JUK-Medifa
(Jurnal Kesehatan, Rekam Medis dan Farmasi)
https://jurnal.seaninstitute.or.id/index.php/health
Volume 1 No 02, 2023
E-ISSN: 2963-993X

Description Of Sleep Quality In Patients With Chronic Obstructive Pulmonary Disease At Imelda Pekerja Indonesia General Hospital Medan

Ali Sabela Hasibuan[1], Ratna Dewi[2], Hamonangan Damanik[3]
[1,2,3] Imelda University Medan, Indonesia

ARTICLE INFO

Keywords:
COPD, Quality of Life, Sleep Quality

ABSTRACT

Sleep quality is the sleep that a person gets which is useful for getting freshness and fitness when waking up from sleep and can be assessed by the number of hours of sleep. Chronic Obstructive Pulmonary Disease (COPD) is a chronic inflammation that leads to long-lasting narrowing of the airways caused by destruction of the alveolar walls. The aim of the research is to determine the description of the sleep quality of patients with chronic obstructive pulmonary disease (COPD) at the Imelda Pekerja IndonesiaGeneral Hospital, Medan in 2021. This research uses a descriptive method, a cross sectional approach with a sampling technique using nonprobability sampling with a sampling method, namely consecutive sampling involving 31 respondents. The instrument used was the Pittsburgh Sleep Quality Index (PSQI) sleep quality questionnaire. The results of this study were based on the sleep quality of 31 COPD patients in the orchid room at the Imelda Pekerja IndonesiaGeneral Hospital, Medan. The majority of respondents had poor sleep quality, 21 people (67.7%) and the minority had good quality, 10 people (32, 3%). It is hoped that it can be used for basic data and developed for subsequent research by adding respondents, conducting research on the description of patients with chronic obstructive pulmonary disease (COPD) in improving sleep quality, and before conducting interviews so that researchers can better understand the material. 7%) and minorities have good qualities as many as 10 people (32.3%). It is hoped that it can be used for basic data and developed for subsequent research by adding respondents, conducting research on the description of patients with chronic obstructive pulmonary disease (COPD) in improving sleep quality, and before conducting interviews so that researchers can better understand the material. 7%) and minorities have good qualities as many as 10 people (32.3%). It is hoped that it can be used for basic data and developed for subsequent research by adding respondents, conducting research on the description of patients with chronic obstructive pulmonary disease (COPD) in improving sleep quality, and before conducting interviews so that researchers can better understand the material.

Email :
alisabelahasibuan@gmail.com
ratnadewi2550@gmail.com

INTRODUCTION

Chronic Obstructive Pulmonary Disease (COPD) is a chronic inflammation that leads to long-lasting (chronic) narrowing of the airways caused by destruction of the alveolar walls (emphysema). Airflow limitation is associated with an increase in the inflammatory response in the respiratory tract and lungs resulting in dangerous particles or gases (Vestbo, 2013). Chronic Obstructive Pulmonary Disease (COPD) is a disease characterized by obstruction or obstruction of the respiratory tract. COPD is a chronic disease characterized by a productive cough and shortness of breath (Cahyandari, 2015).

Sleep is a physical need for all humans. Sleep quality is a condition where a person's sleep produces recovery in health, a feeling of well-being and helps balance between rest and sleep. Low sleep quality is an indicator of many diseases (Unsal, 2012). A quality sleep pattern is assessed from qualitative aspects, namely the time needed to fall asleep, frequency of awakening, and subjective aspects such as depth and soundness of sleep. The quality of sleep a person gets is

useful for feeling fresh and fit when they wake up from sleep. Sleep quality is said to be good if they do not show signs of sleep deprivation and do not experience problems sleeping (Hazima, 2017).

Permatasari (2016) assessed the average sleep quality of lung disease patients, 66.1% of respondents had poor sleep quality, and 33.9% of respondents had good sleep quality. The results of the sleep assessment using the PSQI instrument obtained an average result of around 6.70 (0 - 21) where the score above can indicate that the respondent has poor sleep quality. Based on the research results, it was found that the sleep disturbances experienced by many lung disease patients in this study were due to waking up at night, coughing and not being able to breathe comfortably.

World Health Organization/ WHO (2016) includes chronic bronchitis and emphysema, an estimated 65 million people are at risk of developing severe COPD. More than 3 million people died of COPD in 2005 (5% of all global deaths). It is known that almost 90% of COPD deaths occur in low-income, middle-class countries. In 2002 COPD was the fifth leading cause of death. The number of deaths from COPD is projected to increase by more than 30% in the next 10 years unless urgent action is taken to reduce underlying risk factors, especially tobacco use. Estimates show that COPD will become the third leading cause of death worldwide by 2030 (Ritianingsih, 2017).

The United States is associated with COPD, where more than 16 million people, more than 2.5 million people in Italy, more than 30 million worldwide and caused 2.74 million deaths in 2000. The prevalence rate of moderate-severe COPD in people aged 30 years and over , with an average of 6.3%, where Hong Kong and Singapore have the smallest prevalence rate, namely 3.5% and Vietnam at 6.7% (Susanti, 2015). United States data in 2007 showed that the prevalence of COPD was 10.1%, for men it was 11.8% and for women it was 8.5%. Meanwhile, mortality is ranked as the fourth most common cause, namely 18.6 per 100,000 population. Meanwhile, the prevalence of COPD in Southeast Asian countries is estimated at 6.3%, with the highest prevalence found in Vietnam at 6.7% and China at 6.5% (Oemiati, 2013).

In Indonesia, the highest prevalence of COPD is in East Nusa Tenggara (10.0%), Central Sulawesi (8.0%), West Sulawesi and South Sulawesi with 6.7% each and East Java with 3.6%, North Sumatra with the number of sufferers. COPD was 483 people in 2012, 376 people in 2013, 478 people in 2014 and 447 people in 2015 (Anggeria, 2018). In Indonesia, COPD is one of the 10 main causes of death. The estimated prevalence of COPD in 28 countries is 7.6%. The estimated prevalence of COPD in Indonesia in men aged > 30 years is 1.6% and women 0.9%. Chronic Obstructive Pulmonary Disease (COPD) is also ranked tenth as a disease that is a global burden (Patriani, 2015).

Based on a preliminary study conducted by researchers, namely by taking data from the medical records of the Imelda Pekerja Indonesian Hospital in Medan, it was found that 270 patients suffering from COPD in the last six months were treated in the Anggrek room, 15 rooms consisting of 4 rooms in class 1, 2 class. 3 rooms, and class 3 has 8 rooms.

COPD complaints are not limited to symptoms of shortness of breath, coughing and phlegm production, but have many systemic effects and complications related to the cardiovascular system, musculoskeletal system, nervous system, nutrition and metabolism. COPD can also affect social and psychological aspects as well as physical health. Anxiety, loss of control in independence, changes in self-concept and breathing difficulties result in serious psychological changes, including fear of death and depression. Prolonged conditions of depression and anxiety without treatment can create an imbalance of serotonin, an important chemical in the brain that is responsible for making a person happy and social. Meanwhile,

Inadequate sleep and decreased sleep quality can result in physiological and psychological balance disorders. Physiological impacts include decreased activity, weakness, slow healing

process, decreased body endurance and instability of vital signs. Psychological impacts include depression, anxiety and decreased cognitive function. There is a significant relationship between depression and anxiety and the sleep quality of chronic disease patients, the higher the degree of depression, the worse the sleep quality (Alwan, 2018).

Providing therapeutic exercise walking is to increase feelings of calm, relaxation, body fitness and help you sleep better. Therapeutic exercise walking can increase blood circulation and optimize oxygen supply in tissues, which can cause serotonin to increase. Serotonin is a serum released by special cells in the pons and midbrain stem, namely the bulbar synchronizing regional (BSR) during sleep which can have a calming effect. At that time, the patient's level of fatigue or tiredness will be restored (Anggeria, 2018).

Providing a high fowler and orthopneic position can reduce shortness of breath in COPD patients. The high fowler or high fowler position is the position where the head and chest are raised to 45-80 degrees. This position is carried out to maintain comfort and facilitate the patient's breathing, while the orthopneic position is the position of the client sitting on the bed with the body slightly face down on the table accompanied by two pillows. This position can reduce dyspnea because this position helps improve lung function (Albar, 2017).

Meditation is a practice that covers the body and soul and is classified as complementary and alternative medicine (CAM). One type of meditation is the Spiritual Emotional Freedom Technique (SEFT), this therapy is a therapy that uses spirituality to reduce psychological and physical problems caused by emotional or psychosomatic causes. SEFT will produce an amplifying effect resulting in sincerity, the patient will accept positively the illness they are experiencing through fortitude, hope for recovery, and being able to learn lessons. SEFT therapy can help COPD patients deal with health problems such as anxiety, pain, depression, self-confidence and insomnia (Alwan, 2018).

Based on the description above, researchers are interested in conducting research with the title "Overview of Sleep Quality in Patients with Chronic Obstructive Pulmonary Disease at the Imelda Pekerja IndonesiaGeneral Hospital, Medan, 2021".

METHOD

The research in this study uses a descriptive method which aims to determine the description of sleep quality in patients with chronic obstructive pulmonary disease (COPD) at the Imelda Pekerja IndonesiaHospital, Medan. With a cross sectional research design, namely by conducting research with one observation (Setiadi, 2013). The research will be carried out at the Imelda Pekerja Indonesia General Hospital, Medan, in the Anggrek Room. Researchers chose this hospital as a research location with several considerations, including: the hospital is a type B referral hospital in the Medan area so the research location is easily accessible to researchers, and there is no nursing research related to the problem to be studied. This research will be conducted in April-September 2021.

Population is a generalized area consisting of objects or subjects that have certain quantities and characteristics that are determined by researchers to be studied and then drawn conclusions (Sugiono, 2017). The population is all research subjects (Sugiono, 2017). The population in this study was all 270 patients with chronic obstructive pulmonary disease (COPD) who were hospitalized in the last six months in the Orchid Room at the Imelda Pekerja Indonesia General Hospital, Medan. So the average number of COPD patients who seek treatment every month is 45 people. Sampling techniqueis the process of selecting a sample to describe the population as a whole so that conclusions from the population can be drawn (Polit & Beck, 2012). The sampling technique used was nonprobability sampling with a sampling method, namely consecutive sampling. This method is a sample selection method which is carried out by selecting all

individuals encountered who meet the sample criteria until the desired sample size is met (Polit & Beck, 2012).

The inclusion criteria in this study were: 1) Patients with chronic obstructive pulmonary disease (COPD), 2) Can communicate well, and 3) Willing to be respondents. The sample size in this study was found using the Slovin formula as follows:

n = N /1 + (N x e2)
= 45/ 1 + (45 x (0.1)2)
= 45/1.4
= 31 respondents

RESULTS AND DISCUSSION

Based on the results of research on 31 respondents, characteristics were obtained based on age, gender, education, occupation, smoking history, duration of smoking, and duration of COPD. The research results can be seen in table 1.

Table 1. Frequency Distribution and Percentage Data on Characteristics of Respondents from COPD Patients at Imelda Pekerja IndonesiaHospital, Medan (n=31)

No	Characteristics	f	Percentage (%)
1.	**Age (Years)**		
	36-45	5	16.1
	46-55	10	32.3
	56-65	10	32.3
	> 66	6	19.3
2.	**Gender**		
	Man	27	87.1
	Woman	4	12.9
3.	**Education**		
	elementary school	3	9.7
	JUNIOR HIGH SCHOOL	10	32.3
	SENIOR HIGH SCHOOL	9	29.0
	PT	9	29.0
4.	**Work**		
	Civil servants	5	16.1
	TNI/Polri	2	6.5
	Self-employed	17	54.7
	Farmer	2	6.5
	Retired	3	9.7
	Domestic worker, pedicab driver	2	6.5
5.	**Smoking History**		
	Have stopped smoking	29	93.5
	Do not smoke	2	6.5
6.	**How long to stop smoking**		
	Never smoked	2	6.5
	6 months-1 year	12	38.7
	1-2 years	4	12.9
	> 2 years	13	41.9
7.	**Long duration of COPD**		
	< 6 months	-	-

6 months-1 year	-	-
1-2 years	16	51.6
> 2 years	15	48.4
Total	31	100

Table 1 shows that of the 31 COPD patients in the orchid room at the Imelda Pekerja IndonesiaGeneral Hospital, Medan, the majority were aged 46-55 years and 56-65 years, with 10 people each (32.3%), based on gender, the majority were male. 27 people were male (87.1%), based on education the majority were junior high school graduates as many as 10 people (32.3%), based on occupation the majority were self-employed as many as 17 people (54.8%), based on smoking history the majority had quit smoking as many as 29 people (93.5%), the majority of the duration of smoking cessation was > 2 years as many as 13 people (41.9%), and based on the duration of COPD the majority was 1-2 years as many as 16 people (51.6%).

Table 2. Frequency Distribution and Percentage of Sleep Quality Variables for Respondents from COPD Patients at Imelda Pekerja IndonesiaHospital, Medan (n=31)

Sleep Quality Variables	f	Percentage (%)
Sleep quality is good	10	32.3
Poor sleep quality	21	67.7
Total	**31**	**100**

Table 2 shows that of the 31 COPD patients in the orchid room at the Imelda Pekerja IndonesiaGeneral Hospital, Medan, the majority of respondents had poor sleep quality, 21 people (67.7%) and the minority had good quality, 10 people (32.3%).).

DISCUSSION

Sleep Quality in Chronic Obstructive Pulmonary Disease (COPD) Patients

Based on the research results, table 4.2 contains the frequency distribution of sleep quality in COPD patientsshowed that of the 31 COPD patients in the orchid room at the Imelda Pekerja IndonesiaGeneral Hospital, Medan, the majority of respondents had poor sleep quality, 21 people (67.7%) and the minority had good quality, 10 people (32.3%). The quality of sleep in COPD patients is because respondents who experience lung disease are more prone to respiratory problems, causing shortness of breath and coughing. When a participant experiences shortness of breath, coughing requires energy, thereby triggering excessive sweating in the respondent.

The results of the participants' answers are supported by the opinion of Permatasari (2016), most COPD patients report that their sleep is often disturbed due to shortness of breath, coughing and excessive secretion production, especially at night. In conditions of shortness of breath, respiratory effort increases and the need for energy increases, which can lead to fatigue.

Diseases that cause pain can cause sleep problems. Someone who is sick needs more sleep than normal. And often in people who are sick their sleep patterns will also be disturbed. For tuberculosis patients, the disease is accompanied by chest pain, coughing, shortness of breath, muscle aches, and night sweats resulting in a dependency on the patient's comfortable sleep and rest (Kozier, 2012).

Description of Sleep Quality of Patients with Chronic Obstructive Disease at RSU Imelda Indonesia Medan

Sleep quality is whether the sleep is good or bad, there are no disturbances or problems during sleep, the body grows healthy, physically and spiritually. If the sleep is not good it means

the quality is poor and if the sleep is good it means the quality of sleep is decent. Sleep quantity is the amount of sleep that is not regular, such as sleeping less comfortably, sometimes being able to sleep, sometimes not being able to sleep. Some say that sleep quantity is the number of hours of sleep or the length of time you sleep and getting used to the time when it's time to sleep when you have to sleep so that your body can be trained when it's time to wake up when you have to wake up.

The causes of lack of sleep are coughing, shortness of breath, sweating, lots of thoughts such as household burdens, for example children who still need parental guidance and family economics. The cause of lack of sleep can also be disease factors, for example sore muscles, stomach pain. Signs of lack of sleep are headaches, dizziness, unsteadiness, frequent yawning, body weakness, bones feeling like they are being crushed, tightness in the chest, wobbling when walking, poor vision, lack of concentration and no appetite, feeling tired, when you want to sleep. tossing and turning, not feeling the signs that have happened because I haven't been able to sleep for almost 3 months and that has become a normal thing.

The consequences of lack of sleep are forgetfulness, it is dangerous for someone, for example they can fall, the body is unhealthy and many people get sick. Treatment for lack of sleep is listening to music, massaging/sucking, praying to God Almighty, having a big soul, fighting spiritual days and saying I want to live, I want to be healed. This enthusiasm is accompanied by prayer, and lots of activity will trigger sleep.

CONCLUSION

Based on the results of research that has been carried out, it was concluded that of the 31 COPD patients in the orchid room at the Imelda Pekerja IndonesiaGeneral Hospital, Medan, the majority of respondents had poor sleep quality, 21 people (67.7%) and the minority had good quality sleep. 10 people (32.3%).

REFERENCES

Alwan Revai, N. I. M. (2018). *Pengaruh Spiritual Emotional Freedom Technique (Seft) Terhadap Kecemasan, Saturasi Oksigen Dan Kualitas Tidur Pasien Penyakit Paru Osbtruktif Kronik (PPOK).*

Anggeria, E. (2018). Pengaruh Therapeutic Exercise Walking Terhadap Kualitas Tidur Klien Dengan Penyakit Paru Obstruksi Kronik (Ppok) Di Rs TK II Putri Hijau Medan. *Jurnal Keperawatan Priority*, *1*(1).

Brunner & Suddart's, Suzanne C. Smeltzer, et al. (2012). *Textbook of Medical Surgical Nursing.*

Buysse, D. J., Reynolds III, C. F., Monk, T. H., Hoch, C. C., Yeager, A. L., & Kupfer, D. J. (1991). *Quantification of subjective sleep quality in healthy elderly men and women using the Pittsburgh Sleep Quality Index (PSQI). Sleep*, *14*(4), 331-338.

Cresswell, John. (2015). *Research Design Qualitative And Mixed Methods Approaches Third Edition*. American: Sage.

Creswell, J. W. (1998). *Qualitative inquiry and research design: Choosing among five traditions.* Thousand Oaks, CA: Sage Publications.

Dains, Joyce E., author. (2016). Advanced Health Assessment and Clinical Diagnosis in Primary Care. Elsevier:China.

Global Intiative Lung Disease (GOLD). (2018). *Global Staregy For Diagnosis, Management, and Prevention Of Chronic Obstructive Pulmonary Disease 2017 Report*. GOLD Committee. Retrieved From www.goldcopd.org.

Hazima, N. P. (2017). Perbandingan kualitas tidur minggu ke-1 dan ke-5 dalam modul emergency pada mahasiswa angkatan 2014 program studi kedokteran dan profesi dokter fakultas

kedokteran dan ilmu kesehatan uin syarif hidayatullah jakarta *(Bachelor's thesis, UIN Syarif Hidayatullah Jakarta: Fakultas Kedokteran dan Ilmu Kesehatan).*

Hidayat, A.A.A. dan M. Uliyah. 2014. *Pengantar Kebutuhan Dasar Manusia.* Edisi 2 Buku 1. Jakarta: Salemba Medika.

Hillton, P. A. (2004). *Fundamental Nursing Skills. Lecture in Nursing.* Universsity Of Sheffield.

Indonesia, P. D. P. (2003). *Penyakit paru obstruktif kronik. Pedoman dan Penatalaksanaan di Indonesia: 1*, 12.

Khasanah, Khusnul, and Wahyu Handayani. (2012). "Kualitas Tidur Lansia Balai Rehabilitasi Sosial "MANDIRI" Semarang." *Jurnal Keperawatan Diponegoro* 1.1 (2012): 189-196.

Khotimah, S. 2013. *Latihan Endurance Meningkatkan Kualitas Hidup Lebih Baik daripada Latihan Pernafasan pada Pasien PPOK di BP4 Yogyakarta.* Sport and Fitness Jurnal. *Volume 1, No 1.*

Kozier, B., G. Erb., A. Berman, dan S. Synder. 2011. *Buku Ajar Fundamental Keperawatan: konsep, proses & Praktik.* Edisi 7 Volume 1. Jakarta: EGC.

LeMone, P, dan Burke. 2008. *Medical Surgical Nursing : Critical Thinking in Client Care.* Fourth Edition.New Jersey: Pearson Prentice Hall.

Lewis, Sharon Mantik, Author. (2011). *Medical Surgigal Nursing: Assessment and Management Of Clinical Problem*. Canada.

Lopez AD ett. (2016). *COPD:* Current Burden and Future Projection. *European Respiratory Journal*, 2006;27:397-15.

Lumantow, I., Rompas, S., & Onibala, F. (2016). Hubungan Kualitas Tidur Dengan Tekanan Darah Pada Remaja Di Desa Tombasian Atas Kecamatan Kawangkoan barat. *Jurnal Keperawatan*, *4*(1).

Lumbantobing, SM. (2004). Neurogeriatri. *Jakarta : Balai Penerbit FKUI. p. 111-122.*

Mubarak W.I., Lilis I., Joko S. (2015). Buku Ajar Ilmu Keperawatan Dasar. Jakarta: Salemba Medika.

Nursalam. (2014). *Metodologi Penelitian Ilmu keperawatan.* Jakarta: Salemba Medika.

Oemiati, R. (2013). *Kajian epidemiologis penyakit paru obstruktif kronik (PPOK). Media Penelitian dan Pengembangan Kesehatan*, *23*(2).

Patriani, A. A., Paramastri, I., & Priyanto, M. A. (2010). Pemberdayaan Keluarga dalam Rehabilitasi Medik Paru pada Penderita Penyakit Paru Obstruksi Kronik di Balai Pengobatan Penyakit Paru-Paru Yogyakarta. *Berita Kedokteran Masyarakat*, *26*(2), 55.

Permatasari, A., & Karota, E. (2016). Hubungan Keluhan Pernapasan: Sesak Napas, Keletihan (Fatique) Dan Batuk Dengan Kualitas Tidur Pasien Penyakit Paru. *Jurnal Ners Indonesia*, *6*(1), 45-49.

Persatuan Dokter Paru Indonesia (PDPI). (2016). *PPOK : Diagnosa Dan Penatalaksanaan*. (M.Amin,Ed). Jakarta : UI press.

Polit, D. F, & Beck, C. T. (2012). *Nursing research appraising evidence for nursing practice,* Lippincott Williams & Wilkins.

Potter, P.A. dan A.G. Perry. 2010. *Fundamental of Nursing*. Seventh Edition Book 3. Singapore: Elsevier. Terjemahan oleh D.N Fitriani., O. 90 Tampubolon. dan F. Diba. 2010. *Fundamental Keperawatan*. Edisi 7 Buku 3. Jakarta: Salemba Medika.

Ritianingsih, N. (2017). Lama Sakit Berhubungan Dengan Kualitas Hidup Pasien Penyakit Paru Obstruksi Kronis (Ppok). *Jurnal Kesehatan Bakti Tunas Husada: Jurnal Ilmu-ilmu Keperawatan, Analis Kesehatan dan Farmasi*, *17*(1), 133-138.

Smeltzer, S.C. dan B.C Bare. (2013). *Buku Ajar Keperawatan Medical-Bedah Brunner & Suddart.* Edisi 8 Volume 1. Jakarta: EGC.

Susanti, P. F. E. (2015). Influence of Smoking on Chronic Obstructive Pulmonary Disease (COPD). *Jurnal Majority*, *4*(5).

Sugiyono. 2017. *Metode Penelitian Kuantitatif, Kualitatif dan R&D*. Bandung: Alfabeta.

Wong, C. J. (2010). *Assessment of fatigue in patients with COPD participating in a pulmonary rehabilitation program: a feasibility study* (Doctoral dissertation).

Yilmaz, M., Y. Sayın. dan H. Gurler. 2012. Sleep quality of hospitalized patients in surgical units. *Nursing Forum.* 47(3):183-192.