

THESIS

**THE EFFECT OF GOLDEN FINGER BANANA AND SUKARI
DATES ON BLOOD PRESSURE, POTASSIUM, AND SODIUM
INTAKE IN PRE-ELDERLY WOMEN
WITH HYPERTENSION**



Arranged by:

**Wanda Wahyudiniyah Firdausi
NIM 422021728034**

**DEPARTMENT OF NUTRITION SCIENCE
FACULTY OF HEALTH SCIENCE
UNIVERSITAS DARUSSALAM GONTOR
PONOROGO
2025**

VALIDITY SHEET

It is hereby stated that the thesis with the title :

**THE EFFECT OF GOLDEN FINGER BANANA AND
SUKARI DATES ON BLOOD PRESSURE, POTASSIUM,
AND SODIUM INTAKE IN PRE-ELDERLY WOMEN
WITH HYPERTENSION**

Written by:

Wanda Wahyudiniyah Firdausi
422021728034

Has been tested and approved & before the Thesis Examiner Board
On:

Examiner Board :

Supervisor I

Nur Amala, S.Gz., M.Gz

Supervisor II

Qothrunnadaa Fajr Rooiqoh, S.Tr. Gz., M.Gz

Examiner

Kartika Pibriyanti, S.K.M., M.Gizi
NIDN. 0704029003



Approved by,

Head of Nutrition Science Department
Faculty of Health Science, Universitas Darussalam Gontor



Lulu' Luthfiya, S.Gz., M.P.H.
NIDN. 0718019203

UNIDA
GONTOR
UNIVERSITAS DARUSSALAM GONTOR

ABSTRACT

THE EFFECT OF GOLDEN FINGER BANANA AND SUKARI DATES ON BLOOD PRESSURE, POTASSIUM AND SODIUM INTAKE IN PRE-ELDERLY WOMEN WITH HYPERTENSION

Wanda Wahyudiniyah Firdausi
NIM 422021728034

Hypertension ranks as the fourth most prevalent disease in Indonesia. The management of hypertension can be achieved by balancing potassium and sodium intake. Due to their potassium content, golden finger bananas and sukari dates can help lower hypertension. This study aims to determine the effects of golden finger bananas and sukari dates on blood pressure, potassium intake, and sodium intake in hypertensive patients within the working area of Jogorogo Public Health Center. This research employs a Quasi-Experimental Pre-test and Post-test Group Design. A total of 30 participants were selected using total sampling and divided into three groups: one group receiving 100 grams of golden finger bananas, another receiving 60 grams of sukari dates, and a control group receiving no intervention for 14 days. Blood pressure measurements and SQFFQ interviews were conducted before and after the intervention. Data analysis was performed using Paired T-Test, Wilcoxon, One-Way ANOVA, Kruskal-Wallis, and Post Hoc Mann-Whitney tests with a significance level of $\alpha < 0.05$. The study results indicate that sukari dates ($p=0.001$) and golden finger bananas ($p=0.007$) significantly affect systolic blood pressure, with the golden finger banana group showing the most substantial decrease of -18.40 mmHg. All three groups exhibited effects on diastolic blood pressure (control: $p=0.008$, golden finger bananas: $p=0.004$, sukari dates: $p=0.007$), with the golden finger banana and sukari date groups showing the greatest reduction of -8.60 mmHg. Golden finger bananas and sukari dates significantly influenced potassium intake ($p=0.000$), with the sukari date group showing the highest increase of 505.78 mg. Sukari dates also affected sodium intake ($p=0.013$), with the golden finger banana group demonstrating the most substantial reduction of -176.85 mg. Overall, golden finger banana and sukari dates affect blood pressure, as well as potassium and sodium intake in individuals with hypertension, with golden finger banana having the most significant effect.

Keywords: Blood pressure, hypertension, potassium, pre-elderly, sodium

ABSTRAK

PENGARUH PEMBERIAN PISANG MAS DAN KURMA SUKARI TERHADAP TEKANAN DARAH, ASUPAN KALIUM DAN NATRIUM PADA PRA LANSIA WANITA HIPERTENSI

Wanda Wahyudiniyah Firdausi
NIM 422021728034

Hipertensi menduduki peringkat ke 4 penyakit tertinggi di Indonesia. Penatalaksanaan hipertensi dapat dilakukan dengan menyeimbangkan asupan kalium dan natrium. Pisang mas dan kurma sukari dapat membantu menurunkan hipertensi dengan kandungan kaliumnya. Penelitian ini bertujuan untuk mengetahui pengaruh pisang mas dan kurma sukari terhadap tekanan darah, asupan kalium dan natrium penderita hipertensi di wilayah kerja Puskesmas Jogorogo. Jenis penelitian *Quasi Experimental Pre-test and Post-test Group Design*. Jumlah sampel sebanyak 30 orang dengan teknik *total sampling*, terbagi menjadi 3 kelompok, yaitu kelompok yang diberikan pisang mas sebanyak 100 gram, kurma sukari sebanyak 60 gram dan kontrol yang tidak diberikan apapun selama 14 hari, dilanjutkan pemeriksaan tekanan darah dan wawancara SQFFQ sebelum dan sesudah perlakuan. Analisis data menggunakan uji *Paired T Test*, *Wilcoxon*, *One Way Anova*, *Kruskal Wallis* dan *Post Hoc Mann Whitney* $\alpha < 0,05$. Hasil penelitian (kurma sukari $p = 0,001$) dan (pisang mas $p = 0,007$) menunjukkan adanya pengaruh perlakuan terhadap tekanan darah sistolik. Perlakuan paling berpengaruh kelompok pisang mas dengan selisih penurunan -18,40 mmHg. Ketiga kelompok menunjukkan pengaruh perlakuan terhadap tekanan darah diastolik (kontrol 0,008 pisang mas 0,004, dan kurma sukari 0,007). Kelompok paling berpengaruh pisang mas dan kurma sukari dengan selisih penurunan -8,60 mmHg. Perlakuan pisang mas dan kurma sukari mempengaruhi asupan kalium $p = 0,000$, perlakuan paling berpengaruh kelompok kurma sukari dengan selisih kenaikan 505,78 mg. Kurma sukari mempengaruhi asupan natrium $p = 0,013$ dengan perlakuan paling berpengaruh kelompok pisang mas dengan selisih penurunan -176,85 mg. Pisang mas dan kurma sukari mempengaruhi tekanan darah, asupan kalium dan natrium pada penderita hipertensi, dengan pisang mas perlakuan paling berpengaruh.

Kata kunci: tekanan darah, hipertensi, kalium, pra lansia, natrium

ACKNOWLEDGEMENT

All praise and gratitude the author extends to the presence of Allah SWT for His blessings, guidance, and grace, enabling the author to complete this thesis with the title “The Effect of Golden Finger Banana and Sukari Dates on Blood Pressure, Potassium, and Sodium Intake in Pre-Elderly Women with Hypertension”. Blessings and peace be upon our noble Prophet Muhammad SAW, who has guided humanity from the era of ignorance to an era filled with the light of faith and knowledge.

With the completion of this thesis, the author would like to express gratitude to:

1. Al-Ustadz Prof. Dr. K.H. Hamid Fahmi Zarkasy, M.A.Ed., M.Phil as the Rector Universitas Darussalam Gontor.
2. Al-Ustadz Dr. Abdul Hafidz Zaid, M.A, Al-Ustadz Setiawan bin Lahuri, M.A, Al-Ustadz Dr. Khoirul Umam, M.Ec, and Al-Ustadz Dr. Royyan Ramdhani Djayusman, M.A, as the Vice Rector Universitas Darussalam Gontor.
3. Al-Ustadz apt. Amal Fadholah, S.Si., M.Si as Dean of the Faculty of Health Science.
4. Al-Ustadzah Lulu’ Luthfiya, S.Gz., M.P.H. as Head of the Nutrition Science Department.
5. Al-Ustadzah Nur Amala, S.Gz., M.Gz, as the first supervisor, has provided guidance and direction and always made time, enabling the author to complete this thesis successfully.
6. Al-Ustadzah Qothrunnadaa Fajr Rooiqoh, S.Tr. Gz., M.Gz, as the second supervisor, who has provided guidance, direction, and motivation until the completion of this thesis.
7. Al-Ustadzah Kartika Pibriyanti, S.K.M., M.Gizi, as the examiner, has provided feedback and guidance to improve the quality of this thesis.
8. My beloved family, My Mother, Wilis Bagus Susanti, My Father Yudi Astoyo, Younger Brother Marchell Mutawakkil Alallah, and Younger sister Shabrina Nur Wahyudi, who always offered prayers, support, encouragement, and motivation, allowing the author to complete this thesis with immense gratitude.

9. To my fellow Nutrition 2021 classmates, thank you for the prayers, support, and camaraderie we have shared throughout this journey.

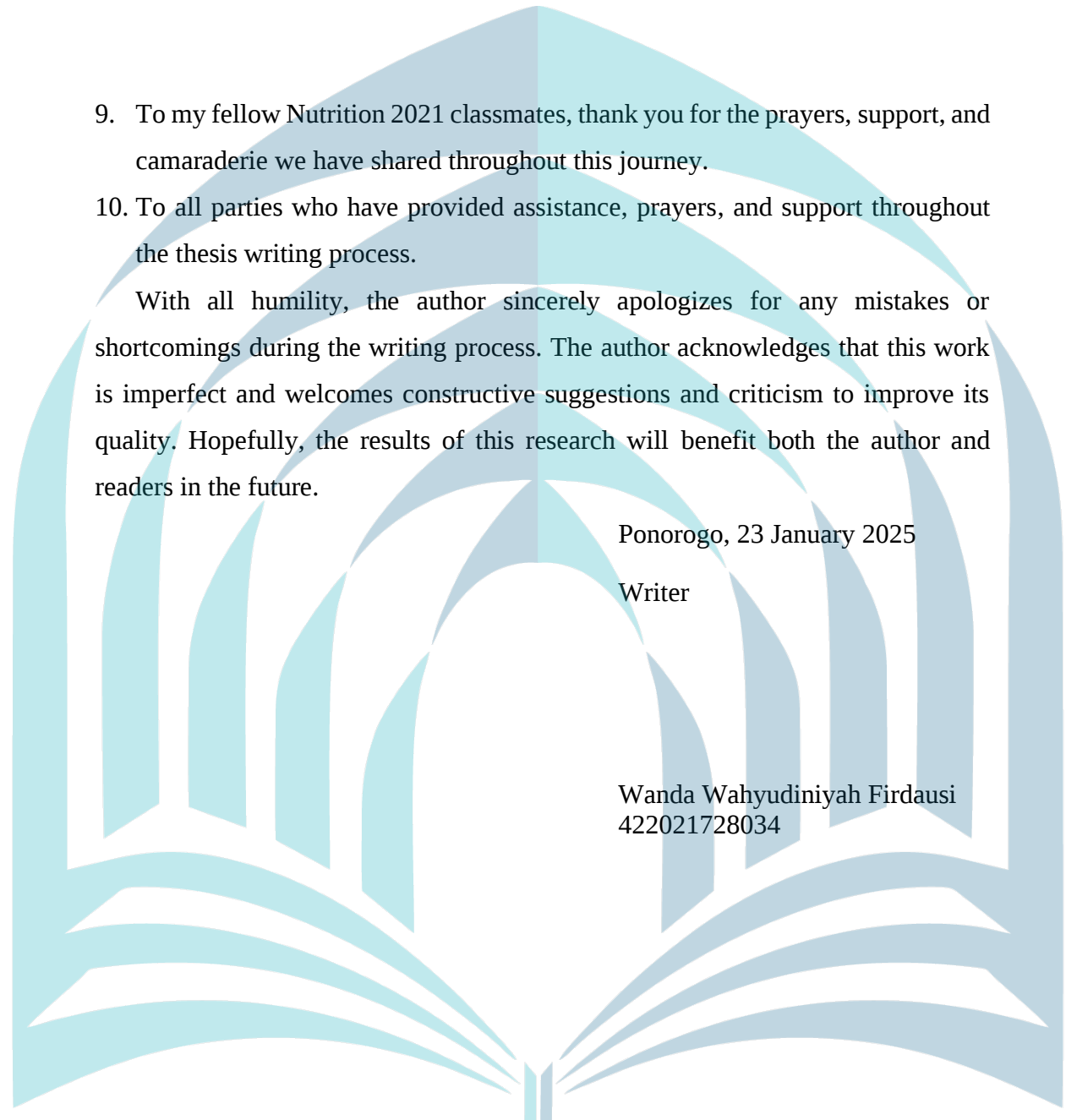
10. To all parties who have provided assistance, prayers, and support throughout the thesis writing process.

With all humility, the author sincerely apologizes for any mistakes or shortcomings during the writing process. The author acknowledges that this work is imperfect and welcomes constructive suggestions and criticism to improve its quality. Hopefully, the results of this research will benefit both the author and readers in the future.

Ponorogo, 23 January 2025

Writer

Wanda Wahyudiniyah Firdausi
422021728034



UNIDA
GONTOR
UNIVERSITAS DARUSSALAM GONTOR

TABEL OF CONTENTS

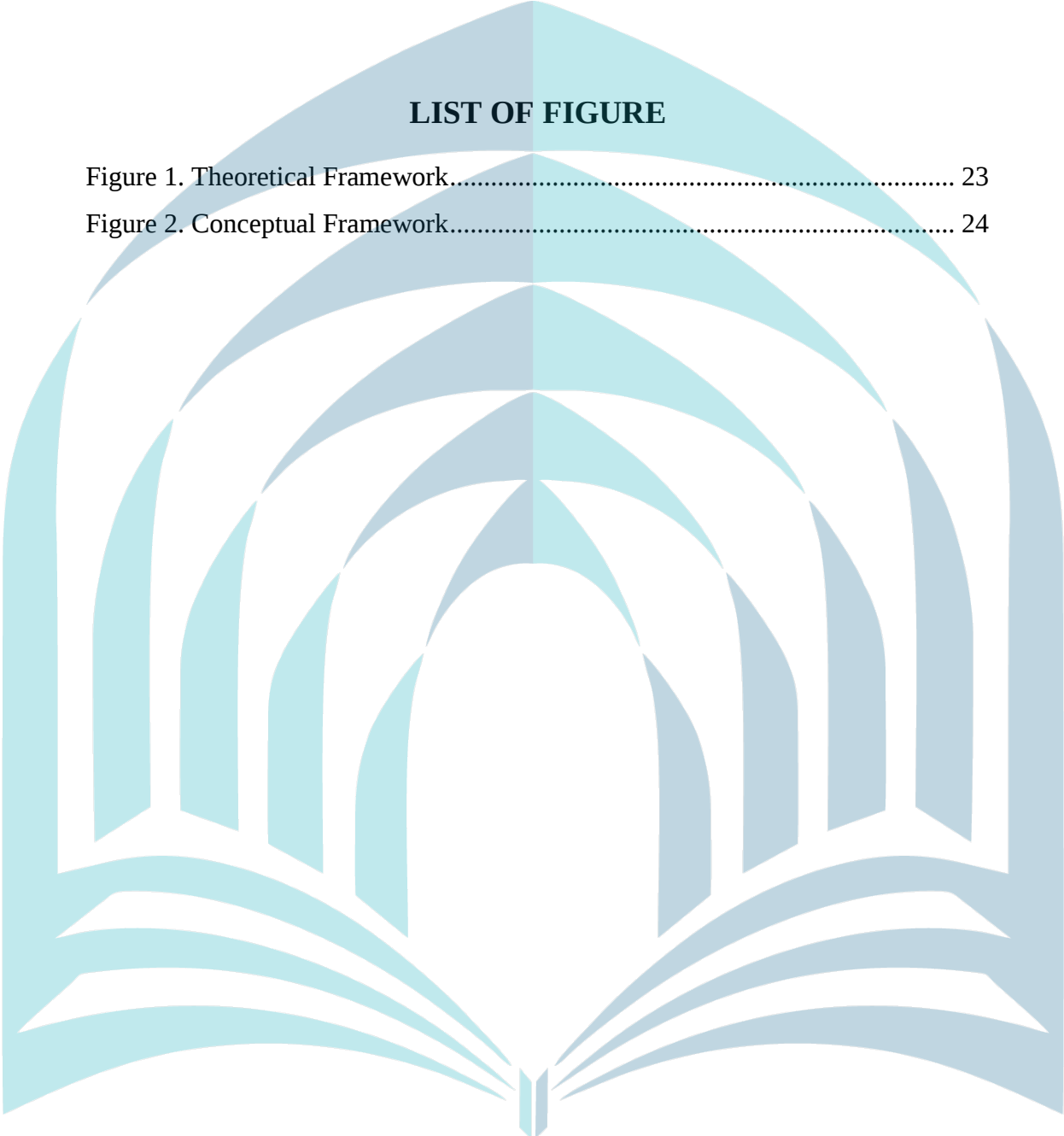
VALIDITY SHEET.....	i
ABSTRACT	ii
ABSTRAK	iii
ACKNOWLEDGEMENT.....	iv
TABEL OF CONTENTS	vi
LIST OF TABLE.....	viii
LIST OF FIGURE	ix
LIST OF ATTACHMENT	x
AUTHENTICITY STATEMENT.....	xi
CHAPTER I. INTRODUCTION	1
1.1 Research Background.....	1
1.2 Research Problems	4
1.3 Research Objectives	4
1. General Objectives	4
2. Specific Objectives.....	4
1.4 Research Benefits	4
1. Theoretical Benefits.....	4
2. Practical Benefits.....	4
1.5 Authenticity Research	5
CHAPTER II. LITERATURE REVIEW	8
2.1 Basic Theory.....	8
1. Blood Pressure.....	8
2. Hypertension.....	8
3. Factors Causing Hypertension.....	12
4. Management of Hypertension	15
5. Hypertension Diet.....	16
6. Potassium Intake.....	16
7. Sodium Intake.....	17
8. Golden Finger Banana.....	18
9. Sukari Dates.....	19
10. Bananas and Dates as Remedies in Islam.....	20

2.2	Theoretical Framework	23
2.3	Conceptual Framework	24
2.4	Hypothesis	24
CHAPTER III. RESEARCH METHOD		24
3.1	Research Design.....	24
3.2	Research Period and Location	24
3.3	Population and Sample	24
3.4	Research Variables	25
1.	Independent Variable.....	25
2.	Dependent Variable	25
3.5	Variable Operation Definition.....	26
3.6	Research Materials	27
1.	Instrument.....	27
2.	Materials	27
3.7	<i>Ethical Clearance</i>	27
3.8	Research Procedure	27
3.9	Data Analysis.....	29
3.10	Research Flowchart	31
3.11	Research Schedule.....	32
CHAPTER IV. RESULT AND DISCUSSION		34
4.1	Result.....	34
4.2	Discussion.....	39
CHAPTER V. CONCLUSIONS AND RECOMMENDATIONS.....		51
5.1	Conclusions	51
5.2	Recommendation.....	51
REFERENCES		52
ATTACHMENT.....		60

LIST OF TABLE

Table 1. Authenticity Research.....	5
Table 2. Blood Pressure Classification	12
Table 3. Nutritional Content in 100 Grams of Mas Banana.	19
Table 4. Nutritional Content in 40 grams Sukari Dates.	20
Table 5. Research Model.....	24
Table 6. Variable Operation Definition	26
Table 7. Research Schedule	32
Table 8. Respondent Characteristics.....	34
Table 9. Average Systolic Blood Pressure Before and After Intervention	34
Table 10. Average Diastolic Blood Pressure Before and After Intervention.....	36
Table 11. Average Potassium Intake Before and After Intervention.....	37
Table 12. Average Sodium Intake Before and After Intervention	38

UNIDA
GONTOR
UNIVERSITAS DARUSSALAM GONTOR



LIST OF FIGURE

Figure 1. Theoretical Framework..... 23

Figure 2. Conceptual Framework..... 24

UNIDA
GONTOR
UNIVERSITAS DARUSSALAM GONTOR

LIST OF ATTACHMENT

Attachment 1. Etichal Clearance Letter	60
Attachment 2. Research Permit Letter From The Ngawi District Health Office..	61
Attachment 3. Bivariate Analysis	62
Attachment 4. Lembar Penjelasan Sebelum Persetujuan Untuk Menjadi Responden Penelitian (PSP).....	79
Attachment 5. Informed Consent	80
Attachment 6. Screening Form	81
Attachment 7. SQFFQ Form	82
Attachment 8. Research Documentation.....	85

UNIDA
GONTOR
UNIVERSITAS DARUSSALAM GONTOR

AUTHENTICITY STATEMENT

It is hereby declared by,

Name : Wanda Wahyudiniyah Firdausi
NIM : 422021728034
Faculty : Faculty of Health Science
Study Program : Nutrition Science Department
Thesis Title : The Effect of Golden Finger Banana and Sukari Dates on Blood Pressure, Potassium and Sodium Intake in Pre-Elderly Women with Hypertension.

I sincerely declare that the research contained in this thesis is my own work and does not belong to anyone else. This thesis has never been published before, except for some parts with original references.

If it is found that work is plagiarism in the future, I am ready to be given administrative and academic sanctions.

Ponorogo,
Writer


ID: C5ALX258651420
Wanda Wahyudiniyah Firdausi
NIM. 422021728034

UNIDA
GONTOR
UNIVERSITAS DARUSSALAM GONTOR