

The Effect of Stress and Social Support among Postpartum Depression Women in Indonesia

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Abstract—Postpartum depression is a mental and emotional condition that can affect not only mother but also partner as well as child. The negative effect of postpartum depression can influence infant growth and relationship with husband. To avoid conditions related to postpartum depression, identifying the effect of stress also social support need further information. **Purposes:** The purpose of this study is to examine effect of stress also social support the with postpartum depression women in Indonesia. **Methods:** A descriptive correlational study was conducted February-March 2015. The 138 participant was recruited from Public Health Sokaraja II in Banyumas area, Central Java, from postnatal visiting in public health and home visit using convenience sampling. This study used 3 instrument there are Edinburgh Postnatal Depression Scale (EPDS), Perceived Stress Scale (PSS-10), Interpersonal Support Evaluation List (ISEL) included the demographic data. **Results:** The effect of stress in postpartum depression were perceived stress and social support significant difference between no depression and depression groups with PSS mean -3.195 ($t=-4.573$, $df=136$), ISEL mean 3.676 ($t= 3.336$, $df=136$). **Conclusion:** The effect of stress also social support were involved prevalence postpartum depression. Further research about intervention based on cultural in Indonesia setting to improved nurse knowledge.

Keywords-postpartum depression, effect of stress, social support

I. INTRODUCTION

Postpartum depression is the one of the global public health problems that can lead infanticide as well as maternal death, often by suicide[1]. Symptoms of distress and depression impact hundreds of thousands of women annually in the USA and affect women from all racial/ethnic and socioeconomic backgrounds [2;3]. After women delivers she will enter postpartum period. In this period women are vulnerable to depression affecting about 10 to 20% of mothers during the first year after delivery. However, only 50% of women with the prominent symptom are diagnosed[4]. Postpartum depression may directly affect a woman's capacity in unhealthful environment for psychological and social development[5;6]

The prevalence of postpartum depression range from 3.5% to 63.3% where Malaysia and Pakistan had the lowest and the highest postpartum depression cases respectively [7;8]. In Indonesia, based on RISKESDAS (The Health and Region Indonesia Research) 2013, postpartum depression has been categorized as one of the emotional disturbing mental health. Andajani-Sutjahjo, Manderson, and Astbury [9] conducted a

study in Javanese women in Indonesia found that varying emotional states in early postpartum women and the related factor that associated with postpartum depression were marital problem, lack of support from partners or family, insufficient family income, and chronic illness in the family. Moreover, Andajani-Sutjahjo et al. study[9], the associated factors may relate to stress conditions and social support, which need to be examined further. This study purpose's was to examine the relationship effects of stress and social support with postpartum depression women in Indonesia.

II. METHODS

A. Participants

A descriptive correlation study used to identify characteristic of postpartum depression with purposive sampling technique of 138 participant conducted from February until the end of March 2015 at Public Health Sokaraja II, Central Java, Indonesia. All participants recruited from outpatient department and home visit. Participants who were eligible in this study postpartum mother were 3 weeks until 1 month delivery baby, with age more than 18 years old, delivery full term (38 -42 weeks) baby, normal healthy newborn (weight>2.600 gram) the participant also able to write and read in Bahasa. Moreover, in this study excluded participants were postpartum mother who had previous psychiatric disorder and apparent complications during postpartum.

B. Measurement

This study used 3 instruments there are Edinburgh Postnatal Depression Scale (EPDS), Perceived Stress Scale (PSS-10), Interpersonal Support Evaluation List (ISEL) included the demographic data.

1) Perceived Stress Scale (PSS-10)

The Perceived Stress Scale is the instrument used to measure the effects of stress. This study used measure by adapted from Dr. Cohen and already done validity also reliability. The Content Validity Index (CVI) was utilized to examine the content validity of the translated questionnaires [9]. The mean I-CVI of the translated PSS-10 from 3 expert

was 1 and S-CVI from questions including demographic and open ended questions was 0.97, consider as acceptable. The validity and reliability PSS-10 each item in the PSS-10 questionnaires scored significantly more than 5% (0.44), ranging from 0.569 to 0.678, in other words the PSS-10 Bahasa version was good to use. The reliability measure for PSS-10, using the Cronbach alpha was 0.837, so clearly this questionnaire was ready to use in this study.

2) *Interpersonal Support Social (ISEL)*

This instrument has already been translated into an Indonesian version. A short version of ISEL exists, consisting of 16 items from the full scales, four from each of the subscales. The translation procedure of the ISEL was similar to that of the PSS. The original version of ISEL has already been translated by translators who are Indonesian native speakers and English proficient. Next, reverse translation was performed and afterwards the newly translated ISEL was tested before use in this study. The mean of I-CVI and S-CVI the translated ISEL were 0.97 which indicated having a good validity score. The questionnaires of ISEL had significant 16 items with the of each items more than 5 percent (0.44) range from 0,560 to 0,733. The reliability ISEL had total score using Cronbach alpha was 0,876.

3) *The Edinburgh Postnatal Depression Scale (EPDS)*

The Edinburgh Postnatal Depression Scale (EPDS) used, is most frequently advocated as a screening test for postnatal depression. The EPDS is a 10-item self-reported questionnaire used to measure women's levels of depressive symptoms, which include lack of interest, guilt, anxiety, and thought of self-harm. This scale was initially developed for use in a postnatal female population to measure the mood of women after delivery and is a useful screening tool. The maximum score is 30, with a range 0-3 per individual depression scale item (0=normal, 3=severe). The scale has been demonstrated to have good reliability and validity. The Indonesian translation of the EPDS has already been validated and deemed reliable by Edward, et.al (2006). The validation of EPDS in Indonesia for postnatal depression is positive when an EPDS score is more than 10 (threshold 10/11, sensitivity 91.7, and specificity 76.9, predictive value positive 46.7%, threshold 11/12, sensitivity 79.2, specificity 82.0, predictive value positive 47.0 %) [10]

C. *Ethical consideration*

Ethical approval for this study was received from the Faculty of Medical Sultan Agung Semarang. In addition, permission from the Purwokerto Department of Health and also the Sokaraja Public Health Centre was obtained to conduct the research. The information of this study, consisting of; title of research, purposes, procedure, principle investigator's responsibilities and the participants rights, have already been given to the participants involved in this study

D. *Data collection procedures*

The data collection began in February and continued until the end of March 2015. Before doing this study, the principal

investigator hired two research assistants to help collect the data. The research assistants were trained by the principal investigator on the information and how to carry out the study, during the pilot project conducted. The participants' information was taken from their medical records and also involved midwives in the primary health care center. After explaining the purposes and also the process of the study to the qualified participants, the research assistants distributed informed consent sheets to the participants personally. To ensure anonymity, participants were asked not to write their initial or names on the instruments. The participants who agreed to fill out the questionnaires, had signed the informed consent forms. To reward the participants, after filling out the questionnaires, a souvenir was given to them. A total 138 questionnaires were filled, with a one hundred return rate.

E. *Statistical analysis*

All analysis was performed using SPSS version 17 software for Windows and a *p*-value less than 0.05 was considered statistically significant. The Chi-Square was used to examine the demographic characteristics and postpartum depression between two groups. To analyze whether non-depressed and depressed postpartum women with effect of stress and social support differed, an independent *t* test was applied.

III. RESULT AND DISCUSSION

A. *Result*

The chi square test was analyzed to examine relationship between demographic characteristic no depression and depression groups. A comparison was made between the sample characteristics of both no depression and depression groups

TABLE 1. COMPARISON OF DEMOGRAPHIC CHARACTERISTICS WITH POSTPARTUM DEPRESSION (N = 138)

Variables	No depression n(%)	Depression n (%)	χ^2	p
Age (yr)				
17-25	39 (34.5)	9 (36.0)	0.000	1.00
26-47	74 (65.5)	16 (64.0)		
Education				
≤ High school	100 (88.5)	24 (96.0)	0.575	0.45
> High school	13 (11.5)	1 (4.0)		
Employment status				
Employed	26 (23.0)	5 (20.0)	0.004	0.95
Unemployed	87 (77.0)	20 (80.0)		
Salary per month				
< 1 million IDR	55 (48.7)	10 (40.0)	2.822	0.24
1-2 million IDR	51 (45.1)	15 (60.0)		
> 2 million IDR	7 (6.2)	0 (0.0)		
Type of parity				
Primipara	55 (48.7)	15 (60.0)	1.051	0.30
Multipara	58 (51.3)	10 (40.0)		
Infant gender				
Male	61 (54.0)	11 (44.0)	0.817	0.36
Female	52 (46.0)	14 (56.0)		
Type of delivery				
Vaginal	95 (84.1)	18 (72.0)	2.011	0.15
Cesarean section	18 (15.9)	7 (28.0)		
Type of pregnancy				

Planned	107 (94.7)	24 (96.0)	0.073	0.79
Unplanned	6 (5.3)	1 (4.0)		
Postpartum key helper				
Husband	43 (38.1)	20 (80.0)	15.995	0.001
Mother	6 (5.3)	0 (0.0)		
Mother in law	56 (49.6)	3 (12.0)		
Brother or sister	8 (7.1)	2 (8.0)		
Type of feeding				
Breast	90 (79.6)	18 (72.0)	0.326	0.57
Mixed	23 (20.4)	7 (28.0)		

The postpartum key helper in this study for the non-depression postpartum women was mother in law (n=56, 49.6%) and depression postpartum women was husband (n=20, 80 %) husband. The postpartum key helper in this study for the non-depression postpartum women was mother in law (n=56, 49.6%) and depression postpartum women was husband (n=20, 80 %) husband.

To examine the significantly different between no depression and depression among postpartum women, independent *t*-test was applied, as shown by the table 2. There was significant the effect of stress between postpartum women with no depression and depression (mean-3.195 with $p < 0.001$). In the social support it showed that there was significant difference between depression and no depression group for social support (mean difference 3.679 with $p < 0.001$).

TABLE II. COMPARISON OF MEAN BETWEEN GROUPS FOR TWO KEY VARIABLES OF POSTPARTUM DEPRESSION (N=138)

Variables	Group		M	Difference t (df)	p
	No depression M (SD)	Depression M (SD)			
Perceived Stress Scale	14.96 (3.12)	18.16 (3.32)	-3.195	-4.573 (136)	< .001
Interpersonal Support Evaluation List	32.96 (4.95)	29.28 (5.15)	3.676	3.336 (136)	< .001

B. Discussion

PSS-10 used to tap how unpredictable, uncontrollable, and overloaded respondent find their lives, in other hand, PSS-10 also to measure the degree to which situations in one's life are appraised as stressful [12]. In this study found significant different between non depressed and depression on the effect of stress ($t = -4.573$, $df = 136$). The depression group significant associated with effect of stress with $p < 0.001$. The previous study about effect of stress related to postpartum found in Taiwan. The study has been done the factors associated with postpartum stress were identified by factors analyzed included maternity role attainment, lack of social support and body image [9]. Another study was found that women who have a higher level of stress and lack adequate social support tend to feel less competent and satisfied in the maternal role, consistent with Bandura's (1989) notion that feedback from family members and friends in the social network is important to validate competent performance in mothering and the results of this study show that women who perceived lower stress and received support and assistance in child care from their social networks showed better competence and satisfaction in the maternal role [13]

Social support was examined used the Interpersonal Support Evaluation List (ISEL) with the result significant difference no depression and depression on social support ($t = 3.336$, $df = 136$). The interpretation this study that significant difference were found between two groups (no depression and depression) perceived stress and social support. The previous study about social support explained that social support has a positive influence women's childbearing experience and was shown to be a preventive factor in postpartum depression [14]. Another study from Chen (1994) found that social support was the best subset to predicted the postpartum depression also perceived stress [15]. Conclusion: This study found the effect of stress and social support related with the prevalence postpartum depression women in Indonesia. Furthermore, good environment begun from family resources and related with postpartum depression. The implication of this study nurse can educated family involved mother, mother in law also husband to prevent mother from postpartum depression. Further research into postpartum women about intervention for depressed women. The result of the study could give better knowledge about care the postpartum depression women especially postpartum women living in Indonesia.

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