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# A QUALITATIVE STUDY OF JOGGING AND SLEEP QUALITY IN OLDER ADULTS

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**ABSTRACT**

*This study aims to understand the experiences of older adults who routinely jog and the effects of jogging on their sleep quality. The research method used was a qualitative descriptive approach through in-depth interviews with 15 older adults over 50 years old who regularly jogged at least three times a week at GOR Sudiang, Makassar. The results showed that regular jogging improved sleep quality by enhancing sleep efficiency, reducing sleep latency, and minimizing nighttime disturbances. Beyond physical benefits, jogging also provided psychological effects such as stress reduction, emotional relaxation, and increased social interaction and peer support. Jogging also encouraged healthier lifestyle changes, including better dietary habits and reduced nighttime caffeine intake. Despite challenges such as physical limitations and weather conditions, health awareness and social support motivated participants to continue jogging. The study concludes that jogging is an effective and holistic non-pharmacological intervention to improve the quality of life for older adults through physical, psychological, social, and lifestyle dimensions.*

***Keywords:*** *Jogging, Sleep Quality, Older Adults, Physical Activity, Healthy Lifestyle*

## INTRODUCTION

The increase in life expectancy has led to a global rise in the elderly population, including in Indonesia. According to data from the Central Statistics Agency, the elderly population in Indonesia reached 10.48% of the total population and is expected to continue increasing (Badan Pusat Statistik, 2023). As ageing progresses, various biological changes occur, one of which is sleep disturbances. The elderly tend to experience reduced sleep efficiency, frequent awakenings at night, shorter and less restful sleep (Knutson and Zee, 2020). This condition is also observed in a study showing that nearly half of the elderly in the Yogyakarta region experience poor sleep quality due to psychological disturbances (Putri and Rahmawati, 2023).

Data from Riskesdas show that about 35% of the elderly in Indonesia experience sleep disturbances, which, if left untreated, can reduce quality of life, increase the risk of cognitive disorders, hypertension, depression, and even mortality (Riskesdas, 2018). There is a significant correlation between sleep disturbances and increased blood pressure as well as psychological complaints in older adults (Sari and Nugroho, 2022). Sleep disturbances can also impair the immune system and body metabolism, making them a significant concern in geriatric health (Gulia and Kumar, 2018). As a non-pharmacological effort, various studies have shown that physical activity can be an effective solution to improve sleep quality. A study conducted by Hidayat and Lestari examined how light physical activities, such as walking or elderly gymnastics, play an important role in reducing insomnia complaints among older adults in Surabaya (Hidayat and Lestari, 2021).

One form of physical activity that is relatively safe, inexpensive, and easy for the elderly to do is light jogging. Jogging stimulates the production of serotonin and endorphin hormones and reduces cortisol, which is associated with stress and anxiety, two main factors causing sleep disorders (Chen, Steptoe, and Chen, 2021). Quantitative

studies show that elderly individuals who routinely jog experience increased sleep duration, reduced nighttime awakenings, and better subjective sleep quality (Liu, Wheaton, and Perry, 2020). This is consistent with a study by Dewi and Kusuma, which recorded a significant improvement in sleep quality scores among older adults after six weeks of light jogging intervention (Dewi and Kusuma, 2023). Although there are many quantitative studies on the relationship between physical activity and sleep, qualitative studies that explore the subjective experiences of the elderly in jogging and its effects on sleep remain limited. Qualitative studies are necessary to deeply understand the motivations, perceptions, and obstacles the elderly face in incorporating jogging into their healthy lifestyle and how they perceive its effects on their sleep. In addition, an exploratory study shows that older adults' perception of the benefits of exercise are still influenced by health myths and social limitations (Carskadon and Dement, 2017).

Therefore, this study is essential to explore the relationship between jogging as a form of physical activity and sleep quality among individuals over 50 years old using a qualitative approach. The results of this study are expected to serve as a basis for developing relevant and effective community-based interventions to enhance the quality of life of the elderly through regular physical activity.

## RESEARCH METHODS

This study used a qualitative descriptive mothod to understand the experiences of older adults who jog and how it affects their sleep quality. The research took place at GOR Sudiang, Makassar, which is common place for jogging among local residence. Informant was selected 15 older adults aged over 50 years who routinely jogged at least three time a week. Participans were chosen purposively, meaning they were selected based on certain criteria, such as jogging habit and willingness to be interviewed. Data were collected using in-depth interviews with open-ended questions. These questions explored how often they jog, what motivates them, and how jogging affect their sleep. Interviews were recorded and then transcribed. Analyzed data using thematic analysis, where identified patterns and themes from the participant's answers.

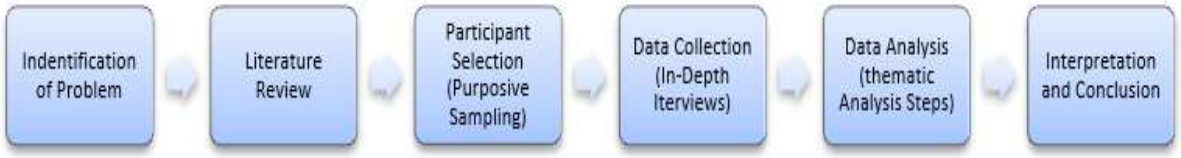


**Figure 1.** Research flow of the qualitative study on jogging and sleep quality in older adults.

## RESEARCH RESULTS AND DISCUSSION

### Jogging Frequency

The majority of informants reported jogging 3 to 5 times weekly, with an average session duration of 30 to 60 minutes. Most elderly people regularly maintained this frequency, which varied depending on their physical state and the weather.

*"I typically jog five times a week, usually at 6 a.m. If it is not raining, I always go jogging."* (Informant 5, age 64)

*"Three times a week, usually on Monday, Wednesday, and Friday."* (Informant 10, age 60)

*"When I feel well, I jog daily except on Sunday, which I reserve for rest."* (Informant

15, age 67).

**Improvement in Sleep Quality After Jogging**

The majority of participants indicated a significant imporovement in their sleep quality after participating in regular jogging

*"I often woke at 2 or 3 a.m. and struggled to return to sleep. Since I started jogging each morning, I have been able to sleep soundly until dawn."* (Informant 3, age 62).

*"I feel more refreshed upon waking now. My body is tired after jogging, which leads to improved sleep quality."* (Informant 7, age 58).

*"I used to sleep at 1 or 2 a.m. and had difficulty falling asleep. Since I began jogging consistently, I feel sleepy around 9 p.m. and fall into a deep sleep."* (Informant 1, age 65).

**Motivation for Jogging**

The informants revealed multiple factors that prompted the elderly to jog, such a maintaining their health, leisure engagement, peer influence, and social connection.

*"At first, I followed my friends, In the end, it evolved into a habit as my body experienced improved well-being. Paticularly as my age, I must prioritize my health"* (Informant 1, age 65).

*"It is preferable for me to jog rather than stay at home all the time. I can socialize while jogging."* (Informant 11, age 60).

*"Due to my history of hypertension, I started jogging as the doctor recommended physical activity to maintain stable blood pressure."* (Informant 3, age 62).

**Feeling Relaxation**

Informants indicated that jogging provides not only physical impacts but also psychological advantages, including a sense of peace, less anxiety and stress, and enchanced mood.

*"After a morning jogs, I experience a sense of mental clarity. I sleep well at night."* (Informant 6, age 66).

"*I used to overthink, but now, after jogging, I can fall asleep right away with clear mind."* (Informant 9, age 55).

*"I feel more energized and less anxious than before. Jogging also helps me sleep better."* (Informant 2, age 57).

**Barriers to Maintaining Consistency**

Despite the benefits, some informants reported facing challenges such as bad weather, minor health issues, lack of motivation, and insufficient time.

*"When it rains, I don't always go jogging. But if the weather is nice, I'll go because I can feel the benefits."* (Informant 12, age 59)

*"I have knee pain, so when it flares up, I either jog slowly or walk instead"* (Informant 8, age 63)

**Lifestyle Change**

Other healthy behaviors in daily lives of older adults, such as increased social and community activity, greater awareness of food consumption and hydration, and improved sleep routines, have been affected by jogging.

*"Now I pay more attention to my diet. I've even cut down on or avoid drinking coffee at night because I know it makes it harder to sleep."* (Informant 14, age 61)

> *"I wake up earlier and go to bed earlier, everything has changed since I started jogging regularly."* (Informant 2, age 57)

This study demonstrates that regular physical activity in the form of jogging has a positive effect on sleep quality among older adults over the age of 50. This can be explained through the sleep homeostasis theory, which posits that the body has a biological need for balanced sleep, and that physical fatigue increases sleep pressure, thereby accelerating sleep onset and prolonging sleep duration (Carskadon and Dement, 2017). Jogging, as a form of light to moderate-intensity aerobic exercise, stimulates increased metabolism and energy expenditure, which naturally elevates the body's need for rest. Several studies in Indonesia have shown that older adults who are physically active, whether through jogging or other activities like senior exercise routines of similar intensity, experience longer sleep duration, improved efficiency, and fewer disturbances. For instance, Subekti and Rosal (2022) found that senior aerobic exercises improved sleep quality with an average score increase of 2.68 among older adults at Panti Tresna Werdha Lampung. Similarly, Fitri et al. (2023) reported that older adults who regularly engaged in physical activity had deeper, longer, and more efficient sleep compared to their inactive counterparts.

This study extends existing findings by providing a qualitative perspective that captures the subjective experiences of older adults who engage in regular jogging. While previous studies have largely focused on quantitative measurements, this research explores the individual motivations, emotional benefits, and lifestyle changes perceived by elderly joggers. It reveals how jogging enhances sleep physiologically and promotes a greater sense of social connection, well-being, and health awareness. These personal narratives offer more profound insights into the holistic impact of jogging that are often overlooked in statistical analyses. Beyond physical benefits, jogging also has a significant psychological impact on sleep quality. Many informants expressed that they felt calmer, less anxious, and generally happier after jogging. From a neurobiological perspective, aerobic exercise such as jogging can increase the production of neurotransmitters like endorphins, serotonin, and dopamine, which are linked to feelings of happiness and relaxation. In contrast, exercise has also been proven to reduce levels of the stress hormone cortisol, which plays a major role in the onset of sleep disorders like insomnia (Dishman, Heath, and Lee, 2020; Razaan and Lontoh, 2024). This hypothesis is supported by Mitsalina et al. (2022) who found that physical training like jogging has a positive effect in reducing anxiety and improving sleep quality, especially among active women. A study conducted by Natikoh et al. (2023) in Pekuncen Village, Purwokerto, also revealed a significant relationship between physical activity and sleep quality in older adults, with a p-value of 0.0000 and a correlation coefficient of 0.571.

The contextual focus of this research on urban elderly populations in Indonesia also provides important practical implications. Environmental, cultural, and infrastructural factors are shown to significantly influence the consistency and motivation of older adults in maintaining jogging routines. The study captures how communal exercise environments, peer encouragement, and routine structures contribute to sustained behavior. These findings back the creation of health promotion strategies that fit the community needs of older people, where formal health services might not be readily available. The motivation of informants to engage in jogging primarily stems from a desire to maintain their health, prevent illness, and enjoy recreation. This aligns with the Health Belief Model, which suggests that health behaviors occur when individuals perceive themselves to be at risk for certain conditions and believe that their actions will provide tangible benefits. Sakamoto et al. (2022) observed that older adults involved in group activities like jogging were more likely to maintain consistency due to social support, peer interaction, and a sense of community that fosters mutual encouragement. These findings emphasize that the success of senior physical activity programs depends not only on physical engagement, but also on the accompanying emotional and social support.

However, maintaining a consistent jogging routine is not always easy. Some informants reported obstacles such as bad weather, joint pain, fatigue, and difficulty waking up early. This highlights the importance of offering alternative strategies, such as indoor exercise or brisk walking, as substitutes when conditions do not permit jogging. Research by Purnama and Suhada (2021) in two nursing homes in West Java Province revealed that while most older adults had moderate levels of physical activity, many were not actively involved in structured exercise programs due to physical, psychological, and environmental barriers. Likewise, Wu et al. (2020) noted that the main barriers for older adults to engage in physical activity include health problems, lack of facilities, and minimal adaptation of activities to age-related conditions.

In addition to the direct benefits to sleep, jogging also stimulates other positive lifestyle changes. Informants reported reduced nighttime caffeine intake, more regular sleep and wake times, and increased mindfulness regarding dietary habits. This suggests that the effect of exercise on sleep is not isolated, but rather forms a reinforcing cycle of healthier behaviors. A study by Oktaviatama et al. (2023) in Padang found that morning exercises like walking significantly improved sleep quality in older adults. These findings are consistent with Pender's Health Promotion Model, which states that health behaviors are more likely to be sustained when individuals perceive immediate benefits and are supported by a conducive environment.

Overall, the findings of this study indicate that jogging is a simple yet highly effective non-pharmacological intervention for improving sleep quality among older adults. More than just a physical activity, jogging has a holistic impact that encompasses physical, psychological, social, and lifestyle dimensions. This presents a strong foundation for designing inclusive, adaptive, and sustainable community-based health promotion programs for Indonesia's elderly population. In the future, such interventions could be integrated with healthy lifestyle education and psychological counseling for a more comprehensive impact.

## CONCLUSION

This study concludes that regular jogging significantly improves the sleep quality of older adults over the age of 50 by enhancing sleep efficiency, reducing sleep latency, and minimising nighttime disturbances. It also offers psychological benefits such as stress reduction and emotional relaxation while encouraging social interaction and support among peers. Additionally, jogging promotes healthier lifestyle habits like consistent meal times and reduced evening caffeine intake. Despite barriers such as physical limitations and weather, older adults remain motivated to jog due to health awareness and social encouragement. Overall, jogging serves as a holistic approach that integrates physical, psychological, social, and lifestyle factors in enhancing the well-being and quality of life in the elderly.

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