

UNIVERSITI TEKNOLOGI MARA

**DEPRESSION AND ITS ASSOCIATED RISK
FACTORS AMONG LOWER LIMB AMPUTEES
AT HOSPITAL KUALA LUMPUR AND
HOSPITAL SULTANAH BAHYAH – A CROSS
SECTIONAL STUDY**

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ABSTRACT

Background: Amputation is a surgical procedure performed to remove non-functioning limb. A limb becomes damaged as a result of medical causes such as diabetic complication, peripheral vascular, malignancy as well as non-medical causes collectively called trauma. Clinical reports have indicated that a significant number of lower limb amputees are experiencing psychological adjustment problems. Research has shown that there is a relatively high prevalence of depression in the amputee population. To date, there is a dearth of studies documenting depression among lower limb amputees in Malaysia

Objective: The objective of this study is to determine the prevalence of depression among lower-limb amputees and examine several salient factors impacting on depression. These include socio-demographic factors, clinical variables, perceived social supports and quality of life.

Methodology: This is a cross-sectional study involving one hundred and ninety-six lower limb amputees who attended the Rehabilitation Medicine Clinics at Hospital Kuala Lumpur and Hospital Sultanah Bahiyah Alor Setar. Level of depressive symptoms, perceived social support, quality of life and clinical depression were measured using Beck Depression (BDI), Multi-Dimensional Perceived Social Support (MSPSS), World Health Organisation Quality of Life Brief Scale (WHOQOL-BREF) and Mini-International Neuropsychiatric Interview (MINI) respectively. The validated Malay version of these questionnaires were also used.

Results: Ninety-three (47.4%) lower limb amputees out of 196 respondents had depressive symptoms based on BDI. 48 respondents or 24.5% were diagnosed to have clinical depression. The findings revealed that depression associated with younger age, being single and low educational background as far as socio-demographic factors were concerned. In the case clinical factors, depression was found to be associated with bilateral side of amputation, trauma as a reason for amputation, absence of prosthesis as type of walking aid, shorter duration of amputation, and absence of medical co-morbidity among amputees. Low social support and poor quality of life were also found to be associated with depression. Multivariate analyses showed low perceived social supports ($p < 0.05$; OR 26.45) and absence of medical comorbidities ($p < 0.05$; OR 50.07) among amputees emerged as a significant predictor of depression among lower limb amputees in this study.

Conclusion: Present study demonstrated high percentage of clinical depression in lower limb amputees. Without proper diagnosis and timely intervention, depression may complicate the rehabilitation process and bring detrimental psychological sequelae. These findings should encourage the rehabilitation clinicians to screen for depression in those attending their services to ensure a holistic management in these patients. All of the risk factors discovered in this study may help the clinicians to identify the high-risk group and to treat them accordingly.

TABLES OF CONTENTS

Contents	Page
CONFIRMATION BY PANEL OF EXAMINERS	ii
AUTHOR'S DECLARATION	iii
ABSTRACT	iv
ACKNOWLEDGEMENT	vi
TABLE OF CONTENTS	vii
LIST OF TABLES	xi
LIST OF FIGURES	xii
LIST OF ABBREVIATION	xiii
CHAPTER 1: INTRODUCTION	1
1.1 Overview of Amputation	1
1.2 Epidemiology and Aetiologies of Lower Limb amputation	1
1.3 Challenges of Amputees	2
1.4 Amputation in Malaysia	4
CHAPTER 2: LITERATURE REVIEW	5
2.1 Impact of Lower Limb Amputation	5
2.2 Psychological Impact of Amputation	5
2.2.1 Grief After Amputation	6
2.2.2 Body Image Disturbances	6

CHAPTER 1

INTRODUCTION

1. Overview on Amputation

1.1 Amputation

Amputation is the surgical removal of all or part of a limb or extremity such as an arm, leg, foot, hand, toe, or finger. Limb amputation has been practiced for more than 2500 years and is known to be the oldest surgical procedure (Liu et al., 2010). Amputation can be divided into two categories, namely, major limb loss and minor limb loss. Major limb loss usually involves amputation below the elbow, above the elbow, above the knee and below the knee or the foot, while minor limb loss usually involves the amputation of the hand or digits such as toes and fingers (Letchuman et al., 2010). The majority of studies in this area indicate that lower limb amputation is much more common than upper limb amputation. According to Pooja & Sangeeta (2013), among 94.8 per cent of all amputations, only 5.2 per cent were upper limb amputations. Meanwhile, up to 70 per cent of all cases of amputations involve lower limbs (Peixoto et al, 2017).

Further, a study in Malaysia by Hazmy et al. (2001) reported that 97 per cent of the amputee population in their study had lower limb amputations and only 3 per cent underwent upper limb amputations. Regardless of whether it is a lower limb or an upper limb amputation, an amputee faces many obstacles and is challenged psychologically and physically in performing his/her daily itinerary.

1.2 Epidemiology and Aetiologies of Lower Limb Amputation

According to Andrew (2005), a lower limb amputation is performed every 30 seconds somewhere in the world as a consequence of diabetes. As of this day, the Global Lower Extremity Amputation Study (GLEAS) is the only retrospective registry study that uses standardized data in comparing international epidemiology of major lower extremity amputations (N. Unwin, 2000). A global epidemiological study of lower extremity amputation (Rachel, 2002) found that the incidence rates were in the range of 5.0-26.2 per 100 000 per year, with men being twice more likely than