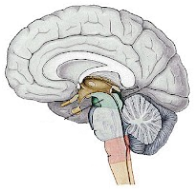
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RELATIONSHIP BETWEEN ANXIETY AND SLEEP QUALITY IN OLDER ADULTS WITH HYPERTENSION IN SUMBERSUKO VILLAGE, DAMPIT DISTRICT

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ABSTRACT

Hypertension in the elderly often occurs together with anxiety that affects their sleep quality. Excessive anxiety can worsen the physical and mental condition of the elderly and increase blood pressure, while sleep disorders in the elderly also have an impact on their health. This study aimed to determine the relationship between anxiety and sleep quality in elderly people with hypertension in Sumbersuko Village, Dampit District. This study used a quantitative design with a cross-sectional approach. Sampling used purposive sampling with 86 respondents. The research variables were anxiety and sleep quality, the instrument used was a questionnaire, and the data were analysed using the Spearman rank correlation test. The results showed that anxiety was mostly in the moderate category (45.3%) and sleep quality was mostly in the poor category (81.4%). The relationship between anxiety and sleep quality in elderly people with hypertension showed a p-value of 0.000, which was less than 0.05, and a correlation coefficient (r) of 0.377. It is concluded that there is a relationship between anxiety and sleep quality in elderly people with hypertension in Sumbersuko Village, Dampit District.

ABSTRAK

Hipertensi pada lansia sering terjadi bersamaan dengan kecemasan yang memengaruhi kualitas tidur mereka. Kecemasan yang berlebihan dapat memperburuk kondisi fisik dan mental lansia serta meningkatkan tekanan darah, sedangkan gangguan tidur pada lansia juga memengaruhi kesehatan mereka. Penelitian ini bertujuan untuk mengetahui hubungan antara kecemasan dan kualitas tidur pada lansia dengan hipertensi di Desa Sumbersuko, Kecamatan Dampit. Penelitian ini menggunakan desain kuantitatif dengan pendekatan potong lintang (cross-sectional). Pengambilan sampel menggunakan purposive sampling dengan 86 responden. Variabel penelitian adalah kecemasan dan kualitas tidur, instrumen yang digunakan adalah kuesioner, dan data dianalisis menggunakan uji korelasi peringkat Spearman. Hasil penelitian menunjukkan bahwa kecemasan sebagian besar berada dalam kategori sedang (45.3%) dan kualitas tidur sebagian besar berada dalam kategori buruk (81.4%). Hubungan antara kecemasan dan kualitas tidur pada lansia dengan hipertensi menunjukkan nilai p sebesar 0.000, yang kurang dari 0.05, dan koefisien korelasi (r) sebesar 0.377. Disimpulkan bahwa terdapat hubungan antara kecemasan dan kualitas tidur pada lansia dengan hipertensi di Desa Sumbersuko, Kecamatan Dampit.

Kata Kunci: Hipertensi, Kecemasan, Kualitas tidur, Lansia

1. INTRODUCTION

Hypertension is a common disease in older adults and often requires ongoing medical care. Globally, the number of adults with hypertension has continued to rise over the last three decades, and blood pressure control remains far from optimal, including among older age groups (Zhou et al., 2021). Yet besides physical factors, anxiety also plays an important part in the course of disease in older adults. Older adults with hypertension often feel anxious because of physical limitations and uncertainty about whether their disease will improve. This anxiety can worsen their physical and psychological condition. A global meta-analysis shows that anxiety symptoms are fairly common in older adults and are associated with various health and social factors (Shafiee et al., 2024).

Anxiety in older adults can cause sleep disorders, which often take the form of irregular sleep patterns, such as waking during the night or difficulty getting enough sleep. Poor sleep quality in older adults can worsen hypertension and raise the risk of other complications, such as diabetes and cognitive disorders. Sleep disorders are indeed a very common complaint in older adults; a systematic review of older adults in care institutions found a high prevalence of sleep disorders (Bai et al., 2025). Previous research shows that anxiety in older adults with hypertension is closely related to poor sleep quality, and that many older adults with hypertension experience mild to moderate anxiety with poor sleep quality, which affects their blood pressure (Indriyani, 2023; Puspita et al., 2020).

Sleep and blood pressure are related in both directions. A meta-analysis of prospective cohort studies shows that insomnia raises the risk of hypertension later in life (Li et al., 2021), and a bidirectional meta-analysis confirms the reciprocal relationship between hypertension and insomnia (Liu et al., 2022). In older adults, this relationship is aggravated by changes in sleep patterns due to ageing, accompanying chronic diseases, and worries about their health condition. Understanding the relationship between anxiety and sleep quality in older adults with hypertension is therefore important for nurses and health workers in primary care, because both problems can be modified through education, social support, and stress management.

A preliminary study conducted in Sumbersuko Village on 5 November 2024 found that of 110 older adults who visited seven posyandu (integrated health posts), 70 had hypertension. Interviews with 15 older adults showed that they experienced anxiety disorders and irregular sleep, and often woke during the night. Against this background, this study aimed to explore the relationship between anxiety and sleep quality in older adults with hypertension in Sumbersuko Village, Dampit District.

2. METHODS

This study is a quantitative study with a correlational design using a cross-sectional approach, conducted in Sumbersuko Village, Dampit District, from January to February 2025. Sampling used non-probability sampling with a purposive sampling technique, with 86 older adults with hypertension as respondents. Data were collected using a questionnaire covering respondents' demographic characteristics, anxiety level, and sleep quality in older adults with hypertension. The relationship between anxiety level and sleep quality was analysed with the Spearman rank correlation test at a significance level of 0.05. The research flow is shown in Figure 1.

3. RESULTS AND DISCUSSION

This study examined the relationship between anxiety and sleep quality in 86 older adults with hypertension in Sumbersuko Village, Dampit District. Respondent characteristics showed the 60 to 65 year age group, a majority of men (52.3%), not working (64.0%), and grade II hypertension (82.6%), as summarised in Table 1.

Table 1. Respondent Characteristics and Distribution of Anxiety Levels and Sleep Quality

Variable	Largest category	%
Age group of respondents	60-65 years	-
Sex	Male	52.3
Employment status	Not working	64.0
Hypertension grade	Grade II	82.6

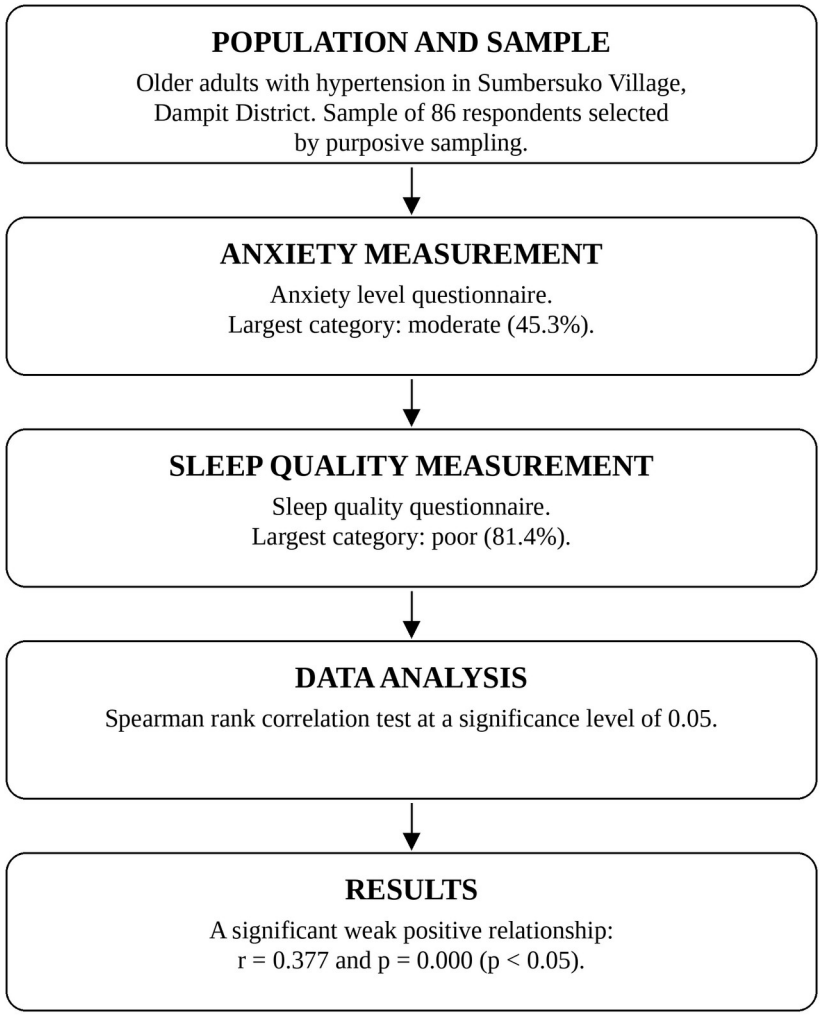
Variable	Largest category	%
Anxiety level	Moderate	45.3
Sleep quality	Poor	81.4
Sleep quality	Good	18.6
Number of respondents	86 people	100

The results show a significant relationship between anxiety level and sleep quality in older adults with hypertension in Sumbersuko Village. Most respondents experienced moderate anxiety, at 45.3%, which contributed to poor sleep quality in 81.4%. The Spearman rank test showed a significance value of 0.000 ($p < 0.05$), indicating a significant relationship between anxiety and sleep quality in older adults with hypertension, with a correlation coefficient (r) of 0.377, as presented in Table 2.

Table 2. Spearman Correlation Test Results for the Relationship between Anxiety and Sleep Quality

Analysis	Coefficient (r)	Significance (p)
Relationship between anxiety and sleep quality (N = 86)	0.377	0.000
Interpretation	Weak positive	Significant ($p < 0.05$)

Figure 1. Research Flow for the Relationship between Anxiety and Sleep Quality in Older Adults with Hypertension



Anxiety in older adults with hypertension in Sumbersuko Village was mostly at a moderate level (45.3%). This anxiety is influenced by external factors, such as threats to physical health, and internal factors, such as age, education, occupation, and environment. Older adults who are older and less educated

are more vulnerable to anxiety, while heavy work and loneliness also worsen the condition. Older adults with grade II hypertension, that is, blood pressure of 160 to 190 mmHg, often experience physical strain that increases anxiety. Excessive physical activity and bodily weakness affect the limbic system, worsen anxiety, and disturb sleep quality. This finding is in line with research showing a relationship between anxiety, poor sleep quality, and increased blood pressure in older adults with hypertension (Indriyani, 2023; Puspita et al., 2020). Social support, health information, and stress management are therefore very important for reducing anxiety and improving the quality of life of older adults with hypertension.

Most older adults with hypertension in this study had poor sleep quality (81.4%), while only 18.6% had good sleep quality. Factors influencing this sleep quality include age, sex, education, occupation, and anxiety. Older adults with low education or heavy physical and mental work often experience sleep disorders, while undemanding work can cause boredom and anxiety that also affect sleep quality. Older adults who struggle to manage anxiety are more vulnerable to sleep disorders. The dominant picture of poor sleep quality was also reported in older adults with hypertension during the pandemic (Ramadhani, 2022) and in research on the relationship between anxiety and sleep quality in older adults with hypertension in a community health centre area (Ramadia et al., 2023).

This finding is in line with research by Sulkarnaen et al. (2022) showing a relationship between anxiety and sleep quality in older adults with hypertension, with a correlation of 0.443. Results in the same direction were also found in older adults with hypertension in a coastal area (Rusdi et al., 2024), in the relationship between anxiety and sleep patterns in older adults with and without hypertension (Nurhayati et al., 2020), in the relationship between anxiety and insomnia in pre-older and older adults with hypertension at an older adults' posyandu (Juwita et al., 2023), and in the relationship between anxiety level and sleep quality in older adults with insomnia (Latief et al., 2020). Good sleep quality is important for maintaining the physical and mental health of older adults, because sufficient sleep helps the body and brain rest optimally. The consistency of findings across regions shows that the relationship between anxiety and sleep quality in older adults with hypertension is a recurring pattern, not merely a local occurrence.

The relationship found was weak and positive, with a Spearman correlation coefficient (r) of 0.377, which means that the higher the anxiety, the worse the sleep quality of older adults. Anxiety in older adults is influenced by age, education, and occupation. Older adults with low education or undemanding work often struggle to manage anxiety, which affects their sleep quality. From a psychoanalytic view, anxiety arises from conflict between natural drives and moral control, which can feel more intense in older adults with low self-esteem. Age also affects sleep quality; older adults who are older and have hypertension tend to experience sleep disorders. Managing anxiety and paying attention to age, education, and occupation are therefore important for improving the sleep quality of older adults.

Mechanistically, the relationship between anxiety and sleep quality can be understood as a mutually reinforcing cycle. Anxiety raises alertness and tension before sleep, lengthens the time needed to fall asleep, and makes sleep easy to break. Conversely, poor sleep lowers the ability to manage emotions the next day, so anxiety arises more easily. The roles of stress, anxiety, and depression as mediators of the relationship between physical complaints and sleep quality in older adults have also been shown in research on older adults (Papi et al., 2023). In older adults with hypertension, this cycle relates to blood pressure: a prospective meta-analysis shows insomnia is associated with an increased risk of hypertension (Li et al.,

2021), a bidirectional meta-analysis found hypertension is also associated with subsequent insomnia (Liu et al., 2022), and research using the Pittsburgh sleep quality index found a correlation between sleep quality scores and hypertension prevalence (Ma et al., 2026). Actigraphy measurements in older adults also show links between objective sleep characteristics and blood pressure (Springall De Pablo & Lauderdale, 2024). Unmanaged anxiety can thus worsen sleep, and poor sleep can make blood pressure control harder.

In terms of measurement, sleep quality in this study was assessed with a questionnaire. The most widely used instrument in the world for this purpose is the Pittsburgh Sleep Quality Index (PSQI), and research in healthy older adults shows that PSQI responses are influenced by total sleep time and wake time after sleep onset (Zitser et al., 2022). This is a reminder that sleep quality scores are subjective and can be influenced by respondents' perceptions and emotional condition at the time of completion, including anxiety itself. Within the nursing symptom management framework, sleep disorders in older adults are understood as an experience shaped by disease conditions, environment, and individual responses, so assessment needs to be supplemented with history-taking on sleep habits, medicines taken, and accompanying complaints (Dolu & Nahcivan, 2020). Sleep disorders in older adults are also related to depression in later life (Apriliani & Soetjipto, 2020), so sleep quality screening should ideally go together with attention to older adults' mood.

The ageing context strengthens this finding. A systematic review of older adults in care institutions in China found sleep disorders to be very common in older age groups (Bai et al., 2025), and a global meta-analysis found anxiety symptoms in older adults to be associated with chronic health factors and functional limitations (Shafiee et al., 2024). During the pandemic, the prevalence of depressive and anxiety symptoms in older adults was also reported to have risen (Yan et al., 2022). Among older adults in Indonesia, sleep quality is related to changes in blood pressure (Harsismanto et al., 2020), and everyday lifestyle factors, including excessive smartphone use, are related to depression, anxiety, and sleep quality in older adults (Karaş et al., 2022). This body of evidence places the finding in Sumbersuko Village within a larger picture: anxiety and poor sleep are two interrelated geriatric problems that both require attention in hypertension care.

The implications of this finding for nursing practice at older adults' posyandu and in primary care are fairly direct. First, assessment of older adults with hypertension should not stop at blood pressure measurement, but should include simple questions about anxiety and sleep quality, because both are related to disease control. Second, health education has proved to be an entry point accepted by older adults; counselling on hypertension in older adults (Siregar, 2024) and education on sleep quality in older adults with hypertension (Maulana, 2021) are forms of activity that can be developed into a combined education package on anxiety management and sleep hygiene. Third, regular physical activity is worth recommending, because meta-analyses show various types of exercise improve sleep quality based on the PSQI in middle-aged and older adults (Gao et al., 2024), and a systematic review of exercise interventions found improvements in subjective sleep quality in older adults (Li et al., 2025). The nurse's role is to assess, educate, and refer older adults with severe anxiety or persistent sleep disorders.

Social and environmental factors in older adults' place of residence also colour this finding. Most respondents were not working (64.0%), which means older adults' days are spent mostly at home with limited activities. This condition can cause boredom, feelings of helplessness, and long periods of reflection

on their disease, all of which feed anxiety. Conversely, older adults who remain involved in posyandu activities, religious activities, and interaction with neighbours have channels for sharing worries and gaining emotional support. Anxiety symptoms in older adults are indeed related to social support and perceived health conditions (Shafiee et al., 2024), and depressive and anxiety symptoms in older adults are also related to limitations in daily activities (Yan et al., 2022). Efforts to reduce anxiety in older adults with hypertension are therefore not enough with individual advice alone, but need to revive social support in the village environment.

The role of hypertension medication is also worth mentioning in reading this relationship. Older adults with grade II hypertension were the largest group in this study (82.6%), and this group generally takes long-term antihypertensive medicines. Worries about a disease that never seems to heal, the cost and availability of medicines, and treatment side effects can themselves be sources of anxiety. On the other hand, non-adherence to medicines because of forgetfulness or feeling already healthy can lead to uncontrolled blood pressure, which then adds to worry. Explanations of treatment goals, medicine schedules, and hypertension danger signs are part of the counselling older adults need (Siregar, 2024). When anxiety and sleep are assessed together with treatment adherence, the picture of older adults with hypertension becomes more complete and nursing interventions can be arranged more precisely.

Several limitations of this study should be noted. The cross-sectional design measured anxiety and sleep quality at one time, so the direction of the relationship cannot be ascertained; anxiety can worsen sleep, but poor sleep can also increase anxiety, and both can be influenced by a third factor such as pain, comorbid disease, and medicines taken, which were not controlled in the analysis. The correlation strength was weak ($r = 0.377$), so anxiety explains only a small part of the differences in sleep quality between older adults. Data were collected with a self-report questionnaire vulnerable to recall bias, and the study was conducted in a single village, so generalisation to older adults with hypertension in other areas needs to be done with care. Future research is advised to use more detailed sleep measurements, control confounding variables, and test anxiety management interventions longitudinally.

4. CONCLUSION AND SUGGESTIONS

The results show that older adults with hypertension in Sumbersuko Village mostly had moderate anxiety (45.3%), because older adults do not yet know how to cope with anxiety well, and mostly had poor sleep quality (81.4%), because most older adults lack health education on the importance of maintaining sleep quality. Analysis of the relationship between anxiety and sleep quality in older adults with hypertension in Sumbersuko Village, Dampit District, shows a weak correlation strength with a positive direction ($r = 0.377$) and significance $p = 0.000$ ($p < 0.05$), which means that the higher the anxiety, the worse the sleep quality of older adults.

Based on this conclusion, several suggestions can be put forward. For health workers and older adults' posyandu cadres, assessment of older adults with hypertension needs to be supplemented with attention to anxiety and sleep quality, together with health education on anxiety management, sleep hygiene, and the importance of sufficient sleep, given that most older adults in this study did not yet understand either matter. For older adults and their families, family support in creating a calm sleep environment and accompanying older adults in managing their worries is an important part of daily care.

For future researchers, developing a more structured theory-based intervention programme is advised, for example education on anxiety management and sleep hygiene or an older adults' physical activity programme, and measuring its long-term impact on anxiety and sleep quality in older adults with hypertension. The results of this study are expected to serve as a reference for future research and as material for consideration in developing gerontic nursing services at village level.

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