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The Effect of Young Coconut Water on Blood Pressure in Middle-Aged Adults (45–59 Years) with Hypertension in RT005/RW012, Taman Mangu Indah Residential Area, South Tangerang

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Abstract: Hypertension is a leading contributor to cardiovascular morbidity and mortality and is often undetected until complications occur. Community-friendly, affordable non-pharmacological approaches are therefore needed to support blood pressure control alongside standard therapy. **Objective**: This study aimed to examine the effect of young coconut water on blood pressure among middle-aged adults (45–59 years) with hypertension in RT005/RW012, Taman Mangu Indah Residential Area, South Tangerang. **Methodology**: This quantitative study used a quasi-experimental pretest–posttest design without a control group. A total of 21 participants received young coconut water (250 cc) twice daily (morning and afternoon) for five consecutive days. Blood pressure was measured before and after the intervention using a calibrated sphygmomanometer, and changes were analyzed using paired t-tests. **Findings**: Young coconut water consumption was associated with significant reductions in both systolic and diastolic blood pressure. Morning measurements showed decreases from 150.71 to 140.95 mmHg (systolic) and from 96.19 to 90.48 mmHg (diastolic) ($p = 0.001$). Afternoon measurements decreased from 145.24 to 132.86 mmHg (systolic) and from 96.19 to 85.24 mmHg (diastolic) ($p = 0.001$). The afternoon reductions appeared greater than those observed in the morning. **Implications**: Young coconut water may serve as an accessible, low-cost complementary nursing intervention to support community-based hypertension management. The findings may inform community health education and practical programs to improve blood pressure control among middle-aged adults. **Originality**: This study provides neighborhood-based evidence using a feasible twice-daily regimen over five days and highlights potential differences in blood pressure reduction between morning and afternoon administrations, offering implementation-oriented insight for community nursing practice.

Keywords : Hypertension, Young Coconut Water, Blood Pressure, Middle-Aged Adults, Non-Pharmacological Therapy

INTRODUCTION

Hypertension is widely recognized as one of the leading causes of premature mortality and morbidity worldwide and is often referred to as a *"silent killer"* because it frequently develops without specific early symptoms ((NCD-RisC), 2021; Organization, 2025). Clinically, hypertension is diagnosed when systolic blood pressure reaches or exceeds 140

mmHg and/or diastolic blood pressure reaches or exceeds 90 mmHg. Uncontrolled hypertension significantly increases the risk of cardiovascular diseases, including stroke, coronary heart disease, heart failure, and chronic kidney disease (Sari & Purwono, 2022).

Globally, the burden of hypertension has continued to rise over the past decades. Reports indicate that the number of people living with hypertension increased substantially between 1990 and 2019, reflecting both population growth and aging. Despite advances in medical treatment, the proportion of individuals with controlled blood pressure remains relatively low. Many people with hypertension remain undiagnosed or inadequately treated, emphasizing the persistent gap between detection, treatment, and effective blood pressure control.

In Indonesia, hypertension represents a major public health challenge. National health survey data show that the prevalence of hypertension among adults has increased over time, with a notable rise between the 2013 and 2018 national surveys (Indonesia & Kesehatan, 2019). Hypertension prevalence increases with age and becomes particularly prominent among middle-aged and older adults. A significant proportion of individuals with hypertension remain undiagnosed or do not receive appropriate treatment, which contributes to a high risk of complications and long-term health burdens.

Middle-aged adults, particularly those aged 45–59 years, are considered a vulnerable group for hypertension(Indonesia & Kesehatan, 2019). Age-related physiological changes, such as decreased sensory function, reduced muscle elasticity, and disturbances in the nervous system, contribute to increased vascular resistance and elevated blood pressure (Organization, 2012). In addition, lifestyle factors, including dietary habits, physical inactivity, and limited routine health monitoring, further increase the risk of hypertension in this age group. Because hypertension often progresses without obvious symptoms, many middle-aged individuals are unaware of their condition until complications occur.

Management of hypertension generally involves pharmacological and non-pharmacological approaches. Pharmacological therapy commonly includes the use of antihypertensive drugs such as diuretics, adrenergic blockers, and vasodilators to reduce blood pressure levels (Sari & Purwono, 2022). Although pharmacological treatment is effective, long-term medication use may be associated with side effects, limited adherence, and increased healthcare costs. These challenges highlight the importance of complementary non-pharmacological interventions that are affordable, accessible, and feasible for long-term use, particularly in community settings.

One non-pharmacological approach that has received increasing attention is the consumption of young coconut water (*Cocos nucifera*). Young coconut water contains essential minerals, particularly potassium and magnesium, which play a role in blood pressure regulation (Alleyne et al., 2005; Awaluddin & Pristika, 2024). Potassium intake is known to promote vasodilation, reduce peripheral vascular resistance, and enhance sodium and water excretion, thereby contributing to lower blood pressure levels (Aburto et al., 2013). Regular consumption of potassium-rich beverages such as young coconut water may therefore support blood pressure control in individuals with hypertension.

Previous studies have reported positive effects of young coconut water on blood pressure reduction. Yanuarti Petriaka and Rafioni demonstrated a decrease in systolic and diastolic blood pressure among hypertensive patients after young coconut water intervention (Petrika, 2019). Similarly, Zuriati and Suriya found a significant reduction in blood pressure following young coconut water therapy in hypertensive patients (Zuriati & Suriya, 2021). Tarworo, Mumpuni, and Widagdo also reported meaningful decreases in blood pressure among individuals with hypertension after consuming young coconut water (Tarwoto et al., 2018). These findings suggest that young coconut water has potential as a supportive therapy in hypertension management.

At the regional level, hypertension remains a prevalent non-communicable disease in South Tangerang. Health service data indicate a substantial number of individuals living with hypertension, with service coverage that varies across community health centers. In some areas, only a limited proportion of hypertensive patients receive care that meets standard guidelines. This situation underscores the need for community-based interventions that can be easily implemented and accepted by the population.

Preliminary observations in the RT005/RW012 area of the Taman Mangu Indah Complex identified a considerable number of middle-aged residents with hypertension. Many individuals reported elevated blood pressure, irregular health monitoring, reliance on non-prescription medications, and limited awareness or use of non-pharmacological interventions. Notably, community members reported that they were not familiar with the potential benefits of young coconut water for blood pressure control. This condition highlights a practical gap between existing scientific evidence and community knowledge and practice.

Based on these considerations, this study aims to examine the effect of young coconut water on blood pressure among middle-aged adults (45–59 years) with hypertension in the

Taman Mangu Indah residential area, South Tangerang. The findings of this study are expected to provide empirical evidence supporting the use of young coconut water as a non-pharmacological nursing intervention and to contribute to community-based hypertension management strategies.

RESEARCH METHOD

Research Design

This study employed a quantitative research approach using a quasi-experimental design with a pretest–posttest without control group. Quasi-experimental designs are commonly used in health research when randomization and control groups are not feasible, particularly in community-based studies (Setyawan, 2022; Sugiyono, 2019). This design enabled the researcher to examine changes in blood pressure before and after the intervention within the same group of respondents.

Research Setting and Period

The research was conducted in the RT005/RW012 area of the Taman Mangu Indah residential complex, South Tangerang, Indonesia. The study was carried out in 2024, following preliminary observations that identified a high number of middle-aged residents with hypertension and limited implementation of non-pharmacological interventions in the area.

Population and Sample

The population of this study consisted of 25 middle-aged adults aged 45–59 years diagnosed with hypertension and residing in the study area. From this population, 21 respondents were included as research participants. The sampling technique used was non-probability sampling, which is appropriate for community health research where the population size is limited and specific inclusion criteria are applied (Sina, 2022; Sugiyono, 2019).

Inclusion and Exclusion Criteria

The inclusion criteria were middle-aged adults aged 45–59 years who had been diagnosed with hypertension, resided in the RT005/RW012 area of the Taman Mangu Indah Complex, and were willing to participate in the study. Respondents who did not

complete the intervention protocol, experienced health complications during the study, or were unwilling to continue participation were excluded.

Research Variables

The independent variable in this study was young coconut water consumption, while the dependent variable was blood pressure, measured through systolic and diastolic values. The operational definition of hypertension followed clinical criteria indicating systolic blood pressure ≥140 mmHg and/or diastolic blood pressure ≥90 mmHg (Sari & Purwono, 2022).

Intervention Procedure

The intervention consisted of administering young coconut water to respondents for five consecutive days. Each respondent received 250 cc of young coconut water, administered twice daily in the morning and afternoon. This intervention protocol was based on previous studies demonstrating the effectiveness of young coconut water in reducing blood pressure due to its high potassium and magnesium content (Aburto et al., 2013; Petrika, 2019). Blood pressure measurements were conducted before the intervention (pretest) and after the intervention (posttest) to assess changes attributable to the administration of young coconut water.

Data Collection Instrument

Blood pressure data were collected using a sphygmomanometer, including mercury, digital, or aneroid types, which had been properly calibrated prior to use. Measurements were performed following standardized blood pressure measurement procedures to ensure accuracy and reliability (Sari & Purwono, 2022). All measurements were recorded using structured observation sheets prepared by the researcher.

Data Analysis

Data analysis was conducted using statistical software. Descriptive statistics were used to describe respondent characteristics and blood pressure distributions. Inferential statistical analysis was performed using a paired t-test to compare mean systolic and diastolic blood pressure values before and after the intervention. The paired t-test is appropriate for analyzing differences between two related measurements within the same

group (Setyawan, 2022). Statistical significance was determined at a significance level of $\alpha = 0.05$.

Ethical Considerations

Ethical principles were applied throughout the research process. Respondents were informed about the objectives, procedures, potential benefits, and risks of the study prior to participation. Informed consent was obtained from all respondents. Confidentiality and anonymity of participant data were maintained, and respondents were given the right to withdraw from the study at any time without penalty, in accordance with standard ethical guidelines for health research (Sina, 2022).

RESULT AND DISCUSSION

Univariate Analysis

Respondent Characteristics in the RT005/RW012 Area of the Taman Mangu Indah Residential Complex, South Tangerang

a. Based on Gender

Table 1. Distribution of Respondent Characteristics Based on Gender among Hypertensive Patients

No.	Gender	Frequency	Percentage (%)
1	Male	5	23.8
2	Female	16	76.2
Total		**21**	**100.0**

Table 1 shows that the majority of respondents in the RT005/RW012 area of the Taman Mangu Indah residential complex, South Tangerang, were female, accounting for 16 respondents (76.2%), while male respondents comprised 5 individuals (23.8%).

b. Based on Age

Table 2. Distribution of Respondent Characteristics Based on Age among Hypertensive Patients

No.	Age Group (years)	Frequency	Percentage (%)
1	45–50	16	76.2
2	51–55	2	9.5
3	56–59	3	14.3
Total		**21**	**100.0**

Table 2 shows that the majority of respondents in the RT005/RW012 area of the Taman Mangu Indah residential complex, South Tangerang, were aged 45–50 years, accounting for 16 respondents (76.2%). Respondents aged 51–55 years comprised 2 individuals (9.5%), while those aged 56–59 years accounted for 3 respondents (14.3%).

c. Based on Occupation

Table 3. Distribution of Respondent Characteristics Based on Occupation among Hypertensive Patients

No.	Occupation	Frequency	Percentage (%)
1	Unemployed	12	57.1
2	Self-employed	4	19.0
3	Private-sector employee	3	14.3
4	Civil servant	2	9.5
Total		**21**	**100.0**

Table 3. indicates that most respondents were unemployed, totaling 12 respondents (57.1%). Self-employed respondents accounted for 4 individuals (19.0%), private-sector employees for 3 respondents (14.3%), and civil servants for 2 respondents (9.5%).

Mean Blood Pressure Before the Young Coconut Water Intervention (Morning and Afternoon)

Table 4. Mean Blood Pressure Before the Morning Intervention of Young Coconut Water

No.	Variable	Mean (mmHg)	SD	Min–Max
1	Pre-intervention systolic blood pressure (morning)	150.71	7.792	140–170
2	Pre-intervention diastolic blood pressure (morning)	96.19	4.976	90–100

Table 4 shows that before the administration of young coconut water in the morning, the mean systolic blood pressure of respondents was 150.71 mmHg with a standard deviation of 7.792, while the mean diastolic blood pressure was 96.19 mmHg with a standard deviation of 4.976. The highest systolic blood pressure recorded was 170 mmHg and the lowest was 140 mmHg. For diastolic blood pressure, the highest value was 100 mmHg and the lowest was 90 mmHg.

Table 5. Mean Blood Pressure Before the Afternoon Intervention of Young Coconut Water

No.	Variable	Mean (mmHg)	SD	Min–Max
1	Pre-intervention systolic blood pressure (afternoon)	145.24	6.796	140–160
2	Pre-intervention diastolic blood pressure (afternoon)	96.19	4.976	90–100

Table 6 indicates that before the administration of young coconut water in the afternoon, the mean systolic blood pressure was 145.24 mmHg with a standard deviation of 6.796, while the mean diastolic blood pressure was 96.19 mmHg with a standard deviation of 4.976. The highest systolic blood pressure was 160 mmHg and the lowest was 140 mmHg, whereas diastolic blood pressure ranged from 90 mmHg to 100 mmHg.

Mean Blood Pressure After the Young Coconut Water Intervention (Morning and Afternoon)

Table 6. Mean Blood Pressure After the Morning Intervention of Young Coconut Water

No.	Variable	Mean (mmHg)	SD	Min–Max
1	Post-intervention systolic blood pressure (morning)	140.95	8.309	130–160
2	Post-intervention diastolic blood pressure (morning)	90.48	5.896	80–100

Table 6 shows that after the administration of young coconut water in the morning, the mean systolic blood pressure decreased to 140.95 mmHg with a standard deviation of 8.309, while the mean diastolic blood pressure decreased to 90.48 mmHg with a standard deviation of 5.896. The highest systolic blood pressure was 160 mmHg and the lowest was 130 mmHg, while diastolic blood pressure ranged from 80 mmHg to 100 mmHg. Based on these data, all respondents experienced a reduction in both systolic and diastolic blood pressure after the intervention.

Table 7. Mean Blood Pressure After the Afternoon Intervention of Young Coconut Water

	Variable	Mean (mmHg)	SD	Min–Max
1	Post-intervention systolic blood pressure (afternoon)	132.86	6.437	120–150
2	Post-intervention diastolic blood pressure (afternoon)	85.24	5.118	80–90

Table 7 demonstrates that after the administration of young coconut water in the afternoon, the mean systolic blood pressure decreased to 132.86 mmHg with a standard deviation of 6.437, while the mean diastolic blood pressure decreased to 85.24 mmHg with a standard deviation of 5.118. The highest systolic blood pressure was 150 mmHg and the lowest was 120 mmHg. Diastolic blood pressure ranged from 80 mmHg to 90 mmHg. These findings indicate that all respondents experienced reductions in both systolic and diastolic blood pressure following the intervention.

Mean Blood Pressure Before and After the Young Coconut Water Intervention (Morning and Afternoon)

Table 8. Mean Blood Pressure among Hypertensive Patients Before (Pre) and After (Post) the Morning Young Coconut Water Intervention

Blood Pressure	Mean Before (mmHg)	Mean After (mmHg)
Systolic	150.71	140.95
Diastolic	96.19	90.48

Table 8 shows that the mean blood pressure of respondents before the morning intervention was 150.71 mmHg for systolic pressure and 96.19 mmHg for diastolic pressure. After the administration of young coconut water, the mean systolic blood pressure decreased to 140.95 mmHg and the mean diastolic blood pressure decreased to 90.48 mmHg. These results indicate a reduction in blood pressure following the morning intervention.

Table 9. Mean Blood Pressure among Hypertensive Patients Before (Pre) and After (Post) the Afternoon Young Coconut Water Intervention

Blood Pressure	Mean Before (mmHg)	Mean After (mmHg)
Systolic	145.24	132.86
Diastolic	96.19	85.24

Table 9 demonstrates that before the afternoon intervention, the mean systolic blood pressure was 145.24 mmHg and the mean diastolic blood pressure was 96.19 mmHg. After the intervention, systolic blood pressure decreased to 132.86 mmHg and diastolic blood pressure decreased to 85.24 mmHg. These findings indicate a greater reduction in blood pressure during the afternoon intervention compared to the morning session.

Differences in Blood Pressure Reduction Following the Morning and Afternoon Young Coconut Water Intervention

Table 10. Differences in Blood Pressure among Hypertensive Patients Before (Pre) and After (Post) the Morning Young Coconut Water Intervention

Blood Pressure	Mean Before (mmHg)	Mean After (mmHg)	Mean Difference (mmHg)
Systolic	150.71	140.95	9.76
Diastolic	96.19	90.48	5.71

Table 10 shows that after five consecutive days of morning administration of young coconut water, the mean reduction in systolic blood pressure was 9.76 mmHg, while the mean reduction in diastolic blood pressure was 5.71 mmHg. These results indicate that the morning intervention led to a measurable decrease in blood pressure among respondents.

Table 11. Differences in Blood Pressure among Hypertensive Patients Before (Pre) and After (Post) the Afternoon Young Coconut Water Intervention

Blood Pressure	Mean Before (mmHg)	Mean After (mmHg)	Mean Difference (mmHg)
Systolic	145.24	132.86	12.38
Diastolic	96.19	85.24	10.95

Table 11 indicates that after five consecutive days of afternoon administration of young coconut water, the mean reduction in systolic blood pressure was 12.38 mmHg, while the mean reduction in diastolic blood pressure was 10.95 mmHg. These findings suggest that the afternoon intervention resulted in a greater reduction in both systolic and diastolic blood pressure compared to the morning intervention.

Bivariate Analysis

Bivariate analysis was conducted to examine the effect of young coconut water on blood pressure among patients with hypertension. To determine whether young coconut water had a significant effect on reducing blood pressure, a Paired-Samples T-Test (dependent t-test) was applied. This test was used to compare blood pressure measurements taken before (pretest) and after (posttest) the administration of young coconut water.

Table 12. Effect of Young Coconut Water on Blood Pressure among Hypertensive Patients Before (Pre) and After (Post) the Morning Intervention

Variable	Measurement	Mean (mmHg)	SD	p-value	n
Systolic Blood Pressure	Pretest	150.71	7.792	0.001	21
	Posttest	140.95	8.309		
Diastolic Blood Pressure	Pretest	96.19	4.976	0.001	21
	Posttest	90.48	5.896		

Table 12 shows that the mean systolic blood pressure during the initial morning measurement (pretest) was 150.71 mmHg with a standard deviation of 7.792. After the intervention, the mean systolic blood pressure decreased to 140.95 mmHg with a standard deviation of 8.309. The paired-samples t-test yielded a p-value of 0.001 ($p < 0.05$), indicating that the null hypothesis (H_0) was rejected and the alternative hypothesis (H_1) was accepted. This result demonstrates a significant effect of young coconut water on reducing systolic blood pressure among hypertensive patients in the study area.

Similarly, the mean diastolic blood pressure decreased from 96.19 mmHg (SD = 4.976) before the intervention to 90.48 mmHg (SD = 5.896) after the intervention. The statistical test also produced a p-value of 0.001 ($p < 0.05$), indicating a significant reduction in diastolic blood pressure following the morning administration of young coconut water.

Table 13. Effect of Young Coconut Water on Blood Pressure among Hypertensive Patients Before (Pre) and After (Post) the Afternoon Intervention

Variable	Measurement	Mean (mmHg)	SD	p-value	n
Systolic Blood Pressure	Pretest	145.24	6.796	0.001	21
	Posttest	132.86	6.437		
Diastolic Blood Pressure	Pretest	96.19	4.976	0.001	21
	Posttest	85.24	5.118		

Table 13 indicates that the mean systolic blood pressure measured in the afternoon before the intervention was 145.24 mmHg with a standard deviation of 6.796. After the intervention, the mean systolic blood pressure decreased to 132.86 mmHg with a standard deviation of 6.437. The paired-samples t-test produced a p-value of 0.001 ($p < 0.05$), confirming a statistically significant reduction in systolic blood pressure following the afternoon administration of young coconut water.

Likewise, the mean diastolic blood pressure decreased from 96.19 mmHg (SD = 4.976) before the intervention to 85.24 mmHg (SD = 5.118) after the intervention. The p-

value of 0.001 ($p < 0.05$) indicates that young coconut water had a significant effect on reducing diastolic blood pressure during the afternoon intervention.

Discussion

This discussion interprets the findings of the study by linking the observed results with relevant empirical evidence and theoretical explanations, while also acknowledging the limitations related to the research design and sample characteristics. The study aimed to examine the effect of young coconut water on blood pressure reduction among patients with hypertension in the RT005/RW012 area of the Taman Mangu Indah residential complex, South Tangerang. The research was conducted between May and July 2024, with the intervention implemented over five consecutive days from 17 to 21 July 2024 and administered twice daily in the morning and afternoon.

The characteristics of respondents indicate that the majority of participants were female, accounting for 76.2% of the total sample. This finding aligns with previous studies reporting a higher proportion of female respondents among individuals with hypertension. Wujartmiko and Aluddin reported that 70.9% of hypertensive respondents were female (Wurjatmiko & Aluddin, 2022), while Parmiyati, Narmawan, Narmi, and Djafar found an even higher proportion of female participants, reaching 83.3% (Parmiyati et al., 2024). From a clinical perspective, cardiovascular risk associated with hypertension in women tends to increase as blood pressure rises, particularly during middle age when hormonal changes occur during the transition from premenopause to menopause. These hormonal changes may influence vascular tone and blood pressure regulation. In the context of this study, the predominance of female respondents was also interpreted in relation to lifestyle and daily behavioral patterns, such as frequent consumption of salty foods, intake of caffeinated beverages, limited physical activity, and stress-related sleep disturbances. Household roles, particularly food preparation activities that involve repeated tasting, may further increase sodium exposure and contribute to sustained high blood pressure.

With respect to age distribution, most respondents were between 45 and 50 years old, representing 76.2% of the sample. This finding supports existing evidence that hypertension is highly prevalent in middle-aged populations. During this life stage, individuals commonly experience physiological changes such as reduced vascular elasticity, altered autonomic regulation, and declining metabolic efficiency, all of which may predispose them to elevated blood pressure. These age-related changes, combined

with lifestyle factors, increase the likelihood of developing and maintaining hypertension during middle age.

The results of this study demonstrated a clear reduction in both systolic and diastolic blood pressure following the administration of young coconut water. In the morning measurements, the mean systolic blood pressure decreased from 150.71 mmHg to 140.95 mmHg, while the mean diastolic blood pressure decreased from 96.19 mmHg to 90.48 mmHg. Similarly, in the afternoon measurements, systolic blood pressure declined from 145.24 mmHg to 132.86 mmHg and diastolic blood pressure from 96.19 mmHg to 85.24 mmHg. These findings indicate that young coconut water consumption was associated with a meaningful reduction in blood pressure, with the decrease observed in the afternoon appearing greater than that observed in the morning. The paired-samples t-test further confirmed that these reductions were statistically significant, with p-values of 0.001 for both systolic and diastolic measurements, indicating a significant effect of the intervention.

The observed reduction in blood pressure can be explained by the mineral composition of young coconut water, particularly its high potassium content. Young coconut water contains a higher concentration of potassium than sodium, and potassium plays a crucial role in blood pressure regulation. Potassium intake may suppress renin secretion, leading to decreased angiotensin II production and reduced vasoconstriction. Lower aldosterone activity subsequently decreases sodium and water reabsorption, thereby reducing intravascular volume. In addition, potassium contributes to the sodium–potassium pump mechanism by facilitating sodium excretion and potassium retention at the cellular level, which supports vascular relaxation and blood pressure reduction. Through these mechanisms, potassium may promote vasodilation, decrease peripheral vascular resistance, and enhance sodium and water excretion, allowing elevated blood pressure to return toward normal levels (Aburto et al., 2013). From a practical perspective, young coconut water is widely available and easy to consume, making it a feasible non-pharmacological intervention at the community level.

The findings of this study are consistent with previous research demonstrating the antihypertensive effects of young coconut water. Prior studies have reported significant reductions in blood pressure following young coconut water consumption among hypertensive patients, supporting its potential role as a complementary, non-pharmacological therapy. The greater reduction observed during the afternoon intervention in this study may be related to daily physiological variations in blood pressure regulation

as well as the cumulative effect of potassium intake following repeated administration over several days.

Despite these encouraging findings, several limitations should be considered when interpreting the results. During the research process, the investigator experienced an accident that affected certain aspects of data collection. Additionally, some respondents were engaged in household activities during the intervention period, which may have influenced adherence, measurement conditions, or daily routines. These factors may have affected the consistency of intervention implementation and blood pressure measurements.

Overall, the results of this study suggest that young coconut water observed decrease after intervention on reducing both systolic and diastolic blood pressure among middle-aged individuals with hypertension. These findings support the potential use of young coconut water as a simple, accessible, and non-pharmacological nursing intervention in community-based hypertension management, particularly in settings with limited resources.

CONCLUSION

This study concludes that the administration of young coconut water observed decrease after intervention on reducing blood pressure among middle-aged adults with hypertension in the RT005/RW012 area of the Taman Mangu Indah residential complex, South Tangerang. The findings demonstrated a consistent reduction in both systolic and diastolic blood pressure following the intervention, administered twice daily over five consecutive days. Statistical analysis using the paired-samples t-test confirmed that the decreases in blood pressure were significant for both morning and afternoon measurements, indicating that young coconut water contributes meaningfully to blood pressure control.

The greater reduction observed during the afternoon intervention suggests that the antihypertensive effect of young coconut water may be influenced by daily physiological variations and the cumulative intake of potassium over time. The high potassium content of young coconut water is believed to play a central role in blood pressure regulation by promoting vasodilation, reducing vascular resistance, and enhancing sodium and water excretion. These physiological mechanisms support the effectiveness of young coconut water as a non-pharmacological approach to hypertension management. Overall, the results indicate that young coconut water can serve as a simple, affordable, and accessible complementary therapy for individuals with hypertension, particularly in community

settings. As part of nursing and community health interventions, the regular consumption of young coconut water may help improve blood pressure control and reduce the risk of hypertension-related complications. Future studies with larger samples, control groups, and longer intervention periods are recommended to strengthen the evidence and further explore the long-term effects of this intervention.

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