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Examination of Sleep Quality in Patients Diagnosed with Covid-19

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Abstract

Objective: To examine sleep quality in patients diagnosed with Covid-19.

Material and Method: The research was carried out in Tatvan State Hospital Covid and ınternal medicine clinics between April 2022 and July 2022. Sample size was calculated using G*Power 3.1.9.2 software. According to the G*Power analysis, n=90 (45 Covid-19, 45 internal medicine patients) patients were included in the study with a 95% confidence interval and 0.05 margin of error. Random sampling method was preferred in patient selection. Data were collected by face-to-face interview method using the patient identification form and the Pittsburgh sleep scale. Pittsburgh sleep scale questions measure patients' retrospective (1 week ago) sleep quality. Descriptive statistical methods (frequency, standard deviation, mean) were used in data analysis. Mann–Whitney U, Kruskal–Wallis tests were performed to determine the statistical significance of the differences between the mean values of the groups.

Results: There was no statistical difference between the pre-disease and last week Pittsburgh Sleep Quality Scale (PUKI) scores of the patients hospitalized in the Covid-19 clinic ($p>0.05$). No statistically significant difference was found when the mean PUKI scores of patients hospitalized in Covid-19 and internal medicine clinics were compared ($p>0.05$). It was determined that Covid-19 patients experienced more pain ($p<0.05$).

Conclusion:A decrease in sleep quality was detected in both patient groups.Treatment of patients should be arranged according to sleep hours. Non-pharmacological treatments should be included in order to reduce the pain and improve sleep quality of Covid-19 patients. Occupational therapy should be applied to the patients.

Keywords: Covid-19, sleep quality, PUKI.

I. Introduction

Human beings are a whole with their spiritual, physical, intellectual, social and spiritual needs. A person can be healthy if he meets these needs in a balanced way. If these needs are not fully met, various disorders may occur in people. One of the basic needs that humans must meet is sleep (1). Sleep is not only a state of inactivity that allows the organism to rest, but also a period of active renewal that prepares the whole body for life (2). Sleep is an important physiological activity to maintain a good quality of life and mental and physical health. A person must be able to control this activity well. If not well controlled, this cycle will be disrupted. Disruption in the normal sleep cycle causes prolonged wakefulness and insufficient sleep, causing nightmares, insomnia, daytime instability and fatigue, and these disruptions can affect a person's daily activities and reduce the quality of life (3).

Severe stressful situations, depression, trauma, technology use, anxiety, low socioeconomic status, urban life and social media use are among the potential risk factors in the development of sleep disorders (4). Sleep disorders and mental disorders are increasing worldwide (5). People have been dealing with epidemic diseases since the earliest periods of history. Epidemics have threatened people in social, demographic, military and social terms and have produced very important consequences. These consequences have forced people to struggle with difficult situations (6). Unidentified pneumonia cases were reported in Hubei Province, People's Republic of China, in late December 2019. It has been emphasized that it is very similar to viral pneumonia in terms of clinical features. From the analysis of respiratory samples, experts from the People's Republic of China Centers for Disease Control reported that this pneumonia was caused by the new coronavirus (7).

Covid-19 is a respiratory infection. It is considered to be a mutated form of SARS-CoV2, a newly recognized coronavirus, that allows human pathogenicity. The disease continues to be seen in humans and is experienced as a pandemic. Although vaccines have been produced for the disease and various precautions have been taken, its occurrence has not been prevented. This situation affects not only people's physical health but also their psychosocial health. The Covid-19 epidemic caused a long period of quarantine, people's movement

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restrictions, disruptions in the daily activities of individuals, and caused significant changes in the routines of the elderly and children (8). Covid-19 and the quarantine measures have had a severe impact on people's mental health. Many factors such as long-term quarantine, risk of infection, uncertainty, helplessness, hopelessness, disappointment, fatigue, stigma, insufficient data on the disease, insufficient supplies, economic problems, unemployment, lack of social support have had a negative impact. These factors have left many negative effects on people during the Covid-19 period, such as insomnia, deterioration in sleep quality, and increased daytime sleepiness. In addition, Covid-19 patients who are hospitalized have been negatively affected by many sleep-related factors such as sleep duration and sleep quality, both because they are hospitalized and because they have been diagnosed with Covid-19 (9).

More than two years have passed since the Covid-19 outbreak. This epidemic has affected and is affecting people socially, economically, health and psychologically. People have quarantined in their homes to reduce transmission. They started communicating via telecommunication, reduced social contact, and wore masks. This behavioral change has gained a very important dimension. Being confined at home or in hospital has changed people's routine lives in terms of physical activity, eating habits, and use of electronic devices. These factors have caused changes in sleep habits and sleep quality. Sleep changes and sleep disorders have been observed both qualitatively and quantitatively in global communities. The term "COVID-somnia" has been used to describe sleep disorder in the Covid-19 pandemic (10). Covid-19 poses a global threat due to its rapid transmission from person to person and its high mortality rate. Covid-19 is most severe and dangerous in elderly individuals and people with comorbid diseases. The epidemic has been the most important agenda of the whole world since the day it started. The key role in caring for Covid-19 patients belongs to nurses. Nurses are healthcare professionals fighting on the front lines of the Covid-19 epidemic (11). According to the study conducted by Vasfiye and Günay, an increase in psychological diseases such as depression and anxiety was observed during the Covid-19 pandemic. According to this study, the prevalence of anxiety was 24.6% and the prevalence of depression was 18.5%, while 69.5% of the participants had poor sleep quality. This rate is considerably higher than before the Covid-19 pandemic. This shows that the epidemic process negatively affects the sleep quality and mental state of individuals (12).

This study was conducted to determine the sleep quality of patients hospitalized in the Covid-19 ward, and to compare their sleep conditions before and after the disease with the sleep quality of patients hospitalized in the internal medicine ward.

- Does Covid-19 reduce patients' sleep quality?
- Is the deterioration in sleep quality greater compared to internal medicine clinic patients?

II. Materials and Methods

2.1. Type of research

The research was conducted descriptively and cross-sectionally.

2.2. Place and time of research

It was held in Bitlis Tatvan State Hospital Covid-19 and internal medicine clinics between April 2022 and July 2022.

2.3. Population and Sample of the Research

The universe of the research; It consists of patients who have been hospitalized at Tatvan State Hospital with the diagnosis of Covid-19 in the last year. Sample size was calculated using G*Power 3.1.9.2 software. According to G*Power analysis, n = 90 (45 Covid-19, 45 internal medicine patients) patients were included in the study with a 95% confidence interval and a margin of error of 0.05. Random sampling method was preferred in patient selection. Criteria for inclusion in the study; Being diagnosed with Covid-19 means being over the age of 18 and not having difficulty communicating. Exclusion criteria from the study; Not being diagnosed with Covid-19, being under the age of 18, and having communication problems.

2.4. Collection of Data

Data was collected from patients hospitalized in the Covid-19 service and internal medicine service at Tatvan State Hospital between April and June 2022, using the patient introduction form created by the researchers and the Pittsburgh sleep quality scale. The forms were filled out by face-to-face interview method. Each interview lasted 15-20 minutes.

2.4.1. Data Collection Tools

2.4.1.1. Patient Introduction Form

Sociodemographic data of the patients; It includes age, gender, educational status, clinic, and length of hospital stay.

2.4.1.2. Pittsburgh Sleep Quality Scale

The Pittsburgh Sleep Quality Scale (PSQI), a 19-item self-report scale, was developed by Buysse et al. (1989) (60), developed by Ağargün et al. (1996) (13) adapted it into Turkish. PSQI evaluates sleep

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disturbance and quality over the past month. The scale, which consists of 24 questions, has 19 self-report questions. The scale consists of 7 components: subjective sleep quality, sleep medication use, sleep latency, sleep disturbance, sleep duration, habitual sleep efficiency, and daytime dysfunction. Each component is evaluated on a scale of 0-3 points. The total score of the 7 components gives the total scale score. Total score varies between 0-21. A total score greater than 5 indicates poor sleep quality, and a score below 5 indicates good sleep quality.

2.5. Statistical Evaluation of Data

While analyzing the data, SPSS (Statistical Package for the Social Sciences) 26.0 statistical program was used. Descriptive statistical methods (frequency, standard deviation, mean) were used in data analysis. The Kolmogorov-Smirnov test was performed to test normal distribution assumptions. Chi-square test was applied to compare categorical variables. Mann–Whitney U and Kruskal–Wallis tests were performed to determine the statistical significance of the differences between the mean values of the groups.

2.6. Ethical Principles of Research

Before starting the research, ethical approval (decision numbered 22/05-5 and numbered E.2073) was obtained from Bitlis Eren University Rectorate Ethical Principles and Ethics Committee. Bitlis Provincial Health

Institutional permission was obtained from the Directorate (number 70871440). However, after informing the patients about the research and explaining that their personal information would be protected and that the information received would be used only in this research, the volunteer patients were included in the research after their written consent was obtained. The principles of the Declaration of Helsinki and the Council of Higher Education Scientific Research and Publication Ethics Directive were adhered to at all stages of the study.

III. Findings

Sociodemographic characteristics of the patients included in the study are shown in Table 1. Of our patients included in the study, 63.3% were women, 50.0% were illiterate, 46.7% were between the ages of 57-65, 78.9% were married, 50.0% were Covid-19. It was determined that they were hospitalized in the clinic, 65.6% of them had been hospitalized for 5-11 days, 71.1% had been hospitalized before, 40.0% were housewives, and 74.4% were non-smokers (Table 1). .

Comparison of hospitalization periods of patients with Covid-19 and patients hospitalized in the internal medicine ward is shown in Table 2. The percentage of patients hospitalized in the internal medicine ward between 12 and 18 days was 46.7, which was high. The difference between the length of stay of patients hospitalized in the internal medicine and Covid-19 wards was found to be statistically significant. ($p<0.05$ Table 2). It is observed that patients hospitalized in the internal medicine ward stay in the hospital for longer periods of time compared to patients hospitalized in the Covid-19 ward.

Comparison of previous hospitalization status of Covid-19 and internal medicine patients is shown in Table 3. The difference between Covid-19 and previous hospitalization status of internal medicine patients was found to be statistically significant ($p <0.05$). 80.0% of internal medicine patients stated that they had been hospitalized before. This table shows that internal medicine patients are frequently hospitalized.

A comparison of the coughing conditions of patients hospitalized in internal medicine and Covid-19 wards for the last week is shown in Table 4. While the percentage of patients experiencing cough problems three or more times a week in the Covid-19 ward is 26.7%, this is 0.0% in patients in the internal medicine ward. The difference between the coughing status of patients with Covid-19 and patients hospitalized in the internal medicine ward was found to be statistically significant ($p<0.05$ Table 4).

Comparison of pain levels of patients hospitalized in the internal medicine and Covid-19 wards is shown in Table 5. 33.3% of Covid-19 patients experience pain three or more times a week. The difference between the pain levels of patients hospitalized in the internal medicine and Covid-19 wards was found to be statistically significant ($p<0.05$). It has been found that Covid-19 patients experience more pain during their hospital stay.

Comparison of sleep quality between Covid-19 and internal medicine patients is shown in Table 6. While the rate of internal medicine patients stating that their sleep quality has been very bad for the last week is 6.7%, the rate of Covid-19 patients is 22.2%. The difference between them was not found to be statistically significant ($p>0.05$). Although there was no statistical difference between the groups, the proportion of patients hospitalized in the Covid-19 ward who said their sleep quality was "very bad" was higher.

Comparison of the ability of patients hospitalized in the Covid-19 ward to fall asleep

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within 30 minutes before the disease and in the last week is shown in Table 7. 31.1% of the patients answered the question "You have not been able to fall asleep within 30 minutes for the last week" three or more times a week, and 22.2% gave the same answer to the situation before the disease. The difference between the patients in the last week and before the disease was found to be statistically significant ($p<0.05$ Table 7). This table shows that Covid-19 patients have more trouble falling asleep after hospitalization.

Table 8 shows how many hours patients actually slept at night according to the clinics where they were hospitalized. 53.3% of patients diagnosed with Covid-19 and 44.4% of internal medicine patients stated that they slept between 8-11 hours in total at night. It was determined that there was no statistically significant relationship between the clinic where the patients stayed and the duration of their sleep at night ($p>0.05$).

The Pittsburgh sleep quality scale (PSQI) scale between 0 and 5 indicates good sleep quality. Scores between 5 and 21 indicate poor sleep quality. The average PSQI score of patients hospitalized in the Covid-19 clinic is 5.97 ± 3.04, and the PSQI score of patients hospitalized in the internal medicine clinic is 5.31 ± 2.39, indicating that sleep quality is poor in both patient groups. When the PSQI score averages of patients hospitalized in the Covid-19 and internal medicine clinics were compared, no statistically significant difference was detected ($p>0.05$ Table 9). Although there was no statistically significant difference between the groups, it was determined that the sleep quality of Covid-19 clinic patients was worse.

The Pittsburgh sleep quality scale (PSQI) scale between 0 and 5 indicates good sleep quality. Scores between 5 and 21 indicate poor sleep quality. When PSQI scores are examined according to smoking status, it is seen that the sleep quality of the patients is poor in both cases. When comparing smoker and non-smoker patients, no statistically significant difference could be detected ($p<0.05$ Table 10). Although there was no statistical difference, it was determined that the sleep quality of non-smoking patients was higher than that of smokers.

The Pittsburgh sleep quality scale (PSQI) scale between 0 and 5 indicates good sleep quality. Scores between 5 and 21 indicate poor sleep quality. Comparison of PSQI scores of patients hospitalized in the Covid-19 clinic before the disease and in the last week is shown in Table 11. When we look at the PSQI scores of patients hospitalized in the Covid-19 clinic before the disease, it is seen that the patients had good sleep quality before the disease, but poor sleep quality in the last week, that is, during the time they were hospitalized. There is no statistical difference between the PSQI scores of patients hospitalized in the Covid-19 clinic before the disease and in the last week ($p <0.05$). Although there is no statistical difference, there is a decrease in the sleep quality of the patients after their hospitalization.

IV. Discussion

Sociodemographic characteristics of the patients included in the study are shown in Table 1. It was determined that 63.3% of our patients included in the study were female, 26.7% were male, 46.7% were between the ages of 57-65, and 74.4% were non-smokers (Table 1).

According to the research conducted by Çobanoğlu and his colleagues on 127 patients between February 20 and March 20, 2021, in a training and research hospital in the north of Turkey; The average age of the patients included in the study is 63.14. It consists of 55.1% women and 44.9% men. It was stated that 11% of the patients smoked (14). According to the study conducted by Karaköse et al. on 112 patients diagnosed with Covid-19, 63.4% of the patients were male and the average age was 55.24 (15).

Many studies including demographic characteristics have been conducted in the literature on Covid-19 (16, 17). The studies conducted and the data from our study support each other. When we look at the average age of patients hospitalized in the Covid-19 ward, the fact that the rate is high is due to the lower immune system of older individuals compared to younger individuals and chronic diseases related to advanced age, etc. Factors may cause the patients hospitalized in the Covid-19 ward to be older individuals. It is seen that the percentage of patients hospitalized in the Covid-19 ward is higher among women than men. This may be due to the fact that men do not apply to the hospital as long as they can bear it in order to avoid job loss and loss of time to fulfill the role functions that society imposes on male individuals, and the pain threshold of men is higher than women. The lower number of smokers compared to non-smokers may be due to the fact that the majority of patients are women and that patients quit smoking due to health problems due to their advanced age.

Comparison of previous hospitalization status of Covid-19 and internal medicine patients is shown in Table 3.3. The difference between Covid-19 and previous hospitalization status of internal medicine patients was found to be statistically

significant ($p<0.05$). 80.0% of internal medicine patients stated that they had been hospitalized before. This table shows that internal medicine patients are frequently hospitalized.

According to the study conducted by Yiğitoğlu et al. on 197 patients receiving inpatient treatment in the Covid-19 wards of a university hospital in Istanbul between August 2020 and November 2020, 44% of them had not been hospitalized before and 56.3% of the patients had more than one chronic disease. It has been stated that he has a disease (16). According to the study conducted by Tan et al. on 173 patients, 30.6% of the patients stated that they had been hospitalized for more than 22 days, while 71.7% stated that they had been hospitalized before. It was determined that 51.4% of the patients had previously been hospitalized with the same diagnosis (18).

The studies conducted support our study, and in both studies, it was determined that more than half of the Covid-19 patients had not been hospitalized before. The reason why the previous hospitalization rates of patients hospitalized in the Covid-19 ward are lower compared to the internal medicine ward may be due to the fact that internal medicine patients have had to be hospitalized before due to their chronic diseases. The reason why this rate is low in the Covid-19 ward may be that Covid-19 affects all people. The majority of those in the Covid-19 ward who have been hospitalized before may have a chronic disease and therefore have been hospitalized before.

A comparison of the coughing conditions of patients hospitalized in internal medicine and Covid-19 wards over the last week is shown in Table 4. While the percentage of patients experiencing cough problems three or more times a week in the Covid-19 ward is 26.7%, this is 0.0% in patients in the internal medicine ward. The difference between the coughing status of patients with Covid-19 and patients hospitalized in the internal medicine ward was found to be statistically significant ($p<0.05$ Table 4.)

According to the study conducted by Teker et al. on 654 people, cough was the most common first symptom in patients admitted to the hospital. 39.3% of those admitted to the hospital complained of cough (17). According to the research conducted by Güneysu et al. on 1400 patients who applied to the hospital with Covid-19 complaints, it was determined that the most common complaint was cough (40.4%) (19). There are many studies in the literature examining Covid-19 and cough (20-22).

The studies support each other, and these studies show that cough, one of the cough symptoms of Covid-19, continues throughout the disease. The high number of coughs during the day in patients hospitalized in the Covid-19 ward may be due to Covid-19 affecting the lungs and the complaint of hospitalization being cough. The reason why this rate is low in the internal medicine ward is that patients hospitalized in the internal medicine ward have diseases other than lung disease (diabetes, hypertension, gastritis, kidney failure, etc.).

The difference between the sleep quality of Covid-19 and internal medicine patients was not statistically significant ($p>0.05$ Table 6). The rate of internal medicine patients who stated that their sleep quality was very bad was 6.7% and the rate of Covid-19 patients was 22.2%. Although there was no statistical difference between the groups, the proportion of patients hospitalized in the Covid-19 ward who said their sleep quality was 'very bad' was higher.

During the pandemic period, Zhang et al in a study evaluating 1563 participants, it was found that most of the participants showed symptoms of insomnia during the Covid-19 pandemic. According to the results, the group showing insomnia symptoms experienced more psychological problems related to the Covid-19 epidemic (23).

The Covid-19 pandemic causes negative effects on patients' sleep quality. In their research, Jahrami and his colleagues; In their study, in which they aimed to examine the effect of the pandemic on the prevalence of sleep problems in the general population, healthcare workers and patients diagnosed with Covid-19 positive (+), they found that the prevalence of sleep problems was high during the Covid-19 pandemic (22).

Encountering stressful situations may reduce sleep quality by causing sleep suppression and increased alertness (23). However, sleep is a very important physiological process for maintaining mental and physical health (24).

When we look at the studies in the literature, the studies support our study. Deterioration in the sleep quality of patients may be due to the conditions, mental and physical difficulties caused by the Covid-19 pandemic, as well as the change in the bed or environment where hospitalized patients sleep and the individuals' inability to adapt to their units accordingly. On the other hand, patients having to wake up for night treatments, healthcare professionals entering patient rooms at night to examine the condition of patients, fever, respiratory distress and pain, which are symptoms of Covid-19 disease, may negatively affect sleep quality.

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The difference between the sleep status of patients hospitalized in the Covid-19 ward in the last week and before the illness was found to be statistically significant ($p < 0.05$ Table 7). To the question "You have not been able to fall asleep within 30 minutes for the last week", 31.1% of the patients answered "three times a week or more", and 22.2% gave the same answer to the situation before the disease. It has been observed that patients have more trouble falling asleep after being hospitalized.

Effects on mental health have been strongly associated with changes such as difficulty falling asleep, disrupted sleep, daytime sleepiness and nightmares. In a meta-analysis involving 54,231 participants from thirteen countries, sleep structure was evaluated using scales such as Epworth "Sleepiness Scale, Pittsburg Sleep Quality Index, Insomnia Severity Index, Athens Insomnia Scale"; The prevalence of sleep disorders is 32.3% in the general population; 36% in healthcare workers; It has been shown that the rate is 74.8% in Covid-19 infected patients (25). Studies have emphasized that sleep problems common in Covid-19 patients may be related to cough, fever, and respiratory distress, which are symptoms of the disease, and that physical pain and drug side effects due to the disease may also cause sleep problems (26, 27). Among the reasons why patients have difficulty falling asleep: It has been stated that factors such as being sick, being hospitalized, and the hospital environment affect the time it takes for patients to fall asleep (28).

Many studies in the literature support our work. When the patients' falling asleep before the disease and during the disease period were compared, it was observed that it became difficult to fall asleep during the disease period. In addition to the hospital environment, clinics and diseases, factors such as fear of death, anxiety, respiratory distress, pain and cough caused by Covid-19 may cause patients to have difficulty falling asleep. It was determined that there was no statistically significant relationship between the clinic where Covid-19 and internal medicine patients stayed and the duration of their sleep at night ($p > 0.05$ Table 8).

53.3% of patients diagnosed with Covid-19 and 44.4% of internal medicine patients stated that they slept between 8 and 11 hours in total at night. When the conditions affecting the patients' sleep patterns and duration are examined, they are respectively; too much light in the room (76.7%), sharing the room with other patients (65.5%), being separated from family members (60.8%), early sleeping and waking hours in the hospital (60.6%), presence of pain (60.3%), fear related to the disease (54.2%), and constant entering and exiting of the room (29).

Diseases such as peptic ulcer, hypertension, heart disease, diabetes, respiratory system diseases, and hormone level changes affect the duration of sleep at night and the ability to fall asleep in internal medicine patients (28). The literature review does not support our study. It is observed that patients diagnosed with Covid-19 sleep for 8-11 hours at night. This may be due to symptoms of Covid-19 such as fatigue and weakness, or to have a mild recovery from the omicron variant of Covid-19. On the other hand, inpatients sleep around 8-11 hours. However, this sleep may not be a quality sleep due to fever, cough, respiratory distress, pain and anxiety.

The data only reflects the study population. The data can be generalized to Covid-19 patients who were admitted to Tatvan State Hospital in the last year.

V. Conclusion and Recommendations

Internal medicine patients are hospitalized more often than Covid-19 patients. Internal medicine patients have a higher rate of previous hospitalization. Covid-19 patients cough more than internal medicine patients. Covid-19 patients experience more pain during hospitalization. When sleep quality was compared, it was seen that the sleep quality of Covid-19 patients was worse. Covid-19 patients have more trouble falling asleep after being hospitalized. While Covid-19 patients have good sleep quality before hospitalization, they have poor sleep quality after hospitalization. Sleep quality of Covid-19 patients is lower than internal medicine patients.

According to the results of the research;

In order to improve the sleep quality of Covid-19 patients, a survey should be conducted and problems should be identified, and studies should be carried out to address these problems. In order to reduce the time patients spend in bed, patients should be given work and occupations. Treatment hours should be arranged according to the patients' sleeping hours. Non-pharmacological treatments should be used to reduce the pain of Covid-19 patients (as they reduce sleep quality).

VI. Contribution to the Field

The study aimed to draw attention to the sleep problems of patients diagnosed with Covid-19. It has been determined that the ventilation problems experienced by Covid-19 patients reduce their sleep quality. The results of this cross-sectional study are

important in terms of drawing attention to sleep problems in Covid-19 patients.

Ethical Aspects of Research

Before starting the research, ethical approval (decision numbered 22/05-5 and numbered E.2073) was obtained from Bitlis Eren University Rectorate Ethical Principles and Ethics Committee. Bitlis Provincial Health

Institutional permission was obtained from the Directorate (number 70871440). However, after informing the patients about the research and explaining that their personal information would be protected and that the information received would be used only in this research, the volunteer patients were included in the research after their written consent was obtained. The principles of the Declaration of Helsinki and the Council of Higher Education Scientific Research and Publication Ethics Directive were adhered to at all stages of the study.

Resources

[1]. Önler E. Sleep quality in patients hospitalized in surgical units, Florence Nightingale Journal of Nursing. 2008, 16 (62):114-121.

[2]. Karadağ M. Classification of sleep disorders (ICSD-2). T Klin Lung Archive. 2007, 8: 88-91.

[3]. Otsuka Y, Kaneita Y, Itani O, Nakagome S, Jike M, Ohida T. Relationship between stress coping and sleep disorders among the general Japanese population: A nationwide representative survey. Sleep Med 2017, 37: 38-45.

[4]. Chattu VK, Mahzar D, Soosanna Kumary S, Burman D, Spence DW, Pandi-Perumal SR. The Global Problem of Insufficient Sleep and Its Serious Public Health Implications. Healthcare 2019, 7(1): 1-16.

[5]. Rajkumar RP. Covid-19 and mental health: A review of the existing literature. Asian J Psychiatr 2020, 52: 102066

[6]. Kılıç O, 2004. Epidemic diseases in general terms in the world and the Ottoman Empire from ancient times to modern times. Middle Eastern Research Center Publication No: 6, History Branch Publications No: 5, Fırat University Press, Elazığ. King LJ, Marano N, Hughes JM, 2004. New partnership

[7]. Huang C, Wang Y, Li X, et al. Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China. Lancet. 2020, 395(10223):497-506.

[8]. Lim MTC, Ramamurthy MB, Aishworiya R, et al. School closure during the coronavirus disease 2019 (Covid-19) pandemic – Impact on children's sleep. Sleep Med 2021, 78:108–14

[9]. Brooks SK, Webster RK, Smith LE, Woodland L, Wessely S, Greenberg N, et al. The psychological impact of quarantine and how to reduce it: rapid review of the evidence. Lancet 2020, 395: 912-20.

[10]. Gupta R, Pandi-Perumal SR. Covid-19-Somnia: How the Pandemic Affects Sleep/Wake Regulation and How to Deal with it? Sleep Vigil 2020, 4: 51-3.

[11]. Güneş.Z. Determination of Sleep Quality in Patients with Diabetes. Atatürk University, School of Nursing Journal. 2009; 12:2

[12]. Zaybak A. Examination of factors affecting sleep patterns in hospitalized patients. Ege University, nursing school magazine. 2002, 18(1-3):31-42.

[13]. Özkılıçaslan E. Comparison of Balance, Exercise Capacity, Sleep Quality and Coronavirus Phobia in Individuals with Different Physical Activity Levels During the Covid-19 Pandemic Period. Cardiopulmonary Rehabilitation Program Master's Thesis Hacettepe University Institute of Health Sciences Ankara, 2021.

[14]. Xiong, J., Lipsitz, O., Nasri, F., Lui, L., Gill, H., Phan, L., et al. Impact of Covid-19 pandemic on Mental health in the general population: A systematic review. Journal of Affective Disorders. 2020, 277:55-64.

[15]. Karaköse, M., Tarsuslu, B. & Durat, G. Examination of Sleep Quality of Hospitalized Patients with a Positive Diagnosis of COVID-19. Sakarya University Holistic Health Journal, 2022, 5 (1), 19-28. DOI: 10.54803/sauhsd.1033966

[16]. Yiğitoğlu E. T, Karadede H, Karadede Ö, Karaali R, Aydın E, Determination of Anxiety and Depression Levels of Individuals Diagnosed with Covid-19, Journal of Intensive Care Nursing. 2021, 25 (2), 51-59.

[17]. Tan M, Özdelikara A, Polat H, Determination of Patient Learning Requirements. F.N. Both. Journal. 2013, 21 (1): 1-8

[18]. Teker A.G, Emecen1 A. N, Girgin S, Keskin H. Ş, Şiyve1 N, Sezgin1 E, Başoğlu E, Karalar K. Y, Appak Ö, Zeka A. N, Ömeroğlu G, Ünsal B, One in Turkey Epidemiological Characteristics of Covid-19 Cases in University Hospital Dokuz Eylül University, Faculty of Medicine Clinical Journal 2021; 34(1): 61-8

[19]. Güneysu F, Durmuş E, Yürümez Y, Evaluation of the Success of Blood Parameters in Predicting the Disease in Patients Who Presented to the Emergency Department During the Covid-19 Pandemic, Sakarya Medical Journal. 2021, 11 (3), 479-488.
[20]. Melek N. A Brief Dive into Covid-19 Cough Sound Data sets 2021 Medical Technologies Congress (tıptekno). 2021, 1-4. DOI: 10.1109/tıptekno53239.2021.9632935
[21]. Günal Ö, Türe E, Bayburtlu M, Arslan U, Demirağ M. D, Taşkın M. H. Evaluation of patients diagnosed with Covid-19 in terms of risk factors Microbiology Bul. 2020, 54 (4), 575-82.
[22]. Eren E, Çelik İ, Yıldız M, Topaloğlu U. S, Toker A. K, Fırat E. A, Gür A, Bolat E, Ulu-Kılıç A. Evaluation of healthcare workers with Covid-19. 2020, Klimik Journal 33 (3).
[23]. Aydınoğlu Ü, Yazla E. The effect of the COVID-19 pandemic on the sleep quality of patients diagnosed with bipolar disorder. Journal of Clinical Psychiatry. 2021, 24(1):33-40. Doi: 10.5505/kpd.2020.26576
[24]. Jahrami H, BaHammam AS, Bragazzi NL, Saif Z, Faris MA, Vitiello MV. Sleep problems during the Covid-19 pandemic by population: a systematic review and meta-analysis. J Clin Sleep Med 2021; 17(2): 1-15.
[25]. Ferrando M, Bagnasco D, Roustan V, Canonica GW, Braido F, Baiardini I. Sleep complaints and sleep breathing disorders in upper and lower obstructive lung diseases. J Thorac Dis 2016; 8(8): E716-E725. 18.
[26]. Shi L, Lu ZA, Que JY, Huang XL, Liu L, Ran MS, et al. Prevalence of and risk factors associated with mental health symptoms among the general population in China during the coronavirus disease 2019 pandemic. Jama Netw Open 2020; 3(7):e2014053.
[27]. Zaybak A.,& Khorshid, L. Examination of factors affecting the sleep patterns of hospitalized patients. Ege University Faculty of Nursing Journal, 2002, 18(3), 31-42.
[28]. Alp S. İ. Deveci, M. Erdal, B. Akalın, R. B. & Terzi, D. Sleep Quality and Insomnia Severity in University Students During Coronavirus Disease 2019 (Covid-19). Namık Kemal Medical Journal. 2020, 8(3), 295-302.
[29]. Ertekin Ş. Evaluation of sleep quality in hospitalized patients (Master's thesis, Institute of Health Sciences, (1998). 34.

Table 1. Descriptive Characteristics of the Patients (N:90)

Sociodemographic characteristics	N	%
Gender		
Female	57	63.3
Male	33	36.7
Education Level		
İlliterate	45	50.0
Literate	16	17.8
Primary Education	11	12.2
Secondary Education	10	11.1
Undergraduate And Above	8	8.9
Age		
18-30	4	4.4
31-43	17	18.9
44-56	27	30.0
57-65	42	46.7
Marital Status		
Married	71	78.9
Single	15	16.7
Divorced	4	4.4

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Clinic		
Covid-19 Clinic	45	50.0
İnternal Medicine Clinic	45	50.0
Number of Days in Hospital		
5-11	59	65.6
12-18	31	34.4
Have you been hospitalized before?		
Yes	64	71.1
No	26	28.9
Job		
Unemployed	27	30.0
Housewife	36	40.0
Officer	8	8.9
Employee	6	6.7
Other	13	14.4
Do you smoke?		
Yes	23	25.6
No	67	74.4

Table 2. Comparison of Hospitalization Times of Covid-19 and Internal Medicine Patients (N: 90)

Hospitalization times	**5-11 days**		**12-18 days**		**Total**		**P**
	N	%	N	%	N	%	
Covid-19 service	35	77.8	10	22.2	45	100.0	.015
Internal medicine service	24	53.3	21	46.7	45	100.0	
Total	59	65.6	31	34.4	90	100.0	

Table 3. Comparison of Covid-19 and Previous Hospitalization Status of Patients Hospitalized in the Internal Medicine Service (N: 90)

Previous hospitalization	**Yes**		**No**		**Total**		**P**
	N	%	N	%	N	%	
Covid-19 service	27	60.0	18	40.0	45	100.0	.038
Internal medicine service	36	80.0	9	20.0	45	100.0	
Total	63	70.0	27	30.0	90	100.0	

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Table 4. Comparison of Coughing Status of Patients Hospitalized in Internal Medicine and Covid-19 Service in the Last Week (N:90)

Coughing for the last week	None		Less than once a week		Once or twice a week		Three or more times a week		Total		P
	N	%	N	%	N	%	N	%	N	%	
Covid-19 service	6	13.3	15	33.3	12	26.7	12	26.7	45	100.0	.00
Internal medicine service	18	40.0	24	53.3	3	6.7	0	0.0	45	100.0	
Total	24	26.7	39	43.3	15	16.7	12	13.3	90	100.0	

Table 5. Comparison of Pain Feelings in the Last Week of Patients Hospitalized in the Internal Medicine and Covid-19 Service (N:90)

Pain in the last week	None		Less than once a week		Once or twice a week		Three or more times a week		Total		P
	N	%	N	%	N	%	N	%	N	%	
Covid-19 service	5	11.1	8	17.8	17	37.8	15	33.3	45	100.0	.00
Internal medicine service	11	24.4	24	53.3	8	17.8	2	4.4	45	100.0	
Total	16	17.8	32	35.6	25	27.8	17	18.9	90	100.0	

Table 6. Comparison of Sleep Quality of Patients Hospitalized in Covid-19 and Internal Medicine Service for the Last Week (N:90)

Sleep quality in the last week	Very good		Pretty good		Pretty bad		Too bad		Total		P
	N	%	N	%	N	%	N	%	N	%	
Covid-19 service	6	13.3	15	33.3	14	31.1	10	22.2	45	100.0	.113
Internal medicine service	5	11.1	24	53.3	13	28.9	3	6.7	45	100.0	
Total	11	12.2	39	43.3	27	30.0	13	14.4	90	100.0	

Table 7. Comparison of Falling Asleep Status of Patients Hospitalized in the Covid-19 Service in the Last Week and in the 30 Minutes Before the Disease (N:90)

Covid-19 service	None		Less than once a week		Once or twice a week		Three or more times a week		Total		P
	N	%	N	%	N	%	N	%	N	%	
Inability to fall asleep within 30 minutes in the last week	13	28.9	11	24.4	7	15.6	14	31.1	45	100.0	.010
Inability to fall asleep within 30 minutes before illness	13	28.9	17	37.8	5	11.1	10	22.2	45	100.0	

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Table 8. Comparison of How Many Hours Patients Really Sleep at Night (N:90)

How many hours did you sleep?	2-4 hours		5-7 hours		8-11 hours		Total		X^2	P
	N	%	N	%	N	%	N	%		
Covid-19 clinic	7	15.6	14	31.1	24	53.3	45	100.0	1.756	.010
internal medicine clinic	5	11.1	20	44.4	20	44.4	45	100.0		

Table 9. Comparison of Pittsburgh Sleep Quality Scale (PSQI) Average Scores of Covid-19 and Internal Medicine Patients (N:90)

Clinic	*PSQI*	T	P
	Mean±SD		
Covid-19 clinic	5,97 ±3,04	1.156	0.251
internal medicine clinic	5,31 ±2,31		

Table 10. Comparison of Pittsburgh Sleep Quality Scale (PSQI) Average Scores of Covid-19 and Patients Hospitalized in the Internal Medicine Service, Smokers and Non-Smokers (N:90)

Smoking Status	*PSQI*	T	P
	Mean±SD		
Uses	5,60 ± 2,40	-,072	0.943
Not using	5,65 ± 2,86		

Table 11. Comparison of Pittsburgh Sleep Quality Scale (PSQI) Scores of Covid-19 Patients in the Last Week and Before the Disease (N:45)

	PSQI (pre-disease)	*PSQI* (Last week)	T	P
	Mean±SD	Mean±SD		
Covid-19 clinic	4,84 ± 2,11	5,97 ± 3,04	1.156	0.251