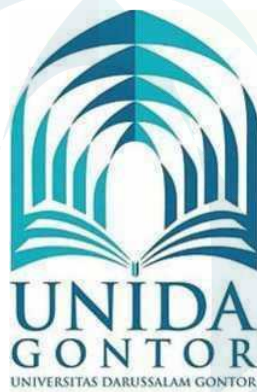


THESIS

**THE RELATIONSHIP BETWEEN SALT-TASTE
THRESHOLD, FIBER INTAKE, AND CAFFEINE INTAKE
WITH BLOOD PRESSURE AMONG FEMALE STUDENTS AT
UNIVERSITAS DARUSSALAM GONTOR**



Arranged by:

Qudwatun Niswah Amara

412020728022

NUTRITION SCIENCE DEPARTMENT

FACULTY OF HEALTH SCIENCE

UNIVERSITAS DARUSSALAM GONTOR

PONOROGO

2025

**APPROVAL SHEET
THESIS DEFENCE**

It is hereby stated that the thesis with the title:

**THE RELATIONSHIP BETWEEN SALT-TASTE THRESHOLD, FIBER
INTAKE, AND CAFFEINE INTAKE WITH BLOOD PRESSURE AMONG
FEMALE STUDENTS AT UNIVERSITAS DARUSSALAM GONTOR**

Written by:

**Qudwatun Niswah Amara
412020728022**

It has been reviewed and recommended to meet scientific standards, in terms of
both scope and quality.

It has been approved to presented on: 5 March 2025

Mentor I

Indahtul Mufidah, S.Gz., M.Gz

NIDN. 0728039501



Mentor II

Amilia Yuni Damayanti, S.Gz., M.Gizi

NIDN. 0722018904



**Head of Nutrition Science Department
Faculty of Healthy Science, Universitas Darussalam Gontor**

UNIVERSITAS DARUSSALAM GONTOR



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

NIDN. 0718019203

VALIDITY SHEET

It is hereby stated that the thesis with the title:

**THE RELATIONSHIP BETWEEN SALT-TASTE THRESHOLD, FIBER
INTAKE, AND CAFFEINE INTAKE WITH BLOOD PRESSURE AMONG
FEMALE STUDENTS AT UNIVERSITAS DARUSSALAM GONTOR**

Written by:

Qudwatun Niswah Amara
412020728022

Has been tested and approved & before the Thesis Examiner Board

On : 5 March 2025

Examiner Board:

Mentor I

Indahtul Mufidah, S.Gz., M.Gz

NIDN. 0728039501



Mentor II

Amilia Yuni Damayanti, S.Gz., M.Gizi

NIDN. 0722018904



Examiner

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



Approved by

Head of Nutrition Science Department

Faculty of Healthy Science, Universitas Darussalam Gontor



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

NIDN. 0718019203

ABSTRAK

HUBUNGAN AMBANG RASA ASIN, ASUPAN SERAT DAN ASUPAN KAFEIN DENGAN TEKANAN DARAH PADA MAHASISWI DI UNIVERSITAS DARUSSALAM GONTOR

Qudwatun Niswah Amara
NIM 412020728022

Tekanan darah tinggi masih menjadi permasalahan kesehatan di Indonesia. Beberapa faktor yang berhubungan dengan perubahan tekanan darah adalah ambang rasa asin, asupan serat dan asupan kafein. Sensitivitas rasa mempengaruhi asupan makanan sehingga dilakukan uji ambang rasa asin untuk melihat kepekaan terhadap rasa asin. Jumlah asupan serat dan kafein dapat mempengaruhi tekanan darah. Tujuan penelitian ini adalah menganalisis hubungan ambang rasa asin, asupan serat dan asupan kafein dengan tekanan darah pada mahasiswi di Universitas Darussalam Gontor. Penelitian ini merupakan jenis *observasional* yang menggunakan desain *cross sectional*. Jumlah subjek penelitian ini sebanyak 97 orang yang dihitung menggunakan metode *slovin*. Pengambilan data dengan menggunakan metode 3-AFC (*Alternative Forced Choice*) untuk pengujian ambang rasa asin, pengisian kuesioner SQ-FFQ (*Semi Quantitative Food Frequency Questionnaire*) untuk asupan serat dan kafein serta pengukuran tekanan darah menggunakan alat tensimeter *digital*. Analisis data yang digunakan adalah analisis bivariate menggunakan uji hubungan Spearman. Hasil uji hubungan antara ambang rasa asin dengan tekanan darah sistolik (TDS) menunjukkan nilai ($p=0,009$) dengan ($r=0,265$), sedangkan hubungan ambang rasa asin dengan tekanan darah diastolik (TDD) menunjukkan nilai ($p=0,045$) dengan ($r=0,204$) yang berarti adanya hubungan bermakna. Hubungan asupan serat dengan TDS ($p=0,203$), asupan serat dengan TDD ($p=0,509$), asupan kafein dengan TDS ($p=0,700$) dan asupan kafein dengan TDD ($p=0,938$) menunjukkan tidak terdapat hubungan bermakna. Kesimpulan terdapat hubungan ambang rasa asin dengan TDS dan TDD, sedangkan tidak terdapat hubungan asupan serat dan kafein dengan TDS maupun TDD pada mahasiswi Universitas Darussalam Gontor

Kata Kunci: Ambang rasa asin, asupan serat, asupan kafein, tekanan darah

ABSTRACT

THE RELATIONSHIP BETWEEN SALT-TASTE THRESHOLD, FIBER INTAKE, AND CAFFEINE INTAKE WITH BLOOD PRESSURE AMONG FEMALE STUDENTS AT UNIVERSITAS DARUSSALAM GONTOR

Qudwatun Niswah Amara

NIM 412020728022

High blood pressure is a significant health issue in Indonesia, influenced by factors such as Salt-taste threshold (STT), fiber intake, and caffeine intake. This study aimed to analyze the relationship between STT, fiber, and caffeine intake with blood pressure among female students at Universitas Darussalam Gontor. It used an observational cross-sectional design with 97 participants, calculated using the Slovin formula. Data collection involved STT testing via the 3-AFC method, fiber and caffeine intake assessment using the SQ-FFQ, and blood pressure measurement using a digital sphygmomanometer. Bivariate analysis with the Spearman correlation test was performed. The results showed a significant correlation between STT and Systolic blood pressure (SBP) ($p=0.009$, $r=0.265$) and between STT and Diastolic blood pressure (DBP) ($p=0.045$, $r=0.204$). However, no significant relationship was found between fiber intake and SBP ($p=0.203$), fiber intake and DBP ($p=0.509$), caffeine intake and SBP ($p=0.700$), or caffeine intake and DBP ($p=0.938$). In conclusion, STT was significantly related to both SBP and DBP, while fiber and caffeine intake showed no significant association with blood pressure among female students at Universitas Darussalam Gontor.

Keywords: Salt taste threshold, fiber intake, caffeine intake, blood pressure

ACKNOWLEDGEMENT

Bismillahirrahmanirrahim

Assalamu'alaikum Warahmatullahi Wabarakatuh

All praise be to Allah SWT, who had granted His guidance and blessings, allowing the author to complete this thesis entitled "*The Relationship Between Salt Taste Threshold, Fiber Intake, and Caffeine Intake with Blood Pressure Among Female Students at Universitas Darussalam Gontor*". With the completion of this thesis, the author would like to express the deepest gratitude to:

1. Al-Ustadz Prof. Dr. K.H. Hamid Fahmi Zarkasyi, M.Ed., M.Phil, as the Rector of 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., dan Al-Ustadz Dr. Royyan Ramadhani Djayusman, M.A., as the Vice Rector of Universitas Darussalam Gontor
3. Al-Ustadz apt. Amal Fadholah, S.Si., M.Si, as the Dean of the Faculty of Health Sciences, who had provided guidance until the completion of this thesis.
4. Al-Ustadzah Lulu' Luthfiya, S.Gz., M.P.H, as the Head of the Nutrition Science Study Program, who had given motivation throughout the completion of this thesis.
5. Al-Ustadzah Indahtul Mufidah, S.Gz., M.Gz, as the first supervisor, who had provided direction and guidance until the thesis was completed.
6. Al-Ustadzah Amilia Yuni Damayanti, S.Gz., M.Gizi, as the second supervisor, who had provided guidance, direction, and motivation until the thesis was completed.
7. Al-Ustadzah Qothrunnadaa Fajr Rooiqoh, S.Tr. Gz., M.Gz, as the examiner, who had given valuable input and considerations to improve the quality of this thesis.
8. All lecturers in Universitas Darussalam Gontor, who had imparted their knowledge and provided academic and non-academic guidance.

9. The author beloved family: my father Khoironil A'mal, my mother Umdah Masyroh, my siblings Asyiq Muhammad Amara, Nabila Fikriyyah A'masy, and Iffatul Fauziyyah A'masy, as well as my extended family, who had continuously offered prayers, motivation, support, love, trust, and comfort during difficult times, enabling the author to complete this thesis.
10. To my friends from the Nutrition Science Study Program, class of 2021 and 2020, and all my dearest friends, thank you for the support, experiences, and encouragement you had given to the author.

The author realizes that this thesis is far from perfect. Therefore, constructive criticism and suggestions are highly welcomed to enhance the quality of this work, hoping that it may be beneficial for all of us.

That is all, and thank you.

Wa'alaikumsalam Warahmatullahi Wabarakatuh

Ngawi, 5 March 2025

Author

UNIDA
GONTOR
UNIVERSITAS DARUSSALAM GONTOR

TABLE OF CONTENT

APPROVAL SHEET	i
VALIDITY SHEET	ii
ABSTRAK	iii
ABSTRACT	iv
ACKNOWLEDGEMENT	v
TABLE OF CONTENT	vii
LIST OF TABLE	ix
LIST OF FIGURE	x
AUTHENTICITY STATEMENT	xi
CHAPTER I INTRODUCTION	1
A. Research Background	1
B. Research Problem	5
C. Research Objectives	5
D. Research Benefits	5
E. Authenticity Research	6
CHAPTER II	8
LITERATURE REVIEW	8
A. Theoretical Basis	8
1. College Students	8
2. Blood Pressure	10
3. Blood Pressure Classification	12
4. Risk Factors of Hypertension	12
5. Salt Taste Threshold	13
6. Definition of Salt Taste Threshold	15
7. Fiber Intake	16
8. Caffeine Intake	18
9. Maqashid Syari'ah	21
B. Theoretical Framework	24
C. Conceptual Framework	25

D. Hypothesis	25
CHAPTER III.....	26
RESEARCH METHOD.....	26
A. Research Design	26
B. Research Period and Location	26
C. Population and Sample	26
D. Research Variables	28
E. Operational Definition of Variables.....	28
F. Research Instruments and Materials.....	29
G. Ethical Clearance	29
H. Research Procedure	29
I. Data Analysis	33
J. Research Flowchart.....	34
K. Research Schedule	35
CHAPTER IV	36
RESULTS AND DISCUSSION	36
A. Research Results.....	36
B. Discussion.....	40
CHAPTER V.....	45
CONCLUSION AND RECOMMENDATIONS.....	45
A. Conclusion	45
B. Recommendations.....	45
REFERENCES.....	46
ATTACHMENT	52

LIST OF TABLE

Table 1. Research Originality	6
Table 2. Hypertension Classification	12
Table 3. Operational Definition	28
Table 4. Research Schedule	35
Table 5. Respondent Characteristic.....	36
Table 6. Relationship Between Salt Taste Threshold with Blood Pressure Among Female Students at Universitas Darussalam Gontor	37
Table 7. Relationship Between Fiber Intake with Blood Pressure Among Female Students at Universitas Darussalam Gontor.....	38
Table 8. Relationship Between Caffeine Intake with Blood Pressure Among Female Students at Universitas Darussalam Gontor	38
Table 9. Relationship Between BMI with Blood Pressure Among Female Students at Universitas Darussalam Gontor.....	39
Table 10. Relationship Between Monthly Allowance with Blood Pressure Among Female Students at Universitas Darussalam Gontor	39
Table 11. Relationship Between Family Disease History with Blood Pressure Among Female Students at Universitas Darussalam Gontor	40



AUTHENTICITY STATEMENT

It is hereby declared by,

Name : Qudwatun Niswah Amara
NIM : 412020728022
Faculty : Faculty of Health Science
Study Program : Nutrition Science Department
Thesis Title : The Relationship Between Salt-Taste Threshold, Fiber Intake, and Caffeine Intake with Blood Pressure Among Female Students at University of Darussalam Gontor

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

If, in the future, it is found that this work is plagiarism, I am willing to accept any administrative and academic sanctions accordingly.

Ngawi, 5 March 2025

Writer,



Qudwatun Niswah Amara

NIM. 4120207280222

UNIVERSITAS DARUSSALAM GONTOR