allows the maintenance of a healthy body and mind. During the sleep period, cerebral functions maintain long-term memory capabilities, integrate new information and repair cerebral tissue by renewing tissue, nerve cells and biochemistry (National Institute of neurological disorder, 2001; Arifin, 2011). The results of this study indicated that 77% of the respondents had a poor sleep quality and 33% of respondents had a good sleep quality.

Assessment of quality of sleep using instruments PSQI is based on seven components of sleep that includes ratings *Sleep latency* (the accuracy of sleep), *sleep duration* (length of sleep), *Sleep efficiency* (sleep efficiency), *Sleep disturbance* (sleep disorders), the use of drugs and activities that can disrupt sleep and daily activities related to sleep. Based on the results of the study, it was found that the sleep disorders experienced by many Lung disease patients in this study were due to waking up at night, due to coughing and unable to breathe comfortably. These results are consistent with the patient sleep quality study conducted by John (2017) in Nigeria that discomfort due to disease is the cause of poor sleep quality in patients while in the hospital. Causes of discomfort due to complaints of pain, fever, shortness of breath and other complaints. This study used a modified SQT (Sleep Quality Time) questionnaire from the PSQI and used an observation sheet using the *Sleep Behavior Observation Tool.*

From the results of Hasanah's (2015) study, the sleep quality of lung disease patients as measured by using the *Pittsburgh Sleep Quality Index* (PSQI) showed that 37 respondents (66%) had poor sleep quality, and 19 (34%) had good sleep quality.

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Nursing problems related to the need for rest and sleep that can occur in patients with lung disease include sleep deprivation and sleep disorders. Sleep deprivation is one of the nursing diagnoses related to sleep disorders which describes a condition of lack of sleep that lasts for a long time. Sleep disruption is a sleep disorder which indicates a limited time for sleep disturbances, which indicates that there is a limited time for sleep in terms of quantity and quality (Doctherman & Bulecheck, 2004).

Based on the sleep assessment using the PSQI instrument, the average result is around 6.50 (0-21) where the above score can illustrate that the respondent has poor sleep quality. The results of this study can be the basis for nurses to provide nursing care to patients with lung disease, especially those related to meeting the need for sleep rest.

CONCLUSION

From the results of the characteristics of the respondents, it was found that of the 30 respondents the majority of respondents who belonged to middle adulthood were 25 people (83%). The majority of education levels are low education (not in school, elementary and junior high school) as many as 18 people (60%) and for the duration of COPD disease, the majority of those who have been sick for <5 years are 16 people (53%), the majority of sex is male as many as 16 people (53%).

Based on the results of research on sleep quality, the majority of respondents had poor sleep quality as many as 23 people (77%).

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