



Fatigue Description of The Mother During Postpartum Period at Garuda Public Health Region in Bandung City

Riana Pascawati¹⁾, Yulidar Yanti²⁾, Dewi Purwaningsih³⁾

¹Department of Midwifery, Poltekkes Kemenkes Bandung, Sederhana Street No. 2 Bandung, Indonesia. ZIP code 40161

Abstract. Background : Postpartum period is a transition phase which affects physical and mental health of the mother. Fatigue is usually suffered during postpartum, where up to 67% of the mother reported heavy fatigue for 12 months after giving birth. Negative effects of postpartum fatigue on the health of child, mother and family include lactation termination, declining quality of sexual intercourse, stress disorder, moody and higher risk for postpartum depression. Lessening the fatigue induced by the mother can reduce the risk of depression, and is an effective way to promote the health and wellbeing of the child and mother. The aim of this study is to make a conception of the level of fatigue and workload of the mother during postpartum.

Methods : Method used in this study includes quantitative method with descriptive design. Fatigue is measured on the seventh day of postpartum using the Fatigue Assessment Scale (FAS) questionnaire.

Results : The result of this study found that all of the respondents were on an age range between 20-27 years and the overall workload averaged 3.4 hours a week. The level of fatigue measured on the seventh day of postpartum was 25.8 with the range of 16-36.

Conclusion : The authors hope that the result of this study can benefit for midwives to be used as an early detection during postpartum period and as a way to effectively promote the health of mother and child.

Introduction

The postpartum period is a critical phase of transition that determines the effects on a mother's physical and mental health. During the recovery period, the mother will experience many changes both physically and psychologically. Actually, most of them are physiological in nature, but if there is no assistance through midwifery care, there is a possibility that pathological conditions will occur. Changes that occur during this period, including hormonal changes. Changes that occur during this period, including hormonal changes and caring for newborns, can cause mothers to experience stress and fatigue [1].

Postpartum fatigue, which is a result of tension and extraordinary experience in caring for a newborn baby, has a negative effect on the health of the mother, baby and family [2]. Fatigue is a common symptom during postpartum in which 67% of mothers report severe fatigue 12 months after giving birth. This rate is much higher than that

reported in primary care (13.6%). This phenomenon often begins immediately after giving birth and reaches maximum severity within 36 hours. Postpartum fatigue can last for a long time after giving birth. A literature that is reviewed by Groër et al reported that more than 80% of mothers complain of puerperal fatigue. Corwin et al reported that the incidence of postpartum fatigue was recorded at around 70% among mothers who gave birth 1-2 months earlier. Primi parous women are more likely to complain of fatigue after giving birth. [3].

Although postpartum fatigue is common and natural, this phenomenon is a concern because it causes negative effects. After more than two decades of research, postpartum fatigue remains one of the top five puerperal concerns and treatment often becomes controversial in many studies. Postpartum fatigue can have an impact on decreasing stamina so that it reduces the ability of a mother to perform physical and mental tasks; also reduce the ability to manage the needs of their

babies, their responsibilities for other family members and their duties as mothers. [3].

Other undesirable and potentially serious results are termination of the lactation process, decreased sexual relations between partners, development of stress disorder and mood, and increased risk of postpartum depression.

Methods

This study involved 20 postpartum mothers in the Garuda City Bandung Health Center area. The respondents were tested with fatigue gauges using the Fatigue Assessment Scale (FAS) instrument. Measurements were made on the seventh day of the postpartum period after respondents laying down or taking a 15-minute break.

Results and Discussion

The purpose of this study is to determine the description of maternal fatigue during postpartum period. Characteristics of research subjects are presented to determine the equality of respondents at the beginning of the study. Study respondents are compared in terms of age, gravida, body mass index, workload at week and EPDS scores.

Table 1
Distribution Frequency of Characteristics Respondents

Characteristics	Group	p*
1. Age (year)		0,322*
x (SD)	22,9 (2,51)	
Range	20-27	
2. BMI(Kg/m ²)		0,259*
x (SD)	22,9 (1,31)	
Range	20-24,9	
3. Workload at week (hour)		0,241*
x (SD)	3,4 (2,5)	
Range	0-9	
4. EPDS		0,332*
x (SD)	4,1 (3)	
Range	2-9	

* Chi-Square test

Table 1 shows the characteristics of the study group that there was no significant difference ($p > 0.05$) in terms of age, body mass index, age and workload. These results indicate the homogeneity of the characteristics of research subjects that are worthy of comparison.

Fatigue data is presented to determine the score of fatigue during postpartum.

Table 2
The Illustration of Postpartum Fatigue

Fatigue	Group
x (SD)	25,8 (7,06)
Median	25
Range	16-36

Table 2 shows a picture of fatigue in postpartum women with an average score of fatigue in postpartum mothers of 25.8 with a range of 16-36.

Based on table 1, this study has the characteristics of research respondents who are equal, including in age, BMI, and workload a week. The age range of respondents is between 20-27 years with an average of 22.9 years. This study involved 20 respondents with the criteria of primigravida ranging in age from 20-35. Age shows the healthy reproductive status of the mother in childbirth, in this case, the age of the research subjects influences the metabolism in the body, especially in the regulation of the return of physiological conditions that will affect the health of postpartum mothers. The age of healthy reproduction indicates the function of body organs in metabolizing which is still in good condition so that health will also be maximized [4].

Body Mass Index (BMI) factors will affect maternal nutritional status during postpartum. Through good nutritional status, optimum health and fitness can be achieved. In addition, the body is able to endure the return of physiological changes during the postpartum and is able to achieve optimal health. In the health of postpartum mothers, it is very important to see good nutritional status and availability of energy in sufficient quantities [4].

Based on the respondent's BMI, the average BMI of postpartum mothers was 22.9, which was in the normal category. The lowest BMI is 20 kg / m² and the highest is 24.9 kg / m². During labor, the mother loses a lot of fluids and energy, so that it often causes fatigue and results in the mother not wanting to do activities. According to Reeder (1997), good nutritional status during pregnancy and childbirth will accelerate the recovery of postpartum maternal health, restore the strength of the muscles to be faster and increase the health return during the postpartum [5].

Mother's daily workload during the postpartum period can affect the recovery of maternal health. Referring to table 1, the maternal workload per week averaged 3.4 hours and from the data analysis it was not influential and

homogeneous so that there were no significant differences between the respondents of the study. During the postpartum, the mother must carry out sufficient and not excessive activities. This is in accordance with istinarini research (2016) there is a relationship between childbirth activities of mothers with postpartum quality of life in health care centers [6]

Respondents in this study all had normal EPDS scores with an average score of 4.1 so that it was not a bias factor in the study. This is important to study because during the postpartum the mother must always be in good physical and psychological condition. During the postpartum, mothers are prone to psychological disorders. Psychological changes occur due to the adaptation of hormones that undergo changes such as estrogen and progesterone.

Estradiol and estriol are active forms of estrogen formed by the placenta, and they increase 100 and 1000 times during pregnancy. As the synthesis of estradiol originates from the metabolic activity of the fetal liver, concentration during pregnancy is very high. Based on experiments in animals, estradiol strengthens the function of neurotransmitters by increasing synthesis and reducing the breakdown of serotonin, therefore, theoretically a decrease in estradiol levels due to labor plays a role in causing postpartum depression [7].

In this study there was no significant difference in terms of EPDS scores so that there was no difference between respondents and not a confounding factor. Fatigue data in this study illustrates the fatigue score in the postpartum. Fatigue scores were measured on the seventh day of postpartum. Table 2 shows a picture of fatigue in postpartum mothers with an average score is 25.8.

Fatigue is the most common unpleasant condition during the postpartum period. Other studies have shown that 50% to 54% of postpartum mothers experience fatigue and symptoms can last long over a period of time. The researchers measured fatigue at five times starting 24 hours after giving birth and ending 18 months postpartum, with results showing 52% of 229 registered women experiencing constant fatigue from birth to 18 months. [3]. This study measures maternal fatigue on seven postpartum days and measured in the fourth week for data post.

Postpartum fatigue can cause a decrease in functional ability and quality of life. Fatigue during postpartum becomes the five main problems during the postpartum period. Fatigue has an influence on the health of postpartum mothers, their capacity to become parents, and mother-baby relationships. In

addition, fatigue during post partum is a factor causing depression in the postpartum [8].

Another study illustrate dat six weeks after delivery, in infant care difficulties ($\beta = 0.23$, $p < 0.001$) significantly correlated with postpartum fatigue. At three months after delivery, baby care difficulties ($\beta = 0.16$, $p < 0.001$) also significantly correlated with depressive symptoms as well. There was a significant change in the rate of postpartum fatigue over time [$F(2, 369) = 956$, $p < 0.001$], with the highest level occurring six weeks after delivery [9].

There are many factors that affect fatigue during the postpartum period. These factors include maternal age, education level, duration of hospitalization, depression, increased metabolic needs, hormonal effects, anemia, thyroid dysfunction, cardio myopathy, maternal nutritional status, nausea, vomiting, alcohol and smoking and birth methods etc. . Furthermore, family changes, baby care, sleep status, house work are also contributing factors that influence fatigue [Killic M, 2015].

This study measures fatigue during the seven days postpartum period. This is consistent with the study conducted by Carty et al. Revealed that 75% of women felt excessive fatigue in the first week and 47% in the first month. Mc Queen states that 42% of women experience fatigue within 2 weeks after birth and increase by 59% in 8 weeks. The level of fatigue increased to 54% at 18 months postpartum [10].

Another study by Gerard Jansen AJ, 2007 proved that patients after normal labor had higher physical fatigue scores than cesarean deliveries. The average period for achieving full physical recovery is 3 weeks after normal delivery, 6 weeks after elective cesarean delivery, and 6 weeks after emergency cesarean delivery [11].

Conclusion

The level of fatigue measured on the seventh day of postpartum was 25.8 with the range of 16-36. The authors hope that the result of this study can benefit midwives to be used as an early detection during postpartum period and as a way to effectively promote the health of mother and child.

Competing Interest

The authors of this paper have no competing interest to report.

Acknowledgement

The authors of this paper have no acknowledgement to report.

References

- [1]. Dritsa M, Da Costa D, Dupuis G, Lowensteyn I, Khalifé S. 2008. Effects of a home-based exercise intervention on fatigue in postpartum depressed women: results of a randomized controlled trial. *Ann Behav Med.* Apr;35(2):179–87.
- [2]. Ko YL, Yang CL, Chiang LC. 2008. Effects of postpartum exercise program on fatigue and depression during "doing-the-month" period. *J Nurs Res.* Sep;16(3):177–86.
- [3]. Ashrafinia F, Mirmohammadali M, Rajabi H, Kazemnejad A, Sadeghniai Haghighi K, Amelvalizadeh M. 2015. Effect of Pilates exercises on postpartum maternal fatigue. *Singapore Med J.* Mar;56(3):169–73.
- [4]. Automated Fitness Level (VO₂max) Estimation with Heart Rate and Speed Data. *Firstbeat Technologies.* 2014.
- [5]. Rofiah S, Yuniyati B, Isworo A. 2015. Faktor – faktor yang berhubungan dengan Penurunan Tinggi Fundus Uteri pada Ibu Nifas 6 jam Post Partum. *Jurnal Riset Kesehatan* May;4(2): 734–42.
- [6]. Istinarini R, Betty F. 2012. Hubungan Antara Aktivitas Ibu Masa Nifas Dengan Kualitas Hidup Ibu Masa Nifas Di Wilayah Puskesmas Gemolong II Sragen. *Berita Ilmu Keperawatan.* Juni;5(3):101–9.
- [7]. Gondo H. 2010. Skrining Edinburgh Postnatal Depression Scale (Epds) Pada Post Partum Blues. *Jurnal Obstetri & Ginekologi.* (tersedia di [http://download.portalgaruda.org/article.php?article=490129&val=10001&title=SKRINING%20EDINBURGH%20POSTNATAL%20DEPRESSION%20SCALE%20\(EPDS\)%20PADA%20POST%20PARTUM%20BLUES](http://download.portalgaruda.org/article.php?article=490129&val=10001&title=SKRINING%20EDINBURGH%20POSTNATAL%20DEPRESSION%20SCALE%20(EPDS)%20PADA%20POST%20PARTUM%20BLUES) diakses 1 Oktober 2018)
- [8]. Volrathongchai K, Neelasmith S, Thinkhamrop J. 2013. Non-pharmacological interventions for women with postpartum fatigue (Protocol). *Cochrane Database of systematic review* issue 3.
- [9]. Barbacsy-macdonald, I. 2011. Physical activity and postpartum functional status in primiparous women.
- [10]. Killic M et al. 2015. Comparison of Fatigue Levels of Postpartum Women According to the Birth Method. *International Journal of Caring Sciences.* Volume 8 Issue 1 Page 125.
- [11]. Gerard Jansen AJ, 2007. New Insights Into Fatigue And Health-Related Quality Of Life After Delivery. *Acta Obstetrica et Gynecologica.* 86, 579–584.