UNIVERSITAS GADJAH MADA
THE ASSOCIATION BETWEEN BECK DEPRESSION INVENTORY SCORE AND SEROTONIN METABOLITE LEVEL IN PATIENTS WITH RHEUMATOID ARTHRITIS
ELIGIA PARAMITA S M, dr. Irwan Supriyanto, Ph.D., Sp.KJ ; Dr. dr. Ronny Tri Wirasto , Sp.KJ
Universitas Gadjah Mada, 2018 | Diunduh dari http://etd.repository.ugm.ac.id/

TABLE OF CONTENTS

COVER PAGE……i

RATIFICATION PAGE ii

PLAGIARISM FREE STATEMENT iii

ACKNOWLEDGEMENT iv

LIST OF TABLES ix

LIST OF PICTURES x

LIST OF APPENDIX xi

LIST OF ABBREVIATIONS xii

ABSTRACT xiii

CHAPTER I 1

INTRODUCTION 1

A. Study Background 1

B. Problem Formulation 3

C. Objectives 4

D. Research Authenticity 4

E. Study Benefits 5

CHAPTER II 7

LITERATURE REVIEW 7

A. Literature Review 7

1. Rheumatoid Arthritis 7

1.1 Definition 7

1.2 Pathophysiology 7

1.3 Pain in Rheumatoid Arthritis 8

UNIVERSITAS
GADJAH MADA
THE ASSOCIATION BETWEEN BECK DEPRESSION INVENTORY SCORE AND SEROTONIN METABOLITE LEVEL IN PATIENTS WITH RHEUMATOID ARTHRITIS
ELIGIA PARAMITA S M, dr. Irwan Supriyanto, Ph.D., Sp.KJ ; Dr. dr. Ronny Tri Wirasto , Sp.KJ
Universitas Gadjah Mada, 2018 | Diunduh dari http://etd.repository.ugm.ac.id/

1.4 Physical Disability in Rheumatoid Arthritis 9
1.5 Rheumatoid Arthritis with Comorbidity of Depression 10
2. Depression 11
2.1 Definition 11
2.2 Pathophysiology: The Mediating Role of Monoamines 11
3. Beck Depression Inventory 12
3.1 Definition 12
3.2 Accuracy of Beck Depression Inventory 13
3.3 Implementation of Beck Depression Inventory 14
4. Serotonin and Serotonin Metabolite 14
4.1 Definition 14
4.2 Metabolism of Serotonin 15
4.3 5-Hydroxyindolacetic Acid 16
4.4 Serotonin level in Rheumatoid Arthritis 17
B. Basic Theoretical Framework 18
C. Conceptual Framework 19
D. Hypothesis 19
CHAPTER III 20
STUDY METHODOLOGY 20
A. Type and Research design 20
B. Time and Study Settings 20
C. Study Population and Subjects 20
1. Study Population and Subjects 20
2. Criteria of Subjects 21
3. Sample Size 22
D. Study Variables 23
E. The Study Plan 23
F. Operational Definition of Variables 24

UNIVERSITAS
GADJAH MADA
THE ASSOCIATION BETWEEN BECK DEPRESSION INVENTORY SCORE AND SEROTONIN METABOLITE LEVEL IN PATIENTS WITH RHEUMATOID ARTHRITIS
ELIGIA PARAMITA S M, dr. Irwan Supriyanto, Ph.D., Sp.KJ ; Dr. dr. Ronny Tri Wirasto , Sp.KJ
Universitas Gadjah Mada, 2018 | Diunduh dari http://etd.repository.ugm.ac.id/

G. Instrument of Research 25
H. Data Analysis 26
CHAPTER IV 27
RESULTS & DISCUSSION 27
A. Results 27
1. Subject Characteristics 27
2. Data Analysis 29
B. Discussion 31
1. Subject Characteristics 31
2. Analysis of Correlation 32
C. Limitations 35
CHAPTER V 37
CONCLUSION & SUGGESTIONS 37
A. Conclusion 37
B. Suggestions 37
BIBLIOGRAPHY 38
ETHICAL CLEARANCE 41
STATEMENT LETTER FOR ETHICAL CLEARANCE 42

UNIVERSITAS
GADJAH MADA
THE ASSOCIATION BETWEEN BECK DEPRESSION INVENTORY SCORE AND SEROTONIN METABOLITE LEVEL IN PATIENTS WITH RHEUMATOID ARTHRITIS
ELIGIA PARAMITA S M, dr. Irwan Supriyanto, Ph.D., Sp.KJ ; Dr. dr. Ronny Tri Wirasto , Sp.KJ
Universitas Gadjah Mada, 2018 | Diunduh dari http://etd.repository.ugm.ac.id/

LIST OF TABLES

Table 1. Research Authenticity.....4

Table 2. Data characteristics of the subjects.....27

Table 3. Mean values of: BDI score and 5-HIAA.....28

Table 4. Normality test using Shapiro-Wilk…….....29

Table 5. Spearman Correlation test between BDI and 5-HIAA.....30

UNIVERSITAS
GADJAH MADA
THE ASSOCIATION BETWEEN BECK DEPRESSION INVENTORY SCORE AND SEROTONIN METABOLITE LEVEL IN PATIENTS WITH RHEUMATOID ARTHRITIS
ELIGIA PARAMITA S M, dr. Irwan Supriyanto, Ph.D., Sp.KJ ; Dr. dr. Ronny Tri Wirasto , Sp.KJ
Universitas Gadjah Mada, 2018 | Diunduh dari http://etd.repository.ugm.ac.id/

LIST OF PICTURES

Picture 1. Theoretical Framework.....18

Picture 2. Conceptual framework.....19

Picture 3. Study plan.....24

UNIVERSITAS
GADJAH MADA
THE ASSOCIATION BETWEEN BECK DEPRESSION INVENTORY SCORE AND SEROTONIN METABOLITE LEVEL IN PATIENTS WITH RHEUMATOID ARTHRITIS
ELIGIA PARAMITA S M, dr. Irwan Supriyanto, Ph.D., Sp.KJ ; Dr. dr. Ronny Tri Wirasto , Sp.KJ
Universitas Gadjah Mada, 2018 | Diunduh dari http://etd.repository.ugm.ac.id/

LIST OF APPENDIX

Appendix 1. Ethical clearance approval letter ……..41

Appendix 2. Statement letter of ethical clearance form ……42

UNIVERSITAS
GADJAH MADA
THE ASSOCIATION BETWEEN BECK DEPRESSION INVENTORY SCORE AND SEROTONIN METABOLITE LEVEL IN PATIENTS WITH RHEUMATOID ARTHRITIS
ELIGIA PARAMITA S M, dr. Irwan Supriyanto, Ph.D., Sp.KJ ; Dr. dr. Ronny Tri Wirasto , Sp.KJ
Universitas Gadjah Mada, 2018 | Diunduh dari http://etd.repository.ugm.ac.id/

LIST OF ABBREVIATIONS

Abbreviation	Details
5-HT	5-hydroxytryptamine
5-HIAA	5-hydroxyindoleacetic acid
BDI	Beck Depression Inventory
BDI-FS	BDI-Fast Screen
CNS	Central Nervous System
COPD	Chronic Obstructive Pulmonary Disease
CSF	cerebrospinal fluid
DMARDs	Disease-Modifying Anti-Rheumatic Drugs
IL – 1	Interleukin 1
IL – 6	Interleukin 6
MAO	monoamine oxidase
RA	Rheumatoid arthritis
SSRIs	Selective Serotonin Reuptake Inhibitors
TNF-α	tumor necrosis factor alpha
WBS	whole blood serotonin