The Relation Between Life Style and Quality of Life on Hypertension Farmers in Panti District, Jember Regency

Adinda Widia Pangestu1, Fahruddin Kurdi2, Hanny Rasni2

ABSTRACT

Farmers' unhealthy lifestyles may raise their risk of hypertension. The physical and mental effects of hypertension also impact farmers' quality of life. The study aimed to explain the connection between hypertensive farmers' lifestyles and quality of life in the Panti District of the Jember Regency. 204 farmers with hypertension were the subjects of this cross-sectional study, which utilized proportional random sampling. The WHOQOL-BREF Questionnaire and the Lifestyle Questionnaire are used in data collection to assess farmers' quality of life and lifestyle. The Spearman test with a value of 0.05 was used for data analysis. The Kolmogorov-Smirnov one-sample test revealed that hypertensive farmers in the Panti District had a significant lifestyle (p-value 0.00) based on the findings. Most hypertensive farmers in Jember Regency's Panti District lead healthy lifestyles. The Kolmogorov-Smirnov one sample test also shows that hypertension farmers in Panti District have a significantly better quality of life (p-value 0.00). Most hypertensive farmers in Panti District, Jember Regency (45.1%) live well. In hypertensive farmers in Panti District, Jember Regency, a relationship exists between lifestyle and quality of life (p-value 0.001). This study concludes that hypertensive farmers in Panti District, Jember Regency, have a better quality of life because of their lifestyle. Farmers can improve their health, reduce their risk of hypertension, and alleviate pain by changing their lifestyle. As a result, farmers' physical and mental well-being improves their quality of life.

KEYWORDS
Lifestyle, Hypertension, Quality of Life, Farmers, Hypertension Farmers, Blood Pressure

1. BACKGROUND

Indonesia is an agricultural country where the agricultural sector is the main sector in the population's livelihoods. This is evidenced by 13.61% of Indonesia's population working in the agricultural sector (Badan Pusat Statistik, 2022). 20% of the population of Jember Regency, especially in the Panti District, 55.2% work in the agricultural sector (BPS Kabupaten Jember, 2022; BPS Kabupaten Jember, 2019). The lifestyle of farmers in their daily work...
The relation between life style and quality of life on hypertension farmers influences health status and the emergence of health problems that can occur.

Lifestyles related to hypertension in farmers are smoking habits, eating fatty foods, eating foods high in sodium, working days of more than five days per week, and stress at work (Susanto, Purwandari, & Wuryaningsih, 2016). High sodium intake in farmers can increase the risk of hypertension because salt can bind fluids from outside the cells, causing fluid accumulation (Arityaningrum, 2016). The smoking habit of farmers has an impact on increasing blood pressure because the nicotine in cigarettes from the first puff will release the hormone epinephrine to constrict blood vessels (Wahyuni, Yusran, & Harleli, 2020). Also, excessive stress on farmers can trigger an increase in heart rate faster, which results in increased blood pressure. For this reason, these lifestyle indicators can be a risk factor for hypertension.

Based on data from the Indonesian Ministry of Health (2018), as many as 34.1% of Indonesia’s population aged over 18 years suffer from hypertension, specifically as much as 10.33% in Jember Regency (Kemenkes. RI, 2018). According to data from the Health Service (2021), Panti District occupies the 5th position as the region with the most hypertension sufferers, namely, 5300 visits per year in 2021 in Jember Regency. Increased blood pressure that continues requiring significant treatment can cause decreased productivity. Therefore, daily activities and productivity can be disrupted and cause a decrease in the quality of life in hypertensive farmers.

Quality of life in someone with hypertension can affect measurements of physical, mental, and emotional functional status, activity limitations, and social status that a person feels (Laili & Purnamasari, 2019). Hypertension sufferers will have physiological and psychological complaints related to the discomfort and anxiety they experience (Alfian, Susanto, & Khadizah, 2017). Treatment of hypertension in farmers can be done with lifestyle modifications to prevent complications in sufferers and improve physical, psychological, and social functioning as indicators of achieving a good quality of life to achieve productivity in farmers. However, no research has discussed the relationship between lifestyle and quality of life, especially for hypertension farmers. Therefore, researchers are interested in analyzing the relationship between lifestyle and quality of life in hypertensive farmers in Panti District, Jember Regency.
2. METHODS

The design of this study was analytic observational with a cross-sectional approach (February 2023 to March 2023) in Panti District, Jember Regency. The population of this study was hypertension sufferers in the Panti District, Jember Regency as of October 2022 (N=416). The sample size was calculated using the Slovin Formula to produce 204 samples. The inclusion criteria include 1) Farmers who work in the Panti District, Jember Regency; 2) Farmers with stage 1 or 2 hypertension; 3) Willing to be research respondents; 4) Farmers who are in a condition able to answer the questionnaire. Exclusion criteria include 1) Farmers who are not willing to be research respondents; 2) Farmers who have complications other than hypertension, either physical or psychological; 3) Farmers who undergo hypertension treatment routinely. Sampling was carried out in seven villages, with some villages going door to door and some going through meetings in one place. Researchers screened the population (N=416) with inclusion and exclusion criteria to produce 235 people. Selection of 204 samples through proportional random sampling adjusted for the population of each village.

Data collection using the Respondent Characteristics Questionnaire included age, gender, last education, working hours every week, hours of rest every working, working days every week, blood pressure, and family history of hypertension. Measure independent variables with the Lifestyle Questionnaire to measure the lifestyle of farmers, and measure the dependent variable with the WHOQOL-BREF Questionnaire to measure farmers' quality of life. The Lifestyle Questionnaire contains 10 questions on physical activity, 5 on smoking habits, 3 on sodium consumption, and 14 on stress. The instrument has been tested for validity, showing the results of $r$ count $> r$ table, and the reliability test shows the results of Cronbach's alpha value ($\alpha$) $> 0.60$. The WHOQOL-BREF questionnaire contains 9 physical domain questions, 6 psychological domain questions, 3 social domain questions, and 8 environmental domain questions. This instrument has been tested for validity, showing the results of $r$ count $0.89-0.95$, and the reliability test shows the results of Cronbach's alpha value ($\alpha$) $= 0.66-0.87$.

At each meeting with respondents, the researcher explained to the respondents who were willing regarding the aims, objectives, benefits, research procedures,
and procedures for filling out the questionnaire. The researcher asked for consent to participate in the study by reading and signing the informed consent sheet as proof of willingness to guarantee the confidentiality of the data obtained. Researchers measured the respondent's blood pressure using an aneroid sphygmomanometer with units of mmHg and a stethoscope. The ethical test for this research was carried out at the Health Research Ethics Committee (KEPK) of the Faculty of Nursing, University of Jember, numbered No. 025/UN25.1.14/KEPK/2023.

The results of numerical research data, such as age, are stated in the mean, average value, and standard deviation. Meanwhile, for variables with categorical data such as gender, education level, working hours every week, hours of rest every working, working days every week, family history of hypertension, and stage of hypertension are expressed in frequency and percentage. Specific data, including lifestyle and quality of life, are presented in percentage form. The data of the two variables are nominal. Data analysis used the Spearman test to test the correlation of two nominal variables with abnormal data distribution with \( \alpha < 0.05 \).

3. RESULTS

Characteristics of hypertensive farmers in Panti District, Jember Regency

Table 1. Characteristics of Hypertension Farmers in Panti District, Jember Regency (n=204) (Continued to page 101)

<table>
<thead>
<tr>
<th>Characteristics of Hypertension Farmers</th>
<th>M±SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (Years)</td>
<td>46.85±14.971</td>
</tr>
<tr>
<td>Systolic Blood Pressure (mmHg)</td>
<td>145.3±12.373</td>
</tr>
<tr>
<td>Diastolic Blood Pressure (mmHg)</td>
<td>92.16±5.369</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Characteristics of Hypertension Farmers</th>
<th>f (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>79 (38.7)</td>
</tr>
<tr>
<td>Female</td>
<td>125 (61.3)</td>
</tr>
<tr>
<td>Education Degree</td>
<td></td>
</tr>
<tr>
<td>Did not finish elementary school/equivalent</td>
<td>46 (22.5)</td>
</tr>
<tr>
<td>Graduated from elementary school/equivalent</td>
<td>65 (31.9)</td>
</tr>
<tr>
<td>Graduated from high school/equivalent</td>
<td>34 (16.7)</td>
</tr>
<tr>
<td>Graduated from high school/equivalent</td>
<td>49 (24.0)</td>
</tr>
<tr>
<td>Completed D3 or above</td>
<td>10 (4.6)</td>
</tr>
</tbody>
</table>
Table 1 shows that the mean or average age of hypertensive farmers is 46.85. The systolic blood pressure of the hypertensive farmers had an average of 145.34 mmHg and the average diastolic blood pressure was 92.16 mmHg. The dominance of female farmers is more, namely 61.3% of the 204 farmers. The education level of most hypertension farmers was elementary school graduates/equivalent with a prevalence of 31.9%. The majority of hypertension farmers work more than 40 hours per week (57.8%), have breaks less than or equal to 30 minutes each work (54.4%) with more than 5 working days a week (78.9%). In addition, the majority of farmers do not have a family history of hypertension (58.3%).

Table 2. Lifestyle Indicators for Hypertension Farmers in Panti District, March 2023 (n= 204)

<table>
<thead>
<tr>
<th>Lifestyle Indicator</th>
<th>Md (P25-P75)</th>
<th>Z</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Activity</td>
<td>2.0 (1.0-2.0)</td>
<td>0.364</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Smoking habit</td>
<td>4.0 (3.0-4.0)</td>
<td>0.398</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Sodium Consumption</td>
<td>2.0 (1.0-3.0)</td>
<td>0.319</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>stress</td>
<td>2.0 (1.0-2.0)</td>
<td>0.356</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>8.0 (7.0-10.0)</strong></td>
<td><strong>0.134</strong></td>
<td><strong>&lt;0.001</strong></td>
</tr>
</tbody>
</table>

Md=median, P25-P75= 25-75th percentile, Z= count value of One Sample Kolmogorov-Smirnov Test, P-value= significance value of One Sample Kolmogorov-Smirnov Test

Based on table 2, the results of statistical tests using the Kolmogorov-Smirnov one sample show that there are significant differences in the lifestyle of hypertensive farmers in Panti District (p-value <0.00) across all indicators, namely: physical activity, smoking habits, sodium consumption, and stress.
The Relation Between Life Style and Quality of Life on Hypertension Farmers

Figure 1: Lifestyle of hypertension farmers based on their categories in Panti District, Jember Regency (n=204)

Based on Figure 1 it shows that the majority of hypertension farmers in the Panti District of Jember Regency have a healthy lifestyle with a percentage of 48% or as many as 98 respondents.

Table 3. Indicators of Quality of Life for Hypertension Farmers in Panti District (n=204)

<table>
<thead>
<tr>
<th>Quality of Life Indicator</th>
<th>Md (P25-75)</th>
<th>Z</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Domains</td>
<td>69.0 (51.5-75.0)</td>
<td>0.185</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Psychological Domains</td>
<td>69.0 (51.5-75.0)</td>
<td>0.165</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Social Domains</td>
<td>56.0 (44.0-75.0)</td>
<td>0.189</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Environment Domains</td>
<td>63.0 (50.0-69.0)</td>
<td>0.111</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>64.25 (48.25-70.5)</td>
<td>0.127</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

Md=median, P25-P75=25-75th percentile, Z= count value of One Sample Kolmogorov-Smirnov Test, P-value= significance value of One Sample Kolmogorov-Smirnov Test

Based on Table 3, the results of statistical tests using one sample Kolmogorov-Smirnov show that there are significant differences in the quality of life of hypertensive farmers in Panti District (p-value <0.00) across all indicators, namely: physical domain, psychological domain, social domain, and environmental domains.

Figure 2: Quality of life of hypertension farmers based on their categories in Panti District, Jember Regency (n=204)
Based on Figure 2, shows that the majority of hypertension farmers in the Panti District of Jember Regency have a good quality of life with a percentage of 45% or as many as 204 respondents.

Table 4. The Relationship between Lifestyle and Quality of Life in Hypertension Farmers in Panti District, Jember Regency (n=204)

<table>
<thead>
<tr>
<th>Lifestyle of Hypertension Farmers</th>
<th>R</th>
<th>p-value</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.417</td>
<td>&lt;0.001</td>
<td>204</td>
</tr>
</tbody>
</table>

The results of the Spearman correlation inference analysis test above show that there is a relationship between lifestyle and quality of life in hypertensive farmers in Panti District, Jember Regency in March 2023 (p-value <0.00 <0.05). The value of the positive correlation coefficient shows a unidirectional relationship that the healthier the lifestyle of hypertensive farmers, the better their quality of life. The correlation coefficient value shows 0.417, which means that the relationship between lifestyle and quality of life of hypertensive farmers in Panti District, Jember Regency in March 2023 has a fairly strong correlation.

4. DISCUSSION

The results of this study indicate that there is a relationship between lifestyle and quality of life in hypertensive farmers in Panti District, Jember Regency. This is because the healthy lifestyle of the majority of farmers (48%) improves body fitness thereby minimizing the risk of hypertension and its physical symptoms. Adequate lifestyle modifications can improve the quality of life of people with hypertension (Laili & Purnamasari, 2019), including the physical, psychological, social, and environmental domains (Pawestri, 2021), so as to improve the welfare of the four quality of life domains (Li, Yu, Chen, Quan, & Zhou, 2018). Therefore, it is important for farmers to adopt a healthy lifestyle to be able to reduce the impact of pain and stress from hypertension so that the quality of life improves.

Based on the results of the study, it showed that there were significant differences in the lifestyle of hypertensive farmers in the Panti District, Jember Regency. This is due to the diversity of daily habits of each indicator among farmers creating different interpretations of lifestyles. Lifestyle indicators that affect
hypertension are diet, physical activity, alcohol consumption, and psychosocial stress (Shimbo, 2016), so that through the application of these indicators a lifestyle can be assessed as healthy or not (Sari, 2020). For this reason, it is important for farmers to pay attention to every indicator in the form of physical activity, smoking habits, sodium consumption, and stress in order to create a healthy lifestyle.

The results showed that there was a significant difference in physical activity in the lifestyle of hypertensive farmers in Panti District, Jember Regency. This is because the ability of farmers to perform physical activity differs depending on age. Farmers' ability to carry out activities can be affected by age (Maulana, 2023) due to increasing age, resulting in decreased health and functional status of the body (Hasanudin, Adriyani, & Perwiraningtyas, 2018), so farmers in productive age have sufficient ability to carry out physical activity (Al Mubarroq, Putra, & Rayanti, 2022). For this reason, farmers need to pay attention to their age-appropriate activities, so that health, including blood pressure, is maintained.

The results of this study indicate that there is a significant difference in smoking habits in the lifestyle of hypertensive farmers in Panti District, Jember Regency. This is because the smoking habits of each farmer are different which can be triggered by gender. The habit of smoking is dominated by male farmers (Runturambi, Kaunang, & Nelwan, 2019) because it has become a habit to relieve boredom and fatigue (Siburian, Yustina, & Juanita, 2021), as well as being a taboo cultural for women to smoke (Somantri, 2020). Therefore, farmers with smoking habits are required to stop and for those who do not continue to have to apply other indicators of a healthy lifestyle, so that the risk of hypertension which can interfere with quality of life can be avoided.

Based on this study, it shows that there is a significant difference in sodium consumption in the lifestyle of hypertensive farmers in Panti District, Jember Regency. This is because the hypertension farmers in this study have various levels of education that affect their insights about high sodium consumption. Furthermore, the majority of farmers have a habit of consuming salt due to their low level of education (Susanto et al., 2016) because farmers lack insight (Aprilia, Jumiyati, & Sari, 2021), so they tend to like dried fish, instant noodles, and soy sauce. unknowingly contains high sodium (Andriani, 2020). Therefore, farmers need to be given high insight to reduce sodium
consumption instead of just avoiding salty foods.

In this study the results showed that there were significant differences in stress in the lifestyle of hypertensive farmers in the Panti District, Jember Regency. This is because the length of work experienced by each farmer varies. Stress on farmers can be triggered through working hours and workload of farmers (Wahyuni et al., 2020) due to high job demands causing tired farmers to stress (Ningrum, Dewi, & Kurniyawan, 2020). Therefore, the busy work of farmers must be balanced with good social relations to manage stress.

Based on the results of the study, it showed that there was a significant difference in the quality of life of hypertensive farmers in Panti District, Jember Regency. This is because the quality of life of farmers is triggered through the diverse lifestyles of each individual. The quality of life of hypertension farmers is influenced by how the lifestyle affects each other's health (Pawestri, 2021), so that the healthier the lifestyle they live, the better the quality of life they have (Samiei Siboni, Alimoradi, & Atashi, 2021). Therefore, the establishment of the Quality of Life domain for hypertension farmers can be supported through the adoption of a healthy lifestyle to avoid chronic disease symptoms.

Based on the results of this study indicate that there is a significant difference in the physical domain in the quality of life of hypertensive farmers in Panti District, Jember Regency. This can be caused by the length of work and rest for each farmer which varies, thus creating a different physical domain status. Heavy physical activity in people with hypertension increases fatigue (Waworuntu, Asrifuddin, & Kalesaran, 2019) because the heart's work is less able to circulate oxygen supply throughout the body (Lainsamputty et al., 2021). For this reason, it is important for hypertension sufferers to maintain moderate physical activity regularly to improve fitness so that the physical domain of quality of life is good.

Through the results of this study indicate that there is a significant difference in the psychological domain in the quality of life of hypertensive farmers in Panti District, Jember Regency. This is because the psychological condition of farmers is influenced by stress management such as the level of activity and social skills possessed. A healthy lifestyle such as physical exercise accompanied by good social relationships can reduce stress and
anxiety (Irawan & Mulyana, 2019), so that the psychological domain of quality of life can also improve (Supriani, Kiftiyah, & Rosyidah, 2021). Hypertensive farmers in this study carry out work with joy and are accompanied by good relationships with family and colleagues so as to reduce feelings of stress and anxiety.

The results of this study indicate that there is a significant difference in the social domain in the quality of life of hypertensive farmers in Panti District, Jember Regency. This is because social skills are influenced by physical abilities and hypertension. Hypertension and its symptoms will reduce concentration (Putri & Supratman, 2021), making it difficult for farmers to get along and have personal and social relationships (Suharmanto, 2022). For this reason, it is important for farmers and the environment to maintain good relations.

Based on the results of this study, it shows that there are significant differences in the environmental domain in the quality of life of hypertensive farmers in Panti District, Jember Regency. This is because the ability of farmers to maintain cleanliness and safety is influenced by hypertension. Diseases such as hypertension trigger an increase in financial burden (Yulitasari, Maryadi, & Anggraini, 2021), thus affecting the needs of the living environment (Azizah & Hartanti, 2016). For this reason, farmers need to wisely pay attention to the cleanliness of their residence to create a clean and healthy environment.

The behavior of farmers in shaping lifestyles is in harmony with the Health Promotion Model by Nola J. Pender. Pender explained that human behavior is formed through previous behavior and personal factors (Kasron, Sahran, & Ohorella, 2016). Every farmer has several factors that influence the formation of his lifestyle, resulting in different lifestyles (Andriani et al., 2021). The majority of hypertension farmers have a healthy lifestyle (48%) which keeps their body in good health and minimizes stress, resulting in a good quality of life (45.1%). Therefore, farmers need to select things that affect their lifestyle to be improved to be healthy.

5. CONCLUSION

Hypertension farmers in Panti District, Jember Regency have significant differences in lifestyle, where the majority of lifestyles are identified as healthy (48%). There are significant differences in quality of life, where the majority of quality of life levels are identified as good (45%). Lifestyle is related to quality of life in hypertensive farmers in
Panti District, Jember Regency. The relationship between the two variables is quite strong with a positive correlation direction, the healthier the lifestyle of hypertensive farmers, the better their quality of life.

Hypertension farmers are expected to be able to maintain their healthy lifestyle. Through improving the lifestyle of hypertension farmers, it is hoped that farmers' blood pressure will not increase or get better. Farmers need to balance a healthy lifestyle by routinely checking their blood pressure and undergoing routine medication as directed by health workers. Therefore, it is hoped that with a healthy lifestyle farmers can improve their quality of life.

Health service providers such as puskesmas are expected to be able to add PTM and UKK posyandu services or Occupational Health Units to support farmers' health through screening, providing education and counseling. Farmers with a healthy lifestyle can be encouraged to maintain it and for farmers with an unhealthy lifestyle can be encouraged to improve with all existing indicators. Thus, it is hoped that farmers can increase their knowledge, know their health status, get early treatment, and participate in improving their lifestyle according to the directions of health workers.

**AUTHOR CONTRIBUTIONS**

All authors have made significant contributions to the implementation of activities, data collection, analysis and writing of the manuscript.

**CONFLICT OF INTEREST**

The author declares that there is no conflict in the preparation of this article.

**DATA AVAILABILITY STATEMENT**

The data obtained in this study is available from the author and is not published for certain reasons.

**REFERENCES**


Martapura. Jurnal Pharmascience. https://doi.org/10.20527/jps.v4i2.5774


Maulana, M. A., Susanto, T., Rasni, H., Ma’fuah, S., & Kurdi, F. (2023). Relationship of Physical Activity and Blood Pressure: Data Analysis of the...
The Relation Between Life Style and Quality of Life on Hypertension Farmers


