

## ***Stress and Sleep Quality Among The Elderly During The COVID-19 Pandemic: A Cross-Sectional Study***

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**Abstract:** *Stress experienced by the elderly has an impact on various problems such as difficulty sleeping, discomfort, irritability, and difficulty concentrating. The quality of sleep also has several aspects such as sleep duration, sleep literacy, and subjective aspects of sleep. The objective of this research is to determine the relationship between stress and sleep quality in the elderly during the Covid-19 pandemic. This research uses an analytical observational cross-sectional approach. The sample obtained as many as 111 respondents by means of convenience sampling. This study shows the most stress level is moderate stress (45.9%), most respondents' sleep quality level is good sleep quality (94.6%), the subjective sleep quality level is mostly adequate poor (45.0%), the longest respondent's sleep duration is <5 hours (40.5%), the respondent's sleep latency is at most 31-60 minutes (76.6%), the most respondent's sleep efficiency is >85% (67.6%), the most respondents' sleep disorders were 10-18 (71.2%), the most respondents' sleep dysfunction was 3-4 (57.7%), the respondents had never used sleeping pills in the last month (92.8%), and there was a significant relationship between stress and sleep quality in the elderly during the Covid-19 pandemic with a p-value = 0.001. There is a significant relationship between stress and sleep quality in the elderly during the Covid-19 pandemic, so it is hoped that the puskesmas such as the person in charge of the elderly at the Senen Sub District Health Center will carry out activities or socialization to the elderly regarding improving sleep quality and ways to deal with stress.*

**Keywords:** *Elderly, Stress, Sleep Quality, Covid-19*

### **INTRODUCTION**

Coronavirus was discovered in 2019 in December the incident made many people uneasy because it spread so quickly, the event began in China (Yuliana, 2020), initially the virus was thought to be the result of exposure to the Huanan seafood from sale market, which sells many live animal species and quickly spread domestically to other parts of China. On the 31st of the 12th month of 2019 to January 3, 2020, this problem increased rapidly, marked by reports of 44 cases of exposure to the coronavirus (Susilo, 2020). The cause of Covid-19 is called Sars-CoV-2. Covid-19 is *zoonotic* (transmitted between animals and humans), while the animals that are the source of transmission of Covid-19 are still unknown. Based on scientific facts, Covid-19 can extend from person to person through coughing/sneezing splashes (droplets), people who are very at risk of contracting this disease are people who are in close contact with Covid-19 sufferers, including those who treat Covid-19 patients (Kemenkes, 2020). According to the Ministry of Health of the Republic of Indonesia (2020), vulnerable groups that have a risk of being infected with Covid-19 are the elderly (aged 60 years and over), obesity, people with comorbidities, and those with low immunity. At the age of 31-45 years at a risk of 2.5 times, the age of 46-59 years is at 8.5 times the risk, and at the age of 60 years and above is at 19.5 times the risk of being infected with Covid-19. In December 2020, it was stated that the risk of contracting Covid-19 is greater at the age of 60 years and above and in people who have comorbidities (Adisasmito, 2020).

According to Lovibond 1995 in research (Amir., 2021) argues that despair, anxiety and stress are some of the psychological changes caused by certain crises, such as the outbreak of the Covid-19 disease. Her research revealed that 50.9 percent experienced anxiety, 57.4 percent reported experiencing stress,

and 58.6 percent experienced depression. According to (Perrotta, 2020) the Covid-19 pandemic is accompanied by an increase in depression, post-traumatic stress disorder, and adjustment difficulties in the elderly. This is in line with the results of the study (Dewi, 2022) ditemukan sebanyak 37.1% dari 1.556 sampel lansia di China mengalami depresi, kecemasan dan stres selama pandemi Covid-19. Kondisi psikologis ini dapat menurunkan sistem imun, dan hal ini dapat memperburuk kondisi lansia yang pada dasarnya sudah lemah secara fungsional dan fisik (Amir., 2021). Stress is a pattern of response that a person shows when faced with one or more stimuli from outside himself, which are perceived as threats, challenges or dangers to well-being, self-esteem and integrity (Rahman, 2016). The prevalence of stress in the elderly during the Covid-19 pandemic is mild stress 6.9%, moderate stress 3.8% and severe stress 0.7% (Vannini, 2021) stated that stress in the elderly during the Covid-19 pandemic is classified as moderate stress. Symptoms shown by the elderly such as feeling depressed, agitated, irritable, and feeling unable to cope with the problem. In general, chronic stress in older adults can cause anxiety, fear, and insecurity (Manabung, 2010) Research on factors related to psychosocial stress of the elderly at the Tresna Werdha Ilomata Gorontalo Social Institution found that the elderly experienced moderate stress as much as 94 (87.5%).

In the government program issued during the Covid-19 period, namely *Lockdown*, this policy can cause significant changes in carrying out daily activities, while to see and know statistical data on the spread of the virus, the number of positive patients and the number of victims who die which can cause the level of stress of the elderly to increase (Mugihartadi, 2020). According to Viranata (2021) stated that the elderly experience stress levels due to restrictions on their mobility, absence of care from others, and fear of being exposed to Covid-19 (Viranata, 2021) Other studies also state that the quarantine effect of Covid-19 makes the elderly feel lonely, creating distance between their loved ones, sadness and anxiety which has an impact on long-term psychological effects so that stress can result in a decrease in the immune system which can aggravate physiological damage that has been weakened (Jenau, 2021). The effects of quarantine, social distancing and other health protocols make the elderly feel lonely, creating distance between their loved ones, sadness and anxiety which have an impact on long-term psychological effects so that stress occurs which can result in a decrease in the immune system which can aggravate the psychological damage that has been weakened. This is supported by research conducted by Huang & Zhao, 2020 in (Dewi, 2022) reviewed more than 7,200 elderly men and women in China during the *lockdown*. The large number of respondents who were found to be sufferers of general anxiety disorder related to Covid-19, on the contrary, felt the signs and symptoms of stress and depression, around 18% said that some had difficulty falling asleep. The impact of stress disorders on the elderly greatly affects the health of the elderly themselves.

According to Heri (2021) The stress that the elderly experience can affect their lives because it can lead to loss of appetite, being talkative or withdrawn, symptoms of a flushed face or body shaking from the cold, and even more so, side effects such as difficulty sleeping, discomfort, irritability, hypertension, and difficulty concentrating (Manabung, 2010) found that 49 respondents had poor sleep quality (66.2 percent). Poor sleep quality, because older adults find it difficult to fall asleep, often wake up at night, and do not sleep for too long. Similar research conducted by (Musfiati, 2015) about the relationship between stress levels and the quality of sleep of the elderly in the PSTW unit Budi Luhur Yogyakarta obtained the results of most of the elderly having poor sleep quality as many as 39 people (83%). Lack of sleep can have an impact on the physical and psychological health of the elderly. In addition to psychological problems including anxiety, anger, distracted focus, stress, and poor functional performance, possible physical effects include symptoms of weakness, dizziness, drowsiness, and fatigue. Sleep quality is a state of falling asleep that each individual undergoes to produce freshness and fitness at the time of awakening (Agil Yosa, 2019). Sleep quality has aspects for the elderly, such as sleep duration, sleep latency as well as subjective aspects of sleep (Khasanah, 2012). Good sleep quality in the elderly can provide a better level of fitness for their body, so that the ability to sleep and rest well is increasing.

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## METHOD

This type of research uses the *Analytical Observational* method, using a *cross-sectional* approach, namely to determine the relationship between stress and sleep quality in the elderly during the Covid-19 pandemic at the Kecamatan Senen Health Center, Jakarta. The independent variable in this study is stress and the dependent variable is sleep quality.

The number of samples in this study was 111 elderly at the Kecamatan Senen Health Center. The samples in this study used a convenience *sampling* method. The inclusion criteria in this study are; elderly aged 60-70 years old, elderly who can read and write. The exclusion criteria are the elderly who experience hearing loss and visual impairment.

The questionnaire used in this study was in the form of a checklist with closed questions. Questionnaires consist of 2 types, namely questionnaires (*Depression Anxiety Stress Scales* (DASS 42) to measure stress and questionnaires (*Pittsburgh Sleep Quality Index* (PSQI). to measure sleep quality. *The Depression Anxiety Stress Scales* (DASS 42) consist of 42 questions formed to measure the Negative emotional status of depression, Anxiety, and stress adopted and developed by Henry (2005). Researchers selected only 14 questions that measured stress levels ranging from numbers 1, 6, 8, 11, 12, 14, 18, 22, 27, 29, 32, 33, 35, 39. The 14 questions on the stress questionnaire used a scale of 0, did not fit my personal at all, or never. Scale 1, according to my personal to some degree or sometimes. Scale 2, according to my person to a limit that can be considered or frequent and scale 3, fits perfectly with my person, or very often. The score categories in this questionnaire are normal (0-14), light (15-18), medium (19-25), heavy (26-33), and while very heavy ( $\geq 34$ ). Validity test results with alpha coefficient values of 0.947 for depression, 0.897 for anxiety, 0.933 and for stress and reliability test results with *Cronbach alpha values* > 0.82 (Henry, 2005).

The Sleep Quality Questionnaire (KKT) was adopted from (Karota, 2005) which has been fixed from *The Pittsburgh Sleep Quality Index* (PSQI)(Buysse, 1989) Hospital (SMH) *Sleep questionnaire* (Ellis, 1981) developed by Fatmawati (2013). This questionnaire has been tested for validity and is suitable for use in

Indonesia. This questionnaire was used to determine the client's assessment of the subjective report of their night's sleep, including: bedtime, total sleep time at night, frequency of nighttime wakefulness, depth of sleep, sleep satisfaction, waking up feeling refreshed in the morning, and feeling refreshed during the day Concentrate on activity. There are 7 components in this questionnaire, and each question has a score of 1 to 3, with a minimum of 0 and a maximum of 21. An inter-achievement score of  $\leq 5$  indicates good sleep quality, while  $> 5$  indicates poor sleep quality. The data processing process uses the Statistical Product Service Solution (SPSS) version 26 application. The validity test results obtained r count 0.487 - 0.778 (r table value 0.444) has the meaning of meeting the level of significance. This questionnaire has been tested for validity and declared valid and the reliability results are declared reliable because the dependency value is  $>0.7$ (Agil, 2019). This research has been tested for legality by the Health Research Ethics Committee of the Immanuel College of Health Sciences Bandung with ethics number 096/KEPK/STIKI/VII/2022.

## RESULT

The results of this study explain the relationship between stress and sleep quality in the elderly during the Covid-19 pandemic in the Kecamatan Senen Health Center. area which includes the characteristics of respondents, namely age, last education, type of illness, work, stress and sleep quality.

**Table 1. Demographics Characteristics of elderly (N=111)**

Category	Frequency	Percentage (%)
<b>Age</b>		
Elderly (55-65)	62	55.9
Young old (66-74)	45	40.5
Old (75-90)	4	3.6
<b>Education</b>		
Elementary School	28	25.2
Junior High School	26	23.4
Senior High School	36	32.4
University	21	18.9
<b>Gender</b>		
Man	38	34.2
Woman	73	65.8
<b>Work</b>		
Self employed	24	21.6
Private employees	2	1.8
Housewife	64	57.7
Pensioner	21	18.9

Based on table 1, data on respondents aged 55-65 years (55.9%) was obtained, respondents aged 66-74 years (40.5%) and respondents aged 75-90 years (3.6%). The characteristics of respondents based on the last education of respondents who graduated from elementary school (25.2%), junior high school graduates (23.4%), high school / vocational school graduates (32.4%), college graduates (18.9%). Based on gender, data on respondents who are female (65.8%) while male (34.2%). Based on respondents' occupations, namely respondents' jobs as housewives (57.7%), respondents' jobs as self-employed (21.6%), respondents as pensioners (18.9%), and respondents' jobs as private employees (1.8%).

**Table 2. Stress Levels Among Elderly (N =111)**

Characteristic	Category	Frequency	Percentage (%)
Stress	Normal	121	87.7
	Light	3	2.2
	moderate	1	0.7
	Severe	13	9.4
	Very Severe	1	0.9
Total		111	100

Based on table 2 above, data on moderate stress (45.9%), followed by severe stress (19.8%), then normal stress (18.9%), mild stress (14.4%), and very severe stress (0.9%).

**Table 3. Sleep Quality among Elderly (N =111)**

Characteristic	Category	Frequency	Percentage (%)
Sleep quality	poorly	6	5.4
	Good	105	94.6
Subjective sleep quality	Excellent	5	4.5
	Good enough	37	33.3
	Bad enough	50	45.0
	Very bad	19	17.1
	Sleep Duration	>7	19
Sleep latency	6-7	27	24.3
	5-6	20	18.0
	<5	45	40.5
	≤15 minute	3	2.7
	16-30 minute	19	17.1
Sleep efficiency	31-60 minute	85	76.6
	≥ 60 minute	4	3.6
	>85%	75	67.6
	75-84%	36	32.4
Sleep disorders	1-9	21	18.9
	10-18	79	71.2
	19-27	11	9.9
Sleep Dysfunction	0	2	1.8
	1-2	43	38.7
	3-4	64	57.7
	5-6	2	1.8
	Never in the past month	103	92.8
Use the drugs	once a week	4	3.6
	twice a week	1	0.9
	three times a week	3	2.7

Based on Table 3 above, it was found that the good quality of sleep of the elderly was higher (94,6%), respondents whose subjective sleep quality was bad enough (45.0%), that respondents whose sleep duration was <5 hours (40.5%), respondents who had sleep latency of 31-60 minutes (76.6%), that respondents whose sleep efficiency was > 85% more (67.6%), respondents who had sleep disorders in

the category 10-18 more (71.2%), respondents with sleep dysfunction in categories 3-4 were more numerous (57.7%), respondents with drug use in the never category were (92.8%).

**Table 4. Relationship of Stress and Sleep Quality among Elderly (N =111)**

Stress	Sleep Quality		
	R count	Pvalue	rtable
	0.300	0.0001	0.1555

Based on table 4, data on the relationship between stress and sleep quality was obtained by *means of Pearson correlation* with a value of  $\alpha = 0.001$ , and the r count is greater than the r tabel ( $0.300 > 0.1555$ ), so that there is a significant relationship between stress and sleep quality of the elderly during the Covid-19 pandemic at the Kecamatan Senen Health Center, Central Jakarta.

## DISCUSSION

Based on the results of this study, it shows that some respondents aged 55-65 years, the elderly over 65 years have a high risk of suffering from stress and sleep quality decreases due to the aging process that occurs (Hindriyastuti., 2018). Gender characteristics show that the number of female elderlies is more, stress and difficulty sleeping at night occurs more in elderly women because they often feel anxious and hormonal imbalances experienced by women. This research is in line with Ida Suryawati (2021), that women are more dominant in experiencing stress so that it has an impact on their sleep quality. The characteristic based on the last education of the respondents of the majority of SMA / SMK education is also the initial provision of cognitive development, so that the cognitive can make a mediator between an event and the mood, so that lack of education can be a risk factor for the elderly to suffer from stress (Suryawati, 2021). The characteristics based on the respondent's work are housewives, where mothers spend a lot of time in daily activities at home. Housewives have full responsibility in taking care of the family and other housework. This responsibility sometimes makes her depressed to the point of experiencing stress and lack of sleep. The results of this study are in line with Dyan & Kurniawan (2021), the most respondents are housewives.

In this study, some respondents experienced moderate stress. This study is in line with Vindy's research (2019), showing that, out of 51 respondents, 47 (92.2%) elderly people have moderate physical stress and 43 (84.3%) respondents have mild physical stress, as well as mild psychological stress. Stress for the elderly is stress caused by adaptation and requires adjustment by the elderly. These changes are caused by changes in body component parts, the benefits of body patterns, as well as physical health, which are prolonged and not handled in a timely manner, can cause stress in the elderly (Indriana, 2010). The impact of prolonged stress can lead to a state of anxiety, fear, urgency, no sense of security, critical self-esteem, cold sweats, a heart that becomes throbbing, weak, difficult or likes to eat and difficulty sleeping, stress can occur anywhere to anyone, especially in the elderly during the Covid-19 pandemic. This research is supported by Viranata's research (2021), that all elderly people can feel stress because they are in brackets and limited in their space, lack of attention from others, fear of getting Covid-19 so as to make them feel lonely and stressed. Other studies have also stated that the effects of quarantine, social distancing and other health protocols make all elderly feel lonely, the existence of distance for their loved ones, sadness and anxiety that can cause long-term psychological effects and affect their sleep quality and their health, the impact caused by stress psychological disorders on the elderly is very large in effect on the health of the elderly itself. The influence factor on the mental health of the elderly during the Covid-19 pandemic is anxiety, generally anxiety is the state of mind of a person who is anxious and frightened. Anxiety arises due to feelings of pressure as well so that it is not able to find a way out of one's emotional feelings (Guslinda, 2020). At this time the elderly are the group of people most prone to having an anxiety disorder. When they hear the news, it will make the elderly feel anxious and depressed for fear of being infected. What makes the elderly feel worried are external factors and internal factors.

External factors can cause anxiety in the elderly so that they need social relationships and help from the family. Internal factors are the state of the body and age. The elderly experience anxiety because the elderly are aware of the danger, anxious about being unsafe, and worried about objects that could harm them. The elderly feels very anxious because people over the age of 60 will experience psychological and physiological declines in the physical system (Ranty, 2022).

Based on the results of this study, it can be concluded that stress in the elderly is in the category of moderate stress, this proves that each respondent has a different level of stress, because stress is subjective and is influenced by many factors. Among several factors that affect the mental health of the elderly are decreased physical condition, decreased sexual function, changes (66.7%) and one of the causes of stress that have been researched by researchers, namely the elderly said that they are afraid of exposure to Covid-19 and stress because they are limited / reduced space so that they are sometimes awake / have difficulty sleeping at night. This fact proves that if the elderly experience stress, it will have an impact on their sleep quality. Another study found that the quality of sleep of the elderly is in the good category. This is in line with Junadia's research (2017), the quality of sleep for the elderly can be seen from the age of 60-74 years (23.1%). Psychological factors that can influence the occurrence of poor sleep quality are anxiety, stress, tension, anger and fear. The results of this study were based on 7 components of sleep quality in the form of subjective sleep quality responses, sleep latency (difficulty starting night sleep), length of night sleep, sleep efficiency, disturbances during sleep, use of sleep pills, and disturbances during the day, from the results of the 7 components obtained the highest results and the lowest results, the highest results in this section were sleep latency and followed by components of sleep disorders components and the lowest total results on The use of sleeping pills, lack of sleep quality is caused by various psychological factors, namely mood states, anxiety, stress, and depression. Sleep quality can be assessed from 7 components, namely;

Subjective sleep quality is a brief assessment of his sleep quality subjectively (Smyth, 2012a). The elderly in the Kecamatan Senen Health Center in this study mostly had poor sleep quality, this is because the elderly are not able to tolerate sleep changes that occur in themselves. An analysis that Oliveira did in 2008 in Brazil found that the quality of sleep of the elderly is good or good enough because the elderly do not realize that the disorder they are experiencing is dangerous and they consider it normal because of the aging process such as getting up early, experiencing disorders. sleep, feeling pain (Khasanah, 2012). The elderly in Kecamatan Senen Health Center Subdistrict mostly fall asleep at 15-30 minutes because, most of them say it is very difficult to sleep fast because of the habit of the elderly, namely some who feel anxious, drink coffee and smoke, which can have an impact on unsanitary conditions in the elderly is the environment and habits before going to bed, such as eating and drinking, smoking, and drinking alcohol will interfere with a person's sleep (Chayatin, 2007). The duration of sleep shows that most of the elderly in health centers have a sleep duration of < 5 hours. The average elderly person needs about 6 hours of sleeps every day. Due to the decrease in NREM phase 1 and 2, stages 3 and 4, and the loss of delta wave activity, parents only get 6-7 hours of sleep each day, which is less than ordinary adults 8 hours. It is very likely that elderly people who sleep more than seven hours will be able to adjust to the changes caused by age (Smyth, 2012b).

Sleep disturbances in most of the elderly in health centers have difficulty sleeping at night due to the tendency to wake up in the middle of the night to go to the bathroom, bad weather, uncomfortable room temperature, and body aches. The elderly often uses the bathroom at night due to reduced urine function. Urinary incontinence in the elderly is caused by a weakening of the bladder muscles caused by aging, which causes frequent urination at night and makes it difficult to urinate again. Your capacity to sleep at night may be affected by room temperature. Body aches are one of the sleep disorders that make the elderly awake at night. Especially those who have physical discomfort from conditions such as rheumatism, gout, hypertension, and others, the elderly often complain of experiencing pain at night. Sleep disturbances in most of the elderly in health centers have difficulty sleeping at night due to the tendency to wake up in the middle of the night to go to the bathroom, bad weather, uncomfortable room temperature, and body aches. The elderly often uses the bathroom at night due to reduced urine function. Urinary incontinence in the elderly is caused by a weakening of the bladder muscles caused by

aging, which causes frequent urination at night and makes it difficult to urinate again. Your capacity to sleep at night may be affected by room temperature. Body aches are one of the sleep disorders that make the elderly awake at night. Especially those who have physical discomfort from conditions such as rheumatism, gout, hypertension, and others, the elderly often complain of experiencing pain at night (Khasanah, 2012). The use of sleeping pills found that most elderly people do not use sleeping pills. The use of drugs to help sleep is actually not good for one's body and should be avoided as much as possible. Medications that interfere with sleep in NREM stage III and IV can cause insomnia and nightmares. Anesthetics such as meperidine hydrochloride and morphine are known to inhibit REM sleep and often cause awakenings at night. Elderly people taking sleeping pills should pay attention to the causes of sleep disorders. Taking sleeping pills for older adults with heart disease, diabetes, and other medical conditions can help improve sleep each night. Pharmacological interventions in the elderly should be based on the condition of the elderly and should be carried out as recommended by the doctor (Khasanah, 2012). Sleep Dysfunction shows that most of the elderly in health centers experience disturbances in certain activities during the day (while eating, driving, other activities). Excessive naps are associated with less activity during the day and lack of daily activity. This causes the elderly to sleep more often during the day because there is no activity to do. Nighttime activities, such as frequent nighttime wakes to go to the bathroom, also make the elderly feel tired and need a long nap. Other literature supports this that short naps interfere with nighttime sleep, while long naps interfere with sleep latency and frequent awakenings at night. This can cause a person to sleep for a long period of time during the day, which can interfere with activities.

Sleep Dysfunction shows that most of the elderly in health centers experience disturbances in certain activities during the day (while eating, driving, other activities). Excessive naps are associated with less activity during the day and lack of daily activity. This causes the elderly to sleep more often during the day because there is no activity to do. Nighttime activities, such as frequent nighttime wakes to go to the bathroom, also make the elderly feel tired and need a long nap. Other literature supports this that short naps interfere with nighttime sleep, while long naps interfere with sleep latency and frequent awakenings at night. This can cause a person to sleep for a long period of time during the day, which can interfere with activities (Hidayat, 2018). Based on statistical test, *Pearson correlation* in this study it was a relationship between stress and sleep quality. So, the hypothesis null (H<sub>0</sub>) rejected and hypothesis alternative (H<sub>A</sub>) accepted. According Hindriyastuti (2018) respondents' stress levels were mostly mild stress and respondents' sleep quality was mostly sleeping disturbances, there was a relationship between stress levels and sleep quality in the elderly.

Research conducted by (Sofiana, 2014) said that stress has an effect on a person's sleep quality. Stress can cause adrenaline to increase, heart palpitations violently, so that a person becomes constantly awake, experiencing anxiety that ultimately interferes with their sleep. The theory is reinforced by research conducted by (Hidayat, 2016), The results of the study show that there is a relationship between stress levels and sleep quality in the elderly from these results, it can be interpreted that the elderly who experience stress will affect their sleep quality and vice versa if the elderly who do not experience stress tend not to disturb their sleep quality. The statement is in line with research conducted by (Silvanasari, 2012) The results showed that 26 respondents (53.1%) of the elderly with poor sleep quality experienced mild stress. The elderly who experiences stress, such as worrying about obscure problems, feeling tired, waking up feeling uncomfortable, feeling heart palpitations, will have poor sleep quality, this is in line with the opinion (Prayitno, 2016) who expressed depression and anxiety often interfered with sleep. Various situations during the Covid-19 pandemic have had a psychological impact on society (WHO, 2020). The state of the pandemic or global epidemic shows that the spread of Covid-19 occurs quickly, causing the government to implement *work from home* (WFH), *social distancing*, and sudden situations that make seniors or other communities unprepared for both and psychologically (Phil, 2016). Social support in the form of emotional support, such as empathy, is necessary to accompany the individual when he has problems and to create an atmosphere of warmth, comfort, care and affection so that the individual can cope better with the problem. Based on these results, researchers concluded that elderly people who experience stress will have an effect on their sleep quality. As we know, this pandemic raises



the fear of contracting the Covid-19 virus, and excessive anxiety often interferes with their sleep. The fear of Covid-19 is the most important stressor for the elderly, besides that the elderly also feel annoyance and boredom because they can only stay at home (Karisnatuti, 2021). Thus, it shows that the higher the level of stress experienced by the elderly, the greater the risk of disturbances in their sleep quality.

## CONCLUSION

Most of the respondents were aged 55-65 years, their last education was high school/vocational school, female gender, and more work as a housewife/IRT. Respondents had moderate stress. Respondents who have good quality sleep. There is a significant relationship between stress and sleep quality in the elderly during the Covid-19 pandemic. Knowing there is a relationship between stress and sleep quality makes it easier to carry out socialization activities in the elderly to improve sleep quality and reduce stress. It is hoped that the health centers such as the person in charge of the elderly will carry out activities or socialization for the elderly related to improving sleep quality and ways to deal with stress.

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