

MATERNAL SELF-SCREENING FOR EARLY DETECTION OF DANGER SIGNS TO PREVENT PUERPERAL COMPLICATIONS

Machria Rachman^{1*}, Lutvia Dwi Rofika², Endah Kusuma Wardani³

^{1,2,3} *Bachelor of Midwifery and Midwifery Professional Education Study Program, STIKES Banyuwangi (Indonesia)*

**Corresponding author: machria@stikesbanyuwangi.ac.id*

Abstract

The postpartum period is a critical time for the health of mothers and babies. Complications during this period can have serious consequences, even threatening lives. Most postpartum complications contribute to maternal mortality due to delays in accessing emergency obstetric care. Postpartum complications can be prevented by identifying danger signs during the postpartum period. The aim of this study is to explore the knowledge of postpartum mothers in conducting self-screening to prevent postpartum complications. This research is a quantitative study with a descriptive cross-sectional design conducted from August to November 2022 in the working area of Klatak Health Center, Banyuwangi Regency, East Java. The sample of the study consisted of 30 postpartum mothers, selected through purposive sampling. The results showed that the majority of mothers understood danger signs such as fever over 38°C (70%), dizziness, blurred vision, and epigastric pain (66.7%), vaginal bleeding (86.7%), inability to urinate or pain at the perineal stitch site (70%), foul-smelling and itchy vaginal discharge (70%), as well as chest pain, rapid and shallow breathing, and a feeling of heaviness (53.3%). Most mothers understood basic needs during the postpartum period, including fulfilling nutritional intake (73.3%), iron tablet consumption (56.7%), lactation management (56.7%), and nearly all mothers were aware of the need for rest (93.3%), personal hygiene (96.7%), and adequate fluid intake (83.3%). When danger signs occurred, the majority of mothers chose to contact community health workers, health professionals, or access the nearest health facilities (70%). It is recommended to enhance education on the warning signs during the postpartum period and to empower community health workers in supporting postpartum mothers, while also reminding them to use the Maternal and Child Health Book as a tool for education and screening of postpartum warning signs.

Keywords: Puerperium; danger signs; self-screening

1. INTRODUCTION

The postpartum period is a critical period for the health of mothers and babies. Complications that occur during the postpartum period can have a serious, even life-threatening impact. Globally, it is estimated that 10.7 million mothers die from obstetric complications and almost all (99%) occur in developing countries^{1,2}. In Indonesia, a total of 11.4% of postpartum mothers experience postpartum complications. Most maternal deaths occur postpartum (60%) and in the first 24 hours postpartum (50%). Complications that often occur during postpartum include bleeding, pre-eclampsia, and postpartum infection³.

Most postpartum complications can actually be prevented if detected early and the mother gets timely obstetric emergency treatment. This delay in access is what causes problems or complications of postpartum to continue and ends up contributing to maternal mortality. Some of the factors that cause delays in access to health failings include socio-economic and cultural factors, lack of knowledge about the danger signs of postpartum period, and low awareness of the availability of Emergency Neonatal Obstetrics Services⁴.

Postpartum complications can be identified through the recognition of the danger signs of postpartum including fever of more than 38°C, bleeding from the birth canal, dizziness, blurred vision, heartburn, foul-smelling vaginal discharge can help both the mother and the family make a decision to access health facilities as soon as possible. Several studies have shown that maternal knowledge of the danger signs of postpartum can influence health seeking behavior, including postpartum mothers who have less knowledge tend to visit health facilities less often during postpartum obstetric emergencies, and women who are unable to identify the danger signs are often late in accessing adequate obstetric services⁵. This makes knowledge about the postpartum period and postpartum danger signs very important for postpartum mothers and accompanying families. Because often postpartum mothers and their families do not understand the risks that can be experienced during postpartum⁶.

One of the efforts to prevent complications is to increase postpartum screening by monitoring through the Maternal and Child Health Book (KIA). However, the use of KIA Books during the postpartum period is still not optimal⁷. This study aims to explore the knowledge of postpartum mothers in conducting self-screening as one of the efforts to empower mothers to monitor their health in preventing the occurrence of postpartum complications. By providing good knowledge about the danger signs in the postpartum period and how to detect them, it is hoped that mothers can be more proactive in seeking medical help if a problem occurs.

2. METHODOLOGY

This study is a quantitative research with a cross-sectional descriptive design, i.e. variable measurements are carried out at a certain time. The research was carried out from August to November 2022 in the work area of the Klatak Health Center. The research sample is postpartum mothers totaling 30 respondents who were taken by purposive sampling. The research instrument used a questionnaire modified from the KIA book and the Integrated Postpartum Service algorithm. The instrument has been tested for validity and reliability. After the data is collected, data processing is carried out (editing, coding, tabulating and cleaning), and data analysis in the form of categorical variable descriptive information in the form of frequency distribution tables

3. RESULTS

The number of research subjects is 30 postpartum mothers in the working area of the Klatak Health Center, namely Ketapang Village and Klatak Village, with distribution in Selogiri Hamlet, Gunung Remuk Hamlet, Krajan Hamlet and Sukowidi Neighborhood. The following is an explanation of the results of the study, including the characteristics of respondents and self-screening of postpartum mothers:

3.1 Characteristics of the Research Subject

The research subjects were explained in terms of age, parity, level of education, and occupation.

Table 1. Characteristics of the Research Subject

	Characteristic	Frequency	Number (%)
Age	< 20 years	1	3,3
	20-35 years old	27	90
	> 35 years	2	6,7
Parity	Primipara	14	46,7
	Multipara	16	53,3
Education	Basis	6	20
	Intermediate	18	60

	Tall	6	20
Work	Housewives	25	83,3
	Self employed	3	10
	Civil Servants	2	6,7

Based on table 1, almost all study subjects were aged 20-35 years (90%), as many as 53% had more than 1 child (multi-layer), most of them had secondary education (junior high and high school), and almost all of them were housewives.

3.2 Self screening for Postpartum

Self-screening for the postpartum period is carried out by postpartum mothers through health monitoring during postpartum, namely by understanding the basic needs of the postpartum period, recognizing the danger signs or problems that occur during this period and making decisions in handling them.

Table 2. Self screening for Postpartum

Variable	Component	Already	No
		N (%)	N (%)
Danger sign of the Puerperium Period	Fever >38 C	21 (70)	9 (30)
	Dizziness, blurred vision, heartburn (pre-eclampsia)	20 (66,7)	10 (33,3)
	Bleeding from the birth canal	26 (86,7)	4 (13,3)
	Smelly discharge from the birth canal	12 (40)	18 (60)
	Heat of not being able to urinate (BAK), or pain in the stitch scar	21 (70)	9 (30)
	Sleep disorders	5 (16,7)	25 (83,3)
	Difficulty concentrating	13 (43,3)	17 (56,7)
	Smelly vaginal discharge and itching in the genitals	21 (70)	9 (30)
	Chest pain, rapid, shallow breathing and feeling heavy	16 (53,3)	14 (46,7)
	Coughing up phlegm for 2 weeks, coughing up blood, shortness of breath or frequent night sweats	14 (46,7)	16 (53,3)
Postpartum Needs	Balanced nutrition	22 (73,3)	8 (26,7)
	Tablet Fe	17 (56,7)	13 (43,3)
	Rest	28 (93,3)	2 (6,7)
	Personal hygiene	29 (96,7)	1 (3,3)
	Liquid intake (drinking)	25 (83,3)	5 (16,7)
	Lactation management	17 (56,7)	13 (43,3)
Handling	Contacting cadres, health workers or health facilities	21 (70)	9 (30)
	Self-medicating	18 (60)	12 (40)

From table 2, it is explained that most mothers have understood the basic needs during the postpartum period, including: meeting balanced nutritional intake (73.3%), consumption of Fe tablets (56.7%), lactation management (56.7%) and almost all mothers understand the need for rest (93.3%), personal hygiene (96.7%), and adequate drinking (83.3%). A good basic understanding of the postpartum period is important for mothers and families because it is the basic foundation in monitoring the health and well-being of mothers during the postpartum period. Met basic needs are essential for postpartum mothers and are the initial introduction of problems if they are not met or deviations occur.

Most mothers understand about the danger signs of the postpartum period such as: fever of more

than 38°C (70%), dizziness, blurred vision and heartburn (66.7%), bleeding of the birth canal (86.7%), heat and inability to urinate, or pain in the perineal suture scar (70%), vaginal discharge with smell and itching (70%), as well as chest pain, rapid and shallow breathing and heavy feeling (53.3%). This finding is in line with Boratne's research, et.al that mothers have good knowledge about vaginal bleeding during postpartum (100%) and heartburn (95.6%)⁸. Good maternal knowledge can be influenced by age factors (in the range of 20 – 35 years), parity (multipara), and education (junior high and high school). The more mature you are, the better your ability to absorb information and analyze things. In terms of parity, multipara mothers have had previous experience, so they tend to be well-knowledged. Likewise, it is in line with the education taken, where the higher the level of education, the better the knowledge tends to develop^{5,9}.

Some of the danger signs that postpartum mothers still do not understand include: Odorous fluid from the birth canal (60%), sleep disturbances (83.3%), difficulty concentrating (56.7%), and coughing up phlegm for 2 weeks, coughing up blood, shortness of breath or frequent sweating at night (53.3%). Danger signs of postpartum period. In line with Nithya's research, et.al that knowledge is at least on the danger signs of the postpartum period ⁹. Lack of knowledge about red flags affects choices in seeking treatment or health care⁴. When red flags occur, although most mothers contact cadres, health workers or access the nearest health facilities (70%), there are still many who choose to self-medicate or take care of themselves at home (60%).

4. CONCLUSIONS

Most postpartum mothers in the Klatak Health Center area have good ability to detect problems or danger signs during the postpartum period and choose to ask for help from cadres, health workers or immediately check themselves at the nearest health facility. However, there are still some things that have not been understood about the danger signs of the postpartum period. This needs to be a concern for health workers and first health facilities (Puskesmas) to increase education about the danger signs of the postpartum period and empower the community through the role of cadres in accompanying and reminding the use of the KIA Book as an educational tool and screening for the danger signs of the postpartum period.

ACKNOWLEDGEMENTS

Thank you to the Ministry of Education and Culture for supporting the research through the research grant for beginner lecturers (Penelitian Dosen Pemula/PDP), the Center for Research and Community Service (PPPM) STIKes Banyuwangi, all parties who help the research process including the Klatak Health Center, regional midwives and health cadres in the Klatak Health Center work area.

REFERENCES

- [1] WHO. Trends in maternal mortality: 1990 to 2015 Estimates by WHO, UNICEF, UNFPA, World Bank Group and the United Nations Population Division 2015
- [2] WHO. Maternal mortality fact sheet. Geneva: World Health Organization; 2016
- [3] Banglitbangkes. (2018). National Report on Riskesdas 2018. Jakarta
- [4] Geleto, A., Chojenta, C., Musa, A., & Loxton, D. (2019). WOMEN's Knowledge of Obstetric Danger signs in Ethiopia (WOMEN's KODE): a systematic review and meta-analysis. *Systematic reviews*, 8, 1-14.
- [5] Dangura, A.D. Knowledge about child birth and postpartum obstetric danger signs and associated factors among mothers in Dale district, Southern Ethiopia. *BMC Pregnancy Childbirth* **20**, 340 (2020). <https://doi.org/10.1186/s12884-020-02989-7>
- [6] Cabero-Roura, L., & Rushwan, H. (2014). An update on maternal mortality in low-resource countries. *International Journal of Gynecology & Obstetrics*, 125(2), 175-180A. Einstein, "General theory of relativity," *Annalen der Physik*, vol. 49, no. 7, pp. 769–822, 1916.

- [7] Firefly A., and Cynthia Puspariny. 2020. The Effectiveness of the Utilization of KIA Books on the Knowledge of Postpartum Mothers about the Danger Signs of the Postpartum Period. *Bina Generasi: Health Journal*. West Sulawesi, Indonesia, 12(1), pp. 64–68. doi: 10.35907/bgjk.v12i1.160..
- [8] Boratne, A. V., Datta, S. S., Bahurupi, Y. A., Murugavangini, E., Priya, H., & Patil, R. (2017). Knowledge of Danger Signs of Pregnancy, Labour and Post Partum Period among Mothers in Rural Pondicherry. *Indian Journal of Public Health Research & Development*, 8(2), 116–121. <https://doi.org/10.5958/0976-5506.2017.00094.8>
- [9] Nithya R, Dorairajan G, Chinnakali P. Do pregnant women know about danger signs of pregnancy and childbirth? – A study of the level of knowledge and its associated factors from a tertiary care hospital in Southern India. *Int J Adv Med Health Res* [serial online] 2017 [cited 2022 Nov 28];4:11-7. Available from: <https://www.ijamhrjournal.org/text.asp?2017/4/1/11/20913>