

TABLE OF CONTENTS

TITLE.....	i
APPROVAL PAGE	ii
AUTHENTICITY STATEMENT	iii
ACKNOWLEDGEMENT	iv
TABLE OF CONTENTS	vi
LIST OF FIGURES.....	viii
LIST OF TABLES	ix
ABSTRACT.....	x
CHAPTER I	1
A. Background	1
B. Problem Formulation	2
C. Research Objectives	2
D. Research Authenticity	3
E. Research Benefit	7
CHAPTER II.....	8
A. Coronary Artery Disease.....	8
B. Inflammation	9
C. Lipid Profile	10
1. Total Cholesterol.....	10
2. High-Density Lipoprotein-Cholesterol	11
3. Low-Density Lipoprotein-Cholesterol	12
4. Triglycerides	14
D. White Blood Cells	15
1. Neutrophils.....	16
2. Lymphocytes	19
E. Neutrophil Lymphocyte Ratio (NLR).....	21
F. Relationship between NLR and Lipid Profile.....	23
G. Theoretical Framework	24
H. Conceptual Framework	25
I. Hypothesis.....	25
CHAPTER III.....	26
A. Research Design.....	26
B. Subjects	26

1. Sample Population	26
2. Inclusion & Exclusion Criteria.....	26
3. Sample Size.....	26
C. Tools and Materials.....	27
1. Tools.....	27
2. Materials.....	27
D. Research Flow	28
E. Variables and Operational Definition	29
F. Data Analysis	31
G. Ethical Considerations	31
CHAPTER IV	32
A. Description of Research Results	32
1. Subject Characteristics	32
2. Correlation Analysis between NLR and Lipid Profile Levels	35
3. Correlation Analysis between NLR and Lipid Profile Levels Based on Demographic Factors and Comorbidities	37
B. Discussion of Research Results	44
1. Discussion of Correlation Analysis between NLR and Lipid Profile Levels.....	45
2. Discussion of Correlation Analysis between NLR and Lipid Profile Levels Based on Demographic Factors and Comorbidities.....	47
3. Strengths and Limitations of the Study	53
CHAPTER V.....	54
A. Conclusion.....	54
B. Suggestions	54
REFERENCES.....	55
APPENDICES.....	63
Appendix 1. Ethics Committee Approval	63
Appendix 2. Research Consent from Gadjah Mada Medical Center (GMC)....	64
Appendix 3. Data Cleaning and Analysis with SPSS.....	65

LIST OF FIGURES

Figure 1. Development of Atherosclerotic Plaque	9
Figure 2. Innate and Adaptive Immune Responses in Atherosclerosis.....	10
Figure 3. Cholesterol Transport	12
Figure 4. Oxidative Stress in Cardiovascular Diseases.....	14
Figure 5. Atherogenicity of TGRLs	15
Figure 6. Antimicrobial Mechanisms of Neutrophils.....	17
Figure 7. Role of Neutrophils in CAD	18
Figure 8. Role of Lymphocytes in CAD	21
Figure 9. Theoretical Framework.....	24
Figure 10. Conceptual Framework.....	25
Figure 11. Research Flow.....	28
Figure 12. Scatter Plot of NLR and Total Cholesterol.....	36
Figure 13. Scatter Plot of NLR and HDL-C in Males.....	38
Figure 14. Scatter Plot of NLR and Triglycerides in Males.....	39
Figure 15. Scatter Plot of NLR and HDL-C in Females	39
Figure 16. Scatter Plot of NLR and HDL-C in Non-Obese Individuals	41
Figure 17. Scatter Plot of NLR and Triglycerides in Obese Individuals	41
Figure 18. Scatter Plot of NLR and TC in Non-Hypertensive Individuals	43
Figure 19. Scatter Plot of NLR and LDL-C in Non-Hypertensive Individuals ...	43
Figure 20. Scatter Plot of NLR and HDL-C in Hypertensive Individuals	44

LIST OF TABLES

Table 1. Overview of Previous Related Studies	3
Table 2. Operational Definitions of Study Variables	29
Table 3. Numerical Subject Characteristics	33
Table 4. Categorical Subject Characteristics.....	34
Table 5. Correlation Analysis between NLR and Lipid Profile	36
Table 6. Correlation Analysis between NLR and Lipid Profile Based on Age....	37
Table 7. Correlation Analysis between NLR and Lipid Profile Based on Gender	38
Table 8. Correlation Analysis between NLR and Lipid Profile Based on Obesity	40
Table 9. Correlation Analysis between NLR and Lipid Profile Based on Hypertension	42