

# The level of depression in lower back pain patient at outpatient of neurology Haji Adam Malik hospital Medan (RS HAM)

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**Abstract.** The incidence of Lower Back Pain (LBP) in Indonesia is unclear. Various data in some developing countries stated that the LBP incidence is approximately 15% - 20% of the population. Because there is the unclear incidence of psychological symptoms such as depression on LBP, the researchers were interested in doing this research. A descriptive study was conducted to know the level of depression of patients with LBP in outpatient of neurology RS HAM Medan. Patients with LBP (n=78) in outpatient were examined BDI-II. The minimum depression was 47.44% (n=37), mild depression was 21.79% (n=17), moderate depression was 21.79% (n=17), severe depression was 8.98% (n=7). In conclusion, the level of depression in lower back pain patient at outpatient of neurology Haji Adam Malik Hospital Medan is higher at minimum depression.

## 1. Introduction

Low back pain (LBP) is a common health problem with a prevalence of 60%-90% over one's lifetime and an annual incidence of 5%, although it usually has a benign and self-limiting course.[1] From the study in Northern Sweden by Hildingsson et al., from 5798 respondents who answered questions about the LBP, about 2377 (41%) reported had been experiencing low back pain, 54.6% women and 45.4% men.[2] LBP is often classified according to the duration of pain as acute (short term), sub-chronic (intermediate) and chronic (long-term). Chronic Lower Back Pain (CLBP) cannot be clearly defined in the literature. Sometimes CLBP defined as a Lower Back Pain which is experienced at least 7-12 weeks.[3,4] In Indonesia, the incidence of LBP is unclear. Various data in some developing countries said the LBP incidence of approximately 15% - 20% of the population, which mostly are acute and chronic low back pain. A study in Nigeria by Egwu and Olakunle in 2012 mentioned on 100 patients which consisted of 41 men and 59 women with non-specific CLBP experiencing mild pain intensity (1-3) were 12 people (12%), moderate pain intensity (4-6) were 58 people (58%) and severe pain intensity (7-10) as many as 30 people (30%), with minimum depression levels, were 63 people (63%), mild depression levels were 21 persons (21%), moderate depression levels as many as 12 people (12%), and severe depression levels as many as 4 people (4%).[1,3,5,6] Because there is the unclear incidence of psychological symptoms such as depression on LBP, the researchers are interested in doing this research.



## 2. Method

### 2.1. Design

This study is the Descriptive approach in the outpatient installation of neurology FK-USU / Dr. H. Adam Malik Hospital Medan North Sumatra by collecting as many as 78 subjects were conducted beck depression inventory-II examination.

### 2.2. Subjects

The inclusion criteria as patients who had been diagnosed as having lower back pain in outpatient Installation of Neurology Department of Dr H. Adam Malik hospital, aged 15-65 years, minimum education was junior high school graduation, cooperative (willing as a research subject), with the exclusion criteria such as having a psychiatric disorder prior particularly anxiety disorder and depression, have a systemic medical illness such as heart disease, chronic renal failure, fibromyalgia and thyroid disorders, a history of the use of illicit substances, using anti-anxiety and anti-depressant medication. Patients who did not have a psychiatric disorder before we rated the level of depression. The patient will be given a questionnaire of Beck Depression Inventory II (BDI-II) by starting with a brief description of the questionnaire. After BDI-II score had obtained, will be done the management and presented by demographic characteristic, the level of depression table.

## 3. Results

Characteristics of the subjects in this study are presented in Table 1; it can be seen that the LBP patients aged between 19-65 years in which the average age is currently the subject of research  $51.45 \pm 11.83$  years. For gender, men by 35.9% and amounted to 64.1% of women. In a group of education level, junior high school (21%), High school (32%) and university (25%). For the status of work on the working group by 64.1%, and 35.9% of subjects are not working. The duration of pain in the study subjects  $46.69 \pm 82.98$  weeks old where 41% of the acute pain, subacute were 11.5%, and 47.4% were chronic. On Table 2, it can be seen that the minimum depression is 47.44% (n=37), mild depression is 21.79% (n=17), moderate depression is 21.79% (n=17), severe depression is 8.98% (n=7).

**Table 1.** The sample distribution based on demographic characteristics.

No	Variable	Frequency (%)	Min	Max	Range	Mean±SD
1	Age(Years)	-	19	65	46	51.45±11.83
2	Sex					
	Male	35.9	-	-	-	-
	Female	64.1	-	-	-	-
3	Education					
	Junior High School	26,92	-	-	-	-
	Senior High School	41,02	-	-	-	-
	Collage	32,06	-	-	-	-
4	Job Status					
	Working	64.1	-	-	-	-
	Not Working	35.9	-	-	-	-
5	Duration of pain (Weeks)	-	1	480	479	46.69±82.98

**Table 2.** BDI-II scores.

BDI Score	n	%
Minimum Depression (0-9)	37	47.44
Mild Depression (10-16)	17	21.79
Moderate Depression (17-29)	17	21.79
Severe Depression (30-63)	7	8.98

#### 4. Discussion

Based on the demographic characteristics of the study sample, the mean age was found suffering from low back pain research on the subject  $51.45 \pm 11.83$  years. This is consistent with studies Ferguson et al. that the risk factors for low back pain at age 35 to 55 years.[10] In this study women more suffer from low back pain 64.1% compared to males 35.9%. In the study Hildingsson et al. in Sweden (2008), Egwu and Olakunle in Nigeria (2012), Janet K. Freburger et al. (2009), the occurrence of LBP and CLBP women more frequently than men. In a study of Ferguson et al. in the USA (2012), women have LBP experience less than men. In this study, the level of senior high school education was 32% higher than 25% of the College and junior high school by 21% for the LBP. In this study people in the working group (64.1%) more frequent got LBP than not working group (35.9%).[2,3,8,10,11]

The mean duration of the disease is  $46.69 \pm 82.98$  weeks. This is consistent with studies Hildingsson et al. in northern Sweden (2008) was experiencing symptoms of LBP for 1 last week by 4.5%, over the last 6 months by 7.2%, and for more than 6 months 81.1% where the chronic pain has a higher prevalence.[2]

In previous studies by Egwu and Olakunle in Nigeria mention that non-specific CLBP is experiencing much higher levels of minimum depression (63%) than mild, moderate and severe depression with a mean BDI-II score of  $12.20 \pm 8.33$ . [3] In this study mentioned that the level of depression in lower back pain patient at outpatient of neurology Haji Adam Malik Hospital Medan is higher at minimum depression (47.44%) than mild, moderate and severe depression.

Limitations of this research are the research domain only see the level of depression with BDI-II scores without considering an association between risk factors for low back pain such as mechanical factors, psychosocial and individual risk against the VAS score and BDI-II.[10]

#### 5. Conclusion

The level of depression in lower back pain patient at outpatient of neurology Haji Adam Malik Hospital Medan is higher at minimum depression.

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