

**FACTORS THAT AFFECT ANXIETY IN PATIENTS WITH
RESPIRATORY DISORDERS AT THE PULMONARY
POLYCLINIC OF ARIFIN ACHMAD HOSPITAL, RIAU
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Pekanbaru, Indonesia.*****Corresponding author: Cindyfathiasalsabilla02@gmail.com****Abstract**

Problems with breathing can be dangerous because they stop the lungs from sending enough oxygen to the body. One way that breathing problems can affect a person is by making them feel anxious. Anxiety is a feeling of fear or worry. This study looked at what affects the anxiety of patients with breathing problems at RSUD Arifin Achmad Riau Province. The study used a method called descriptive analysis design with a cross-sectional approach. We used a sample size of 43 respondents and the following instruments: the Medical Research Council questionnaire, the Pittsburgh Sleep Quality Index questionnaire, the World Health Organization Quality of Life-BREF questionnaire and the Hospital Anxiety and Depression Scale questionnaire. The results showed that the degree of breathlessness, quality of life and sleep quality in patients with respiratory disorders can affect anxiety levels. This was confirmed by statistical tests showing $P < 0.05 = 0.000$, which means there is a significant relationship with increased patient anxiety. The results of the person correlation test obtained $r = 0.668$, which indicates a strong correlation between sleep quality and anxiety level. The results also prove that the quality of life is linked to anxiety levels ($P < 0.05 = 0.001$).

Keywords: D Anxiety factors 1; respiratory distress 2; anxiety 3.**INTRODUCTION**

Respiratory diseases are a complex and heterogeneous group of disorders that have a variety of causes and can affect any point along the airways (Faomasi Gulo et al., 2023). Respiratory disorders refer to conditions that affect the airways, potentially endangering a person's life by inhibiting the ability of the lungs to supply enough oxygen to the body (Tampubolon et al., 2023).

Some of the most common respiratory disorders are chronic obstructive pulmonary disease (COPD), tuberculosis (TB), and asthma (WHO, 2023). Chronic Obstructive Pulmonary Disease (COPD) is a leading cause of chronic morbidity and mortality worldwide, many people suffer from this disease for years and die prematurely or as a result of complications (Venkatesan, 2023). Chronic Obstructive Pulmonary Disease (COPD) is the fourth leading cause of death worldwide, causing 3.5 million deaths in 2021, about 5% of all global deaths (WHO, 2024). Pulmonary tuberculosis (TB) is a respiratory infectious disease that has been a public health problem in the world for a long time caused by the bacterium *Mycobacterium Tuberculosis* that attacks the respiratory tract (Wijayanti et al., 2024). A total of 1.25 million people will die from tuberculosis (TB) in 2023, in 2023 it is estimated that 10.8 million people worldwide will be infected with TB including 6.0 million men, 3.6 million women and 1.3 million children (WHO, 2024). Asthma is defined as a chronic disease of the respiratory tract

characterized by inflammation, increased reactivity to various stimuli and narrowing of the airway that can return spontaneously (Pambudi et al., 2023). Asthma is estimated to affect 262 million people in 2019 and cause 455,000 deaths (WHO, 2024).

Based on the results of a survey by the Indonesian Ministry of Health in 2023, the prevalence of pulmonary tuberculosis in Indonesia is the highest in Central Papua Province (1.15%), South Papua province (0.98%), mountainous Papua province (0.77%) and the prevalence in Riau province (0.19%). The highest prevalence of asthma in Indonesia is in the provinces of DI Yogyakarta (3.5%), the provinces of East Kalimantan and West Java (2.4%) and Riau province (1.2%) and the prevalence of COPD in Indonesia is 5.6% (Ministry of Health, 2023). Based on 2024 medical record data at Arifin Achmad Hospital, Riau Province, the prevalence of COPD from January to August in 2024 amounted to 108 people. The prevalence of Tuberculosis from January to August in 2024 is 222 people. Anxiety disorders are the most common mental disorder in the world, estimated to be 4% of the global population today affecting 310 million people in 2019. Anxiety can be defined as feelings of discomfort, worry, or fear associated with the anticipation of danger (threat), the cause of which is often non-specific or unknown. One of the emotional changes of respiratory disorders is anxiety (anxiety) is a natural disorder of feelings characterized by deep and continuous feelings of fear or worry, no disturbance in assessing reality, personality still intact, behavior can be disturbed but still within normal limits (Hendrawati & Amira Da, 2018). Factors that affect anxiety in Respiratory Disorders: Degree of Dipsnea, a high degree of dipsnea often triggers anxiety due to the fear of not being able to breathe, while anxiety can relieve dipsnea through the body's stress response. This condition often occurs in patients with respiratory disorders. Quality of Life, quality of life has a close relationship with respiratory disorders. Poor quality of life due to physical limitations or a sense of social isolation can trigger anxiety, forming a debilitating environment. Sleep quality, sleep quality and anxiety are closely related and form cycles that affect the physical and psychological condition of the sufferer. Repeated shortness of breath, especially at night, also interferes with sleep and increases anxiety. This cycle can significantly reduce the quality of life of patients.

METHODS

This research is a type of quantitative research using a descriptive design analysis with a cross sectional approach. This research was conducted at the Pulmonary Polyclinic of Arifin Achmad Hospital, Riau Province for 4 days, starting from January 31, 2025 to February 04, 2025. Sampling was done using *the Accidental sampling* technique. This *Accidental sampling* technique is a technique of determining samples based on needs, i.e. anyone who happens to meet the researcher can be used as a sample. In this study, the number of samples used was 43 people. The instruments used in this study were the *Medical Research Council* (MRC) questionnaire, *the Pittsburgh Sleep Quality Index* (PSQI) questionnaire, the *World Health Organization Quality of life questionnaire* (BREF (WHOQOL_BREF)), the *Hospital Anxiety and Depression Scale* (HADS) questionnaire.

RESULTS

Table 1. Univariate analysis data on respondent characteristics can be seen as follows.

No.	General Data	Frequency (N)	Percentage (%)
1.	Age		
	Early Adult (20-39 years)	12	27.9
	Late Adult (40-59 years)	24	55.8
	Elderly (60-80)	7	16.3
2.	Gender		
	Man	25	58.1
	Woman	18	41.9
3.	Education		
	SD	4	9.3
	JUNIOR	9	20.9
	SMA	19	44.2
	College	11	25.6
4.	Work		
	Self employed	5	11.6
	Entrepreneurial	15	34.9
	PNS	3	7.0
	Pensioner	3	7.0
	Not Working	4	9.3
5.	Diagnosis		
	PPOK	8	18.8
	PULMONARY TB	13	30.2
	ASTHMA	10	23.3
	LUNG CA	2	4.7
	PNEMONIA	4	9.3
	PNEUMPTORAKS	3	7.0
	BRO NCHITIS	3	7.0
6.	Long Suffering		
	< 5 years	42	97.7
	≥ 5 years	1	2.3

Source: primary data

Shows more respondents who are in the age group of 40-59 years (55.8%), with the male gender more dominant (58.1%). Most of the respondents had a high school education (44.2%) and were entrepreneurs (34.9%). The most common diseases are Pulmonary Tuberculosis (30.2%) and Asthma (23.3%). Most respondents had suffered from respiratory distress for less than 5 years (97.7%).

Table 2. Bivariate Analysis

Variable	N	r	P-Value
Degree of Dyspnea	43	0.490	0.000
Sleep Quality	43	0.660	0.000
Quality of Life	43	0.515	0.001

Source: primary data

Showed a significant value between the degree of dyspnea and the level of anxiety, $P < 0.05 = P\text{-Value } 0.000$. These results suggest that there is a relationship between Derajar Dyspnea and Anxiety Levels. It is evidenced by the co-science value of person Correlation $r =$

0.490. It can be concluded that the degree of dyspnea is related (+) to the level of anxiety with a moderate correlation. Furthermore, the significance value between Sleep Quality and Anxiety Level was obtained, $P < 0.05 = P\text{-Value } 0.000$. These results suggest that there is a relationship between Sleep Quality and Anxiety Levels. It is evidenced by the Person Correlation coefficient value $r = 0.668$. It can be concluded that Sleep Quality is (+) related to Anxiety Level with a strong correlation. And the last one was obtained a significance value between Quality of Life and Anxiety Level, $P < 0.05 = P\text{-Value } 0.001$. These results suggest that there is a relationship between Quality of Life and Anxiety Levels. It is evidenced by the value of the Person coefficient Correlation $r = 0.515$. It can be concluded that Quality of Life is (+) related to Anxiety Level with Moderate Correlation Quality of Life.

DISCUSSION

Of the three factors that affect anxiety levels, the most influential one on anxiety levels is sleep quality as evidenced by the value of the correlation Person coefficient $r = 0.668$. It can be concluded that sleep quality is (+) related to Anxiety Level with a strong correlation. And it is proven by obtaining a significance value between Quality of Life and Anxiety Level, $P < 0.05 = P\text{-value } 0.001$.

It is hoped that future research can use more varied research methods, such as qualitative approaches to better understand the experiences of patients with respiratory disorders and anxiety. Further research can explore other factors that may affect a patient's anxiety, such as social, economic, or family support factors. Non-pharmacological therapy-based interventions such as relaxation techniques, meditation, or cognitive behavioral therapy can be developed to help manage the patient's anxiety

CONCLUSION

The majority of respondents were aged 40-59 years old (55.8%) and more were male (58.1%). Most of the respondents had a high school education (44.2%) and were entrepreneurs (34.9%). The most common diseases are Pulmonary Tuberculosis (30.2%) and Asthma (23.3%). Most of the respondents had a degree of severe dyspnea (51.2%). There is a significant relationship between the degree of dyspnea and the level of anxiety of the patient, where the higher the degree of dyspnea, the higher the level of anxiety experienced. The majority of respondents had poor sleep quality (76.7%), which was associated with increased anxiety. Sleep disturbances due to repeated shortness of breath cause emotional disturbances and worsen the patient's psychological state. As many as 62.8% of respondents have a poor quality of life. The low quality of life is associated with increased anxiety, as the physical and social limitations experienced by patients worsen their psychological condition. The results of the statistical test showed that a higher degree of dyspnea was significantly associated with increased patient anxiety ($p = 0.000$). This suggests that patients with more severe respiratory distress have a tendency to experience higher anxiety. Patients with poor sleep quality were more prone to severe anxiety than patients with good sleep quality ($p = 0.000$). Sleep disturbances that patients often experience due to shortness of breath cause emotional instability and increased anxiety. Poor quality of life had a significant association with severe anxiety ($p = 0.001$). Patients with physical and social limitations are more likely to experience anxiety due to their inability to carry out their daily activities optimally. Of the three factors that affect anxiety levels, the most influential one on anxiety levels is sleep quality as evidenced by the value of the correlation Person coefficient $r = 0.668$. It can be concluded that sleep

quality is (+) related to Anxiety Level with a strong correlation. And it is proven by obtaining a significance value between Quality of Life and Anxiety Level, $P < 0.05 = P\text{-value } 0.001$

REFERENCES

1. Hasanah, R. (2023). The expert system for diagnosing respiratory diseases uses the forward chaining method. *Journal of Advanced Research Informatics*, 1(01), 33–50.
2. Faomasi Gulo, A., Auliya Zulfa, A., Fitriyani, A., Ardiswina Pondini, D., Kairunnisa, S., & Frianto, D. (2023). Analysis of the Cost Effectiveness of Antibiotic Therapy in People with Respiratory Disorders in Indonesia: Literature Review Article. *INNOVATIVE: Journal Of Social Science Research*, 3(2), 2743–2755.
3. Tampubolon, L. F., Sarigih, I. S., Perangin, I., & Siregar, T. N. (2023). Description of oxygen characteristics and saturation in patients with respiratory distress. *Urgent Journal...*, 5(2), 131–138.
4. WHO. (2023). *Chronic obstructive pulmonary disease (COPD)*.
5. Venkatesan, P. (2023). GOLD COPD report: 2023 update. *The Lancet. Respiratory Medicine*, 11(1), 18.
6. WHO. (2024). *Chronic Obstructive Pulmonary Disease (COPD)*.
7. Wijayanti, F., Cahyani, S. D., & ... (2024). The Relationship between Germ Numbers and Home Environmental Sanitation and the Incidence of Pulmonary TB. *Journal...*, 5, 3819–3828.
8. WHO. (2024). *Tuberculosis*.
9. Pambudi, R. S., Dewi, O. P., & Khusna, K. (2023). Overview of the level of treatment compliance of asthma patients at Surakarta Hospital. *Scientific Journal of Pharmacy*, 12(3), 299. <https://doi.org/10.30591/pjif.v12i3.5162>
10. WHO. (2024). *Asthma*.
11. Ministry of Health, R. (2023). The 2023 Indonesian Health Survey is in numbers. In *the city of Kediri in numbers*.
12. WHO (World Health Organization). (2023). *Anxiety Disorders*.
13. Hendrawati, H., & Amira Da, I. (2018). Factors Related to the Level of Anxiety of Pulmonary Tuberculosis Patients in One Hospital in Garut Regency. *Scientific Journal of Nursing Sai Betik*, 14(1), 21. <https://doi.org/10.26630/jkep.v14i1.1003>