The Effect of Lavender Aromatherapy to Improve the Sleep Quality of the Elderly at Tresna Werdha Abiyoso Social Service Center, Sleman

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ABSTRACT

As part of aging or old age (elderly), general changes in circadian rhythms are referred to as earlier sleep phases. Prolonged sleep deprivation conditions can trigger many health system disorders, from a decrease in the body's immune system, weight gain due to uncontrolled appetite, and decreased level of concentration at work, to decreased patience and mood. One alternative non-pharmacological treatment to improve sleep quality is by providing lavender aromatherapy which will have a calming effect. This type of research is descriptive using a case study approach. A case study was conducted by applying non-pharmacological therapy with lavender aromatherapy to elderly respondents with sleep disorder nursing problems. The instruments used in this study were lavender aromatherapy, observation sheets, and sleep quality assessment sheets for the elderly. shows that there is an increase in the quality of sleep in the respondents. By doing this lavender aromatherapy therapy can help reduce sleep pattern disturbances in respondents. The results showed that there was an increase in sleep quality when patients could sleep soundly after being given lavender aromatherapy, so it can be concluded that there was an increase in sleep quality before and after giving lavender aromatherapy

Keywords: *Disorders Sleep, Sleep Quality, Lavender Aromatherapy*

INTRODUCTION

Elderly stands for elderly or old age which is the final stage of development in the human life cycle (Egan dkk., 2019). According to Law No. 13/1998 concerning Elderly Welfare states that an elderly person is someone who has reached the age of more than 60 years (Groopman dkk., 2019). When the elderly experience changes due to the aging process, the function of organ systems will decrease which leads to a decrease in the

quality of life of individuals, including in independent daily activities (IADL) (Lippi dkk., 2020). Decreased quality of life can affect the quality of sleep in the elderly which can weaken the immune system because Natural Killer Cells (NKC) in the blood are also reduced (Chandrasekar dkk., 2020). Prolonged sleep deprivation conditions can trigger many health system disorders, from a decrease in the body's immune system, weight gain due to uncontrolled appetite, and decreased level of concentration at work, to decreased patience and mood (Piva dkk., 2020). Sleep is one of the best rest times to regenerate energy, everyone needs rest to recover physically and mentally (Slivnick & Lampert, 2019). During sleep, the brain clears out unnecessary toxins that build up during our day's thinking (Jung dkk., 2020). Sleep is one of the best rest periods for the body, which can restore energy so that a person is ready to do activities the next day (P2PTM Ministry of Health RI, 2020).

As part of aging, common changes in circadian rhythms are referred to as earlier sleep phases. Late sleep phases in the elderly may be caused by changes that regulate circadian rhythms (Carr & Rowe, 2020). Older people who are no longer working start sleeping earlier at night, like 8 or 9 pm, because they don't have much to do at that time. all they have to do is exist at that time, and then experience an early 3 to 4 am wake up (Huang dkk., 2020). They find it difficult to get back to sleep and complain about what they perceive as a lack of sleep, when in fact they are receiving an adequate amount of sleep. Sleep (Guan dkk., 2020). Because they no longer have to get up early and get ready for their work. It is difficult for them to break the habit of sleeping early, changing sleep schedules is not easy and cannot happen overnight (Yaremchuk, 2018)

According to the view of the World Health Organization (WHO) in 2030, 1 in 6 people in the world will be aged 60 years or more. By then, the number of people aged 60 and over will increase from 1 billion in 2020 to 1.4 billion. A shift in the distribution of a country's population towards older ages - known as population aging - begins to occur in high-income countries, for example in Japan, 30% of the population is over 60 years old (Yao dkk., 2020). The percentage of the elderly population to the total population in Central Java Province continues to increase, namely from 12.22 percent in 2020 to 12.71 percent in 2021 (BPS, 2020). The incidence of elderly people experiencing decreased sleep quality in the world is around 35% of the total population, while the percentage of elderly people experiencing decreased sleep quality in Indonesia is 50% (Adams & Walls, 2020). Based on data obtained by researchers in December 2017, an elderly population of 60 people was found with criteria for being over 50 years old (Ren dkk., 2020). According to data from the Indonesian Ministry of Health, around 750 elderly people experience sleep disturbances per year. Insomnia is the most common sleep disorder. Every year it is estimated that around 35-45% of adults report sleep disturbances and about 25% experience serious sleep disturbances. The prevalence of sleep disorders in the elderly is quite high, namely around 50% in 2009 (Ministry of Health RI, 2010). On the islands of Java and Bali, the prevalence of this disorder is also quite high, around 44% of the total number of elderly people. In Central Java, 45% of the elderly also reported experiencing sleep quality disturbances (Central Java, 2017).

Improving the quality of life of the elderly, especially improving the quality of sleep, can be achieved in various ways, such as with medication and without medication (Liu dkk., 2020). Pharmacological treatment can be carried out with the use of hypnotic drugs which are used to increase the duration of sleep latency, and total sleep duration, and possibly decrease the awakening rate during sleep (Nasiri & Fahimzade, 2017). Excessive use of hypnotic drugs can cause side effects if used for a long time, such as addiction and depression (Alatab dkk., 2020). Alternative non-pharmacological treatments can be done by doing music therapy, yoga therapy, and aromatherapy.

Aromatherapy is a generic term for a type of alternative medicine that uses volatile plant liquid ingredients, known as essential oils, and other aromatic compounds from plants. Aromatherapy aims to influence a person's mood or health, which is often combined with.

RESEARCH METHODOLOGY

This type of research is descriptive using a case study approach. Case studies are limited by time, place, and cases studied in the form of events or activities (Baabdullah dkk., 2019). A case study was conducted by applying non-pharmacological therapy with lavender aromatherapy to improve sleep quality in elderly people with hypertension and diabetes mellitus (Kumar dkk., 2019). The number of samples is 1 elderly respondent with sleep disorder nursing problems (Kumar dkk., 2019). The inclusion criteria are patients who are willing to be respondents, patients aged over 60 years, and elderly patients with sleep disorder nursing problems (Baabdullah dkk., 2019). The exclusion criteria were elderly patients with lavender flower allergy (Bojanic & Warnick, 2020). The instruments used in this study were lavender aromatherapy, observation sheets, and sleep quality assessment sheets for the elderly (Alola dkk., 2019). Data was collected by interview technique (Saha dkk., 2020), previously patients who were going for lavender aromatherapy were encouraged to lie down and inhale lavender aromatherapy while closing their eyes for about fifteen minutes after that, they assessed by asking the patient about the effect after inhaling lavender aromatherapy to measure the effect of the intervention that had been given on the effect (Korfiatis dkk., 2019). feeling relaxed. After the intervention, a study of nursing care documents was carried out

RESULT AND DISCUSSION

Table 1. The Characteristics of Respondent

The Characteristics	Subject
Name	Ny. G
Age	69 Years
Gender	Female
Medic diagnose	Hypertension and Diabetes Mellitus
Total PSQI Before Intervention	14; <15 (have sleep pattern disturbances)

It was found that the patient on behalf of Mrs. G, 69 years old, was treated at the Abiyoso Nursing Home for 4 years with health problems of hypertension and diabetes mellitus. Patients complain of difficulty sleeping at night and are only able to fall asleep after 11 pm after being in bed for 30-60 minutes with a sleep duration of 4 hours a day and sleep less soundly (Al-Ansi dkk., 2019). The patient also said he could not sleep during the day and often woke up at night to urinate and could no longer sleep (Saha dkk., 2020). The patient says he wants to improve his sleep pattern.

Table 2. The Sleep Patterns Pre and Post-Lavender Aromatherapy Therapy

Pre Intervention of Lavender Aromatherapy	Post-Intervention of Lavender Aromatherapy
1. The patient says it is difficult to sleep at night 2. The patient says he can only sleep after 11 pm 3. The patient says he can fall asleep after 30-60 minutes in bed	1. The patient said that last night he could sleep well after being given lavender aromatherapy 2. The patient said he could sleep at 10.30 WIB 3. The patient says it didn't take long to fall asleep

Table 2 shows that there is an increase in the quality of sleep for the respondents. By doing this lavender aromatherapy therapy can help reduce sleep pattern disturbances in respondents (Pierce dkk., 2020). As in Table 2 there is an increase in sleep quality where patients can sleep well after being given lavender aromatherapy (Hult dkk., 2019). The patient has also experienced an increase in sleep intensity from previously being able to sleep at 11 pm to 10.30 pm. In addition, the patient admits that it does not take much longer before he can finally fall asleep. Giving lavender aromatherapy is done for approximately 15 minutes. During the process, the researchers made observations and the results showed that there were no signs of allergies or irritation.

Based on the research, the results showed that there was an increase in sleep quality where patients could sleep soundly after being given lavender aromatherapy (Pfefferbaum & North, 2020). The patient has also experienced an increase in sleep intensity from previously being able to sleep at 11 pm to 10.30 pm. In addition, the patient admits that it does not take much longer before he can finally fall asleep.

Respondents in this study were women, women over 60 years of age will experience menopause which is associated with decreased reproductive hormones, namely the hormones estrogen and progesterone. These hormonal changes are thought to be related to the increased prevalence of insomnia so that the elderly female gender is more prone to experiencing insomnia or sleep disturbances (Setiawati et al., 2021). Several epidemiological studies have found that the prevalence of insomnia symptoms reaches nearly 40% in individuals aged 65 and over. In addition, women over the age of 45 are 1.7 times more likely to experience insomnia than men (Akberzie & Kataria, 2021). Giving lavender aromatherapy to improve sleep quality is proven in the research of Zega & Gaddafi (2023), where in their research it was found that there were 40 respondents (55.6%) experiencing good sleep quality and 32 respondents (44.4%) still

experiencing poor sleep quality. In line with previous research, Nasiri & Fahimzade (2017) have also proven that aromatherapy with lavender essence can have positive effects in improving sleep quality and other aspects related to sleep in the elderly. In addition, aromatherapy is useful, inexpensive, and convenient. In addition, there is a high prevalence of sleep disorders in elderly patients. Therefore, it is suggested that aromatherapy should be used by nurses in charge of elderly individuals as an effective method to improve their sleep quality. Improving the sleep quality of the elderly can lead to better health and lifestyle conditions. In addition, Ni Made Maharianingsih (2020) also proved in her research that after giving lavender aromatherapy (post-test), 38 respondents (90.47%) experienced an increase in sleep quality and 4 respondents (9.53%) did not experience a change, with p = 0.000.

Researchers argue that giving lavender aromatherapy can make the body more relaxed and have a positive effect on the body with a fragrant lavender aroma, besides that the application of this therapy is also simple and affordable if done independently by people with insomnia or sleep disorders.

CONCLUSION

Conclusion

Based on the results of the research that has been done, it can be concluded that there is an increase in sleep quality before and after giving lavender aromatherapy. Lavender aromatherapy therapy can be done alone at home considering that the procedure is simple and lavender aromatherapy is easy to find at a relatively affordable price, so lavender aromatherapy can be used as an alternative treatment for insomnia sufferers.

Suggestion

The elderly can take advantage of lavender aromatherapy to help overcome the problems they experience, namely sleep disturbances. In the surrounding environment, including other family members or nursing staff, it can increase public education about the use of herbal ingredients to help with nursing problems

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