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**HASIL PENILAIAN SEJAWAT SEBIDANG ATAU PEER REVIEW**  
**KARYA ILMIAH : JURNAL ILMIAH**

Judul Jurnal Ilmiah (Artikel) : *Association of Functional Outcome and Post Stroke Depression Among Ischemic Stroke Patients After Three Months Onset : A Preliminary Study*  
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Prof. Dr. Hamdi Muluk, M.Si.  
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**LEMBAR  
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Reviewer



Prof. Dr. Drs. Cholichul Hadi, M.Si., Psikolog

NIP. 196403231989031002

Unit kerja: Fakultas Psikologi Universitas Airlangga

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## Association of Functional Outcome and Post Stroke Depression among Ischemic Stroke Patients after Three Months Onset: A Preliminary Study

F Handayani, S Setyowati... - Jurnal Keperawatan ..., 2019 - jks.fikes.unsoed.ac.id

Background The Post Stroke Depression (PSD) prevalence of stroke survivor after three months onset was ranged from 17% to 37%. Depression led to fatigue, low quality of life, severe morbidity, and mortality. Functional Outcome influence depression on stroke survivor. However, correlation between functional state level and depression among stroke survivor after three months onset has not been established. Objective This study was aimed to investigate the correlation of executive functional outcome and PSD among stroke survivor ...

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## **FACTORS ASSOCIATED WITH ANAEMIA AMONG PREGNANT WOMEN IN INDONESIA : A SYSTEMATIC REVIEW**

**Restuning Widiasih, Ardhini Dwi Utari, Tri Nur Jayanti, Anis Ardiyanti, Rinda Intan Sari, Geuis Anggi Siska**

Faculty of Nursing, **Universitas Padjadjaran, Bandung**, West Java, Indonesia

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### **ABSTRACT**

Pregnant women are vulnerable with anaemia. Quantitative studies related anaemia in pregnancy have been done in Indonesia including assessing factors associated with anaemia in pregnancy. However, none of studies provide a comprehensive view of factors that associated with anaemia in pregnancy. The aim of this review was to identify factors associated with maternal anaemia in Indonesia. The systematic scoping review method was used in this review. The databases were Indonesian electronic databases including; Google scholar, Kandaga, and Sinta. The keywords were bilinguals: Indonesia and English. The inclusion criteria of studies were focused on factors related to anaemia in pregnancy, research design included correlation and quasi-experimental, published from 2013 to 2018, full text, and Indonesian's studies. A total of 1986 papers were retrieved, but only 14 articles met the inclusion criteria and were included in the analysis. Factors associated with maternal anaemia in Indonesia including health professionals'roles, iron tablets consumption, antenatal care, education, nutrition, health knowledge, and awareness. Multi-factors are associated with maternal anaemia in Indonesia. There is a need for comprehensive approaches from health professionals and health services in dealing with anaemia in pregnancy.

Keywords: anaemia, factors, Indonesia, nursing, pregnancy, vulnerable

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### **ABSTRAK**

Anemia adalah salah satu masalah kesehatan pada perempuan hamil. Berbagai riset kuantitatif tentang anemia banyak dilakukan di Indonesia, tetapi penelitian yang mengkaji faktor-faktor penyebab anemia pada kehamilan secara komprehensif masih terbatas. Tujuan dari studi literatur ini untuk mengidentifikasi faktor-faktor yang berhubungan dengan anemia kehamilan secara komprehensif di Indonesia. Studi literatur ini menggunakan pendekatan metode Scoping review. Sumber data menggunakan Google scholar, Kandaga, dan Sinta. Pencarian artikel menggunakan kata kunci 2 bahasa, Indonesia dan Inggris. Kriteria inklusi dari artikel yang dianalisis: riset dengan topik faktor yang berhubungan dengan anemia kehamilan, design risetnya hubungan dan quasi-experiment, dipublikasikan pada tahun 2013-2018, artikel full text, dan riset berasal dari Indonesia. Hasil pencarian artikel mendapatkan 1986 artikel, akan tetapi hanya teridentifikasi 14 artikel yang memenuhi kriteria inklusi. Hasil analisa menunjukkan faktor yang berhubungan dengan anemia pada ibu hamil di Indonesia adalah peran aktif petugas kesehatan, kepatuhan mengkonsumsi tablet Fe, kontrol kehamilan, pendidikan formal, status nutrisi, pendidikan kesehatan, dan kesadaran ibu hamil. Faktor yang berhubungan dengan penyebab anemia pada ibu hamil multi-faktor. Hasil studi literatur ini menginformasikan kebutuhan akan pendekatan yang komprehensif dari layanan dan petugas kesehatan dalam mengatasi anemia ibu hamil di Indonesia.

Kata kunci: Anemia, faktor-faktor, Indonesia, kehamilan, perawat

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## THE INFLUENCE OF SELF-TAPPING ON ANXIETY DURING PRIMARY MENSTRUAL CRAMPS AMONG NURSING STUDENTS

Wiwin Lismidiati<sup>1</sup>, Neni Fidyasanti<sup>1</sup>, Nurkhasanah<sup>2</sup>

1. Teaching Staff of Maternity Nursing at [Nursing Science Study Program of UGM, Yogyakarta](#)
2. Student at [Nursing Science Study Program of UGM, Yogyakarta](#)

### ABSTRACT

Menstruation is a sign of puberty for female adolescents. The common menstrual disorder experienced by adolescent is called painful menstruation (primary dysmenorrhea). Primary dysmenorrhea triggers both physical and psychological symptoms. One of the psychological impacts is anxiety. Self-tapping is a non-pharmacological therapy which can reduce anxiety. Aim of the research is to figure out the effect of self tapping toward anxiety level among nursing students experiencing menstrual cramps. This study was a quasi-experimental research with non equivalent pretest-posttest with control group. The total 60 respondents were divided into intervention and control group with 30 respondents each. Self tapping was practiced in intervention group, meanwhile deep breath was performed in control group. The instruments to measure anxiety were anxiety screening questionnaire and Hamilton Anxiety Rating Scale (HARS). Wilcoxon statistical test was applied to compare the level of anxiety before and after the treatment in both groups. Besides, Mann Whitney statistical test was used to compare the effectiveness of both treatments in reducing the anxiety level in each group. The anxiety mean score of the intervention group decreased from 24,63 to 16,03 after self tapping ( $\Delta=8,6$ ;  $p=0,000$ ), while the anxiety mean score of the control group decreased from 23,5 to 17,73 after the implementation of deep breath technique ( $\Delta=5,77$ ;  $p=0,000$ ). There was a significant difference between self tapping and deep breath technique in reducing anxiety level ( $p\text{-value}=0.006$ ). Self tapping indeed has impact towards anxiety level among nursing students experiencing menstrual cramps.

Keywords: anxiety, primary dysmenorrhea, self tapping

### ABSTRAK

Menstruasi merupakan tanda seorang remaja perempuan mengalami pubertas. Menstruasi seringkali menimbulkan gangguan. Gangguan menstruasi yang paling sering dialami remaja adalah nyeri menstruasi (dysmenorrhea) primer. Dysmenorrhea tidak hanya menimbulkan gejala secara fisik, tetapi juga psikologis. Salah satu dampak psikologis yang banyak dialami adalah kecemasan. Self tapping merupakan salah satu terapi nonfarmakologi untuk mengurangi kecemasan. Tujuan dari penelitian ini adalah untuk mengetahui pengaruh self tapping terhadap kecemasan saat nyeri menstruasi (dysmenorrhea) primer pada mahasiswa PSIK FK UGM. Jenis penelitian kuasi eksperimental dengan rancangan non equivalent pretest-posttest with control group. Sampel penelitian 30 orang sebagai kelompok intervensi diberi perlakuan self tapping sementara 30 orang kelompok kontrol diberi perlakuan nafas dalam. Alat penelitian yang digunakan adalah kuesioner skrining kecemasan dan Hamilton Anxiety Rating Scale (HARS). Perbandingan tingkat kecemasan sebelum dan sesudah terapi pada kedua kelompok, dilakukan uji statistik Wilcoxon. Sementara, perbandingan efektivitas terapi antara kelompok intervensi dan kontrol dilakukan uji statistik Mann Whitney. Rata-rata skor kecemasan pada kelompok intervensi menurun dari 24,63 menjadi 16,03 ( $\Delta=8,6$ ;  $p=0,000$ ), sedangkan pada kelompok kontrol juga mengalami penurunan dari 23,5 menjadi 17,73 ( $\Delta=5,77$ ;  $p=0,000$ ). Meskipun kedua kelompok menunjukkan penurunan tingkat kecemasan, kelompok intervensi secara signifikan lebih efektif dalam menurunkan kecemasan dengan nilai  $p=0,006$ . Jadi terdapat pengaruh self tapping terhadap kecemasan saat nyeri menstruasi (dysmenorrhea) primer pada mahasiswa PSIK FK UGM.

Kata kunci: dysmenorrhea primer, kecemasan, self tapping

# Association of Functional Outcome and Post Stroke Depression Among Ischemic Stroke Patients After Three Months Onset : A Preliminary Study

*by* Dian Ratna Sawitri

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**ASSOCIATION OF FUNCTIONAL OUTCOME AND POST STROKE DEPRESSION  
AMONG ISCHEMIC STROKE PATIENTS AFTER THREE MONTHS ONSET: A  
PRELIMINARY STUDY**

**Fitria Handayani<sup>1</sup>, Setyowati<sup>2</sup>, Dwi Pudjonarko<sup>3</sup>, Dian Ratna Sawitri<sup>4</sup>,  
Hastaning Sakti<sup>4</sup>, J.B. Suparyatma<sup>5</sup>, Mateus Sakundarno Adi<sup>6</sup>**

1. Doctoral Programm, Medicine Faculty, Diponegoro University
2. Professor in Nursing Faculty, Indonesia University
3. Neurologist, Medicine Faculty, Diponegoro University
4. Psychology Faculty, Diponegoro University
5. Patologist, Medicine Faculty, Sebelas Maret University
6. Epidemiologist, Public Health Faculty, Diponegoro University

**ABSTRACT**

The Post Stroke Depression (PSD) prevalence among stroke patients after three months onset was high. Functional Outcome influenced depression on stroke patient. This study aimed to investigate the correlation between these variables. This study was a correlational study. The participants were 44 ischemic stroke patients after three months onset, recruited in an outpatient unit. The tools were GRID-Hamilton Rating Scale for Depression 17 (GRID-HAMD 17) for PSD and Barthel Index (BI) for functional outcome. Data was examined using simple linear regression analyses. The prevalence of PSD was 56.82. The median of HAMD-GRID-17 was  $10.38 \pm 7.58$ , and Barthel Index was  $69.56 \pm 21.69$ . The Barthel Index showed a positive correlation with HAMD-GRID-17 ( $\beta = -.41$   $p = .006$ ). The Functional Outcome influences PSD as many as 16.8 %. Correlation between Functional Outcome and PSD in ischemic stroke patients demonstrated a moderate association. Nursing intervention development that consists of functional outcome repairmen to reduce PSD among ischemic stroke patients should be aimed.

Keywords: Functional Outcome, Post Stroke Depression, After Three Months Onset

**ABSTRAK**

Prevalensi *Post Stroke Depression* pada pasien stroke setelah tiga bulan tinggi. *Functional Outcome* mempengaruhi depresi pada pasien stroke iskemik. Penelitian ini bertujuan untuk mengetahui korelasi kedua variable. Partisipan yang terlibat adalah 44 pasien stroke setelah tiga bulan serangan. Pasien adalah pasien unit rawat jalan. Kuesioner adalah GRID-Hamilton Rating Scale for Depression 17 (GRID-HAMD 17) untuk PSD dan Barthel Index (BI) untuk *functional outcome*. Data dianalisis menggunakan regresi linier sederhana. Presentasi PSD adalah 56.82. HAMD-GRID-17 adalah  $10.38 \pm 7.58$  dan Barthel Index adalah  $69.56 \pm 21.69$ . Barthel Index dan HAMD-GRID-17 menunjukkan hubungan yang positif ( $\beta = -.41$   $p = .006$ ). *Functional Outcome* menentukan PSD sebesar 16.8 %. Hubungan antara *Functional Outcome* dan PSD pada pasien stroke iskemik setelah tiga bulan serangan adalah sedang. Intervensi keperawatan yang berfokus pada status fungsional untuk menurunkan PSD harus dikembangkan.

Kata kunci: *Functional Outcome*, *Post Stroke Depression*, Tiga Bulan Setelah Serangan

## BACKGROUND

Depression is a common phenomenon which follows a stroke incident. Among ischemic stroke patients, pattern of Post Stroke Depression (PSD) score was increased within three months after onset and persistent until six month (Gbiri, Akinpelu, & Odole, 2010). The score at three month was highest among period after stroke onset. At three months after onset, patient engaged with real life in dealing with stroke (Gbiri, Akinpelu, & Odole, 2010). The prevalence of PSD three months after onset was vary, 31.6 % were in risk of PSD (McCarthy et al., 2016), 27.3% (Li et al., 2014) and 33.5% had major PSD (Cheng et al., 2014), and 47.4% experienced PSD (Kim et al., 2011). Besides a high range, PSD also causes fatigue after one and a half year after the onset (Lerdal et al., 2011), prolonged PSD and suicidal thought (E. Lang & Borgwardt, 2013), low of quality of life after five years onset (Kielbergerova et al., 2015), and recurrent stroke (Yuan et al., 2012). In-addition stroke patient with PSD has 4.4 times of mortality risk than non-PSD stroke patient (Naess, Lunde, Brogger, & Waje-Andreassen, 2010). Functional Outcome is another common complication of stroke. Functional Outcome after stroke rates of 49 % (Khan et al., 2012) and 60.9% (Ojagbemi & Owolabi, 2013) have been reported. A higher score of functional outcome is associated with the Return Home Program versus institution-based rehabilitation (Stein et al., 2015).

Stroke patient with functional outcome impairment has mortality risk of 1.7 (Naess et al., 2010). It was found that there was a significance difference of functional outcome between PSD and non-PSD in stroke patient (X.-G. Jiang, Lin, & Li, 2014). Although the association of functional outcome and PSD has been well established among stroke patient, the association of functional outcome and PSD among stroke patient after three months onset has not been well described. The determination to opt three months after the initial stroke was because the pattern of PSD score mostly increases at three months after onset (Gbiri, Akinpelu,

& Odole, 2010), this study was aimed to investigate the association of functional outcome and PSD among stroke ischemic survivor after three months onset. The association between PSD and executive function as considered treatment factor at three months after onset.

## METHODS

### a. Sample

Screening to 120 stroke patients was performed since February to May 2018. Forty four patients who were suffering from ischemic stroke after three months of onset were eligible for this study based on the inclusion and exclusion criteria. The sampling method was convenience sampling during the study period. Samples were recruited at outpatient service in Tugurejo Hospital and Kanjeng Raden Mas Tumenggung Wongsonegoro (KRMT) Hospital, Semarang City, Indonesia. The participants had experienced an acute ischemic stroke onset which was diagnosed according to the AHA 2013. Stroke is classically characterized by a neurological deficit attributed to an acute focal injury of the central nervous system (CNS) by a vascular cause, including cerebral infarction, intra cerebral hemorrhage (ICH), and subarachnoid hemorrhage (SAH), and becomes a major cause of disability and death worldwide (Sacco et al., 2013). The criteria of inclusion including, 18– 80 years old, admitted to the hospital within three months after stroke onset, had no aphasia and MMSE score >12. The exclusion criteria was patient with hearing impairment. The drop out was hemorrhage transformation. Ethic was legally from and. Ethical approval was obtained from the Ethics and Research Committee of Medicine Faculty, Diponegoro University in affiliation with Kariadi Hospital. Considering the hospital research procedure, Ethical approval was re-checked at Tugurejo Hospital. The participants received an explanation regarding research procedure and were then given an informed consent.

b. Assessment

Assessment of PSD used GRID-HAMD 17. The questionnaire consists of 17 questions (Williams et al., 2008). The GRID-HAMD 17 has passed language validity. Backward translation was conducted into Bahasa and continued with face validity. Reliability test of GRID-HAMD 17 among stroke patient was also conducted with *Alpha Cronbach*,  $r = .766$ . Assessment of executive function was conducted using Barthel-Index (Mahoney & Barthel, 1965)(Oveisgharan et al., 2006). The tool was tested with inter-rater observation between two observers. The Kappa result was .001.

c. Statistics Analysis

Participants' clinical and socio-demographic characters such as age, sex, income, and education were presented using descriptive statistics frequencies. Characteristics of age and GRID-HAMD 17 data continuum were analyzed for homogeneity using Saphiro-Wilk. Homogeneity of variance was determined using median or mean. Age and GRID-HAMD 17 presented in mean/median and standard deviation. Post Stroke Depression and Executive Functional category also described in percentages. Post Stroke Depression and Executive Functional continuum data were analyzed in simple linear regression. Level of significance was set at  $p < .05$ .

**RESULTS**

Table 1 Characteristics of Participants

Characteristics	n (participants)	%	Median (Range)	IQR
Sex				
- Male	20	45.5		
- Female	24	54.5		
Employed				
- Employed	18	40.9		
- Unemployed	26	41.9		
Education				
- Low Education	40	90.9		
- Higher Education	4	9.1		
Income				
- Low	23	52.3		
- Moderate	20	45.5		
- High	1	2.3		
Age			57.9 (38-78) years	±8.87

The continuum data of GRID-HAMD 17 and BI were not normally distributed. The median of GRID-HAMD 17 was  $10.38 \pm 7.58$  (0-26), and BI  $69.56 \pm 21.69$  (20-85) respectively. The percentages of PSD of ischemic stroke patients after 3 month onset were 43.2%

no depression, 40.9% mild, 4.5% moderate, and 11.4% severe. The percentages of Functional Outcome were 70.5% mild dependent, 13.6% moderate dependent, 11.4% dependent, and 4.5% total dependent.

Table 2 Univariate of Post Stroke Depression and Functional Outcome

	n	%	Median (Range)	IQR
GRID-HAMD 17			10.38 (0-26)	±7.58
≤ 7 no depression	19	43.2		
≤ 18 Mild	18	40.9		
≤ 24 Moderate	2	4.5		
>24 Severe	5	11.4		
Barthel Index			69.56 (20-85)	±21.69
Total Dependent	2	4.5		

	n	%	Median (Range)	IQR
Dependent	5	11.4		
Moderate	6	13.6		
Mild	31	70.5		
Independent	0	0		

**Table 3 Simple linier Regression**

Factor	c	Unstandardized Coefficient B	Standardized Coefficient (β)	p
Functional Outcome	20.25	-.142	-.41	<.001

R2= .168, adjusted R2= .148,

The correlation between Functional outcome and PSD among ischemic stroke patients after three month onset showed moderate and negative pattern at -.41. A higher Functional Outcome decreases PSD. Coefficient determination was .168. The coefficient demonstrated that linier regression determined 16.8% variation of functional outcome well explain to the PSD variable. Statistical analysis showed a significance correlation between Functional Outcome and PSD among ischemic stroke patients after three months onset  $p < .001$ .

## DISCUSSION

This study examined the association between functional outcome and PSD among ischemic stroke patient after three months onset. Our study showed that the percentage of PSD among ischemic stroke patients after three month onset was higher than that in other studies (McCarthy et al., 2016)(Li et al., 2014)(Cheng et al., 2014)(Kim et al., 2011). In this study, the percentage of functional outcome impairment was 100% ranged from mild to totally dependent, meanwhile other studies found the impairment were 49 % (Khan et al., 2012) and 60.9% (Ojagbemi & Owolabi, 2013). The results of our study showed negative moderate association between functional outcome and PSD. Other studies supported that PSD at discharge and after three months onset was associated with functional outcome, although PSD does not influence the motor recovery (Nannetti, Paci, Pasquini, Lombardi, & Taiti, 2005). Depression at three month after onset correlated with poor functional outcome at 15 months after onset (Kaste, Erkinjuntti,

Pohjasvaara, Vataja, & Leppa, 2001). Major depression was strongly associated with functional dependency (Ojagbemi & Owolabi, 2013).

In comparison of statistics analysis, many studies showed that functional outcome using BI score was significantly difference between PSD and non PSD group in stroke patient after three months onset (Nannetti et al., 2005)(X.-G. Jiang et al., 2014). Specifically in ischemic stroke patient after three months onset, the BI score was also different (Tang et al., 2013). However, few studies found there was no significance difference of BI between PSD and non-PSD in ischemic stroke after three months onset (Zhang et al., 2010). In multivariate statistics analysis, it was stated that handicap (mRS score) predicted the occurrence of PSD among ischemic stroke patient at three months onset (Zhang et al., 2010).

For unspecified time after stroke, comparison analysis supported that post stroke disability using mRS score was significantly different among stroke patient (Oni, Olagunju, Olisah, Aina, & Ojini, 2018). Functional score was included into multivariate model in predicting the PSD among ischemic stroke patient with other variables (Tang et al., 2013).

Correlation of PSD and functional outcome can be explained by lesion area. The cortex area lesion which determined PSD and Functional Outcome Post Stroke Depression showed higher rates of infarcts in cortical-subcortical area of the frontal and temporal lobe as well as in internal capsule (including genu, anterior and posterior limb) (Zhang et al., 2012)(X. Jiang, Lin, & Li, 2014).



Other studies, however, found a different result. One study asserted that Functional Outcome and depression is not correlated (Lohner, Brookes, Hollocks, Morris, & Markus, 2017). Physical disability and psychiatric rating scale, which measure the emotional dimension of disability caused by the disease expresses as depression, showed no correlation as well. The PSD is not a simple reaction to physical disability (Bendsen, Bendsen, Lauritzen, & Vilmar, 1997). Other influencing factors toward PSD and its pattern need to be investigated among ischemic stroke patient after three months onset.

It is widely agreed that The Functional Outcome and PSD should be treated. One of studies suggested that physical exercise improves physical functional recovery after stroke (Pyöriä et al., 2007). The incident of Post Stroke Depression can also be diminished after patients receiving a treatment. The treatment was psychosocial intervention. The indicator of PSD was 5-HTTLPR and STin2 VNTR polymorphisms of the SERT genotyped in DNA (Kohen et al., 2011).

#### CONCLUSION

The Functional Outcome was moderately correlated with Post Stroke Depression on ischemic stroke patient after three months onset. Nursing intervention development which consisted of functional outcome enhancement in order to reduce PSD among ischemic stroke patients after three months onset should be aimed. The obvious limitation is this study explained only one variable which influences PSD in stroke ischemic patient after three months onset, therefore other variables need to be examined in addressing the PSD phenomena.

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