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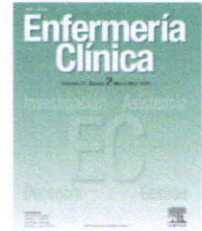




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## Self-care management and health outcomes among Indonesian pregnant women<sup>☆</sup>

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### KEYWORDS

Self-care management;  
Health outcome;  
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### Abstract

**Objective:** The aim of the study is to explore the correlation between self-care management and health outcomes among pregnant women in Makassar City, Indonesia.

**Method:** This study used a quantitative method with longitudinal design study. There were 37 pregnant women with more than 28 weeks gestation participated in this study selected using purposive sampling technique.

**Result:** Result from this study show that more pregnant women had low self-care management only self-care management only correlate with breastfeeding (OR: 95%CI) 5.556 and *p*-value 0.022). Other variables such as types of birth and baby's weight have no correlation with self-care management.

**Conclusion:** Self-care management is one indicator to see someone can reach health outcome. This study revealed that pregnant women with good self-care management would five times higher to have a good understanding of breastfeeding and will breastfeed their babies fully.

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### Introduction

Pregnancy and childbirth are special events in women's lives and their families. In this period, pregnant women will experience a variety of complex changes, both physical and psychosocial.<sup>1</sup> Even though pregnancy is not a disease, but a normal physiological process, it is associated with certain risks to the health and survival both for women and

neonates.<sup>2</sup> Women in developing countries have many more pregnancies than women in developed countries, and their lifetime risk of death due to pregnancy is higher.<sup>3</sup>

Decreasing maternal mortality rate (MMR) is an indicator of improving maternal health.<sup>4</sup> Maternal mortality is unacceptably high. Globally, about 830 women die from pregnancy or childbirth related complications every day,<sup>3</sup> the number of maternal mortality rate in Indonesia around 305 per 100.000 live births.<sup>4</sup> However, the number is still high to achieve the target of Sustainable Development Goal (SDGs') to reduce the global maternal mortality ratio to less than 70 per 100.000 births.<sup>3</sup>

The major causes of Indonesian maternal death are hypertension in pregnancy (HDK), postpartum bleeding, and infection.<sup>4</sup> Prenatal care is one of the models of primary and secondary prevention of disease.<sup>2</sup> Health maintenance is an important aspect of prenatal care.<sup>2</sup> Self-care management during pregnancy is one of the factors that really need to be considered to prevent complications and death during labor, in addition, to enhancing health outcome, including the growth and health of the fetus.<sup>5</sup> Studies have shown that improvement in maternal awareness during pregnancy and childbirth could encourage the mother to practice such care and subsequently reduce complications during pregnancy.

Given the improve health outcomes among pregnant women, the number of weight birth baby and breastfeeding are indicators for self-care management. To ensure mothers have health outcomes of pregnancy, it is important for understanding the correlation of self-care management and health outcomes of mothers' pregnancy. However, to date, no relevant investigation has been undertaken among this population. The aim of the present study was to explore the correlation between self-care management and health outcomes among Indonesian pregnant women.

## Method

This was a longitudinal study encompassing 37 pregnant women who recruited by using the purposive sampling techniques. Inclusion criteria were pregnant women with more than 28 weeks gestation, no history of pregnancy complication, willing to become a respondent and to live in Makassar, South Sulawesi. Makassar is a capital city in South Sulawesi, Indonesia. It was selected for the study due to the decline in maternal mortality rate has still not reached the government target.

Self-care management for pregnant women was measured by *Hart Prenatal Action Scale* that had been translated into Bahasa (Indonesia language) and back translated into English. This questionnaire consisted of 36 questions using a 5-likert scale from 1 (Never) to 5 (Always). The total score range from 36-180. *Hart Prenatal Action Scale* consisted of six aspects are antenatal care visit, nutrition, personal hygiene, breast care, activity and rest, and medicine. Health outcomes were measured by delivery method, birth weight baby, and breastfeeding, which assess one week after birth.

Ethical approved was obtained from Institutional review boards of the University. The study was performed in accordance with the Helsinki Declaration. After receiving an explanation of the aims and requirements of the research, written informed consent was obtained. Respondents could

**Table 1** Characteristics of the sample.

Variable	n	%
Age (mean, $\pm$ SD)	27	5.56
<i>Educational level</i>		
Primary school	4	10.8
Junior high school	3	8.1
Senior high school	20	54.1
Diploma	5	13.5
University	5	13.5
<i>Family income</i>		
High	19	51.4
Low	18	48.6
<i>Gravida</i>		
Primigravida	15	40.5
Multigravida	22	48.6

withdraw from the study at any time without stating a reason.

IBM SPSS version 22.0 (IBM Corp., Armonk, NY, USA) was used to perform data analysis. Frequency distributions and descriptive statistics were conducted to show participant characteristics, while the chi-square test ( $X^2$ ). Overall statistical significance was at the two-sided 5% level ( $p < 0.05$ ). Within and between group effect-sizes (Cohen's  $d$ ) and 95% confidence intervals (CI) were calculated using the observed data.

## Result

The total of 37 participants was included in the analysis. Most of the participants were aged from 20 to 45 years. The average age of the participants was 27 years, with a standard deviation of 5.56 years. The minimum age was 20 years, and the maximum age was 47 years. All participants were educated by formal education: elementary school, junior high school, senior high school, diploma, and university. The majority of the participants are senior high school (54.1%). Regard to pregnancy, 59.5% of participants was multigravida, and 67.6% were in the third trimester (see Table 1).

Table 2 summarizes the description of self-care management and health outcomes among pregnant women. Most respondents had less of self-care management (54.1%). Health outcomes showed most of the type of birth with vaginal birth (86.5%) had normal birth weight baby (94.6%), and most of the respondent had breastfeeding (64.9).

The correlation between self-care management and health outcomes (Type of birth, birth weight baby, and breastfeeding) in pregnant women is presented in Table 3.

## Discussion

To best our knowledge, this study to explore the correlation self-care management and health outcomes among Indonesian pregnant women. The result showed that the presentation of self-care management was moderate. The difference in self-care management of pregnant women is almost balanced between good and less. However, more

**Table 2** The description of self-care management and health outcomes among pregnant women ( $n = 37$ ).

Variable	<i>n</i>	%
<i>Self-care management</i>		
Good	17	45.9
Less	20	54.1
<i>Health outcomes</i>		
<i>Type of birth</i>		
Vaginal	32	86.5
Sectio-caesarea	5	13.5
<i>Breastfeeding</i>		
Full breastfeeding	24	64.9
Partial breastfeeding	13	35.1
<i>Birth weight baby</i>		
Normal birth weight	35	94.6
Low birth weight	2	5.4

pregnant women have less self-care management. To ensure the birth of a healthy infant, women require a wide range of care to safeguard maternal and child health.<sup>6</sup>

Socio-demographic characteristics contributed to practicing healthy behavior, and it could affect their health either positively or negatively. The present study described that pregnant women mean age 27 (SD  $\pm$  5.56) years. Meanwhile, most of the study participants had a high educational background. This in line with another study that self-care behavior was better in patients with higher education, although the improvement with the intervention was similar irrespective of the educational level.<sup>7</sup>

The birth of a child is a crucial time in the life of a mother and her family. The future health and well-being of family members influenced by the health and well-being of a mother and child at birth.<sup>8</sup> This study revealed no significant correlation between self-care management and type of birth. This study found dominant of pregnant women had good self-care management delivery baby with the vaginal method. This might be due to the economic status of respondents that make them prefer to deliver their baby normally because choosing sectio-caesarean option is expensive. Self-care management, including prenatal strategies, could help women to prepare emotionally and physically for labor, may help reduce pain and suffering and optimize wellbeing in childbirth.<sup>9</sup>

Birth weight baby was the one of indicator wellbeing in childbirth.<sup>10</sup> The result of this study showed no

significant correlation between self-care management with birth weight baby. However, most participants have given birth with normal weight baby. In This study one aspect of self-care management was nutrition. Adequate maternal nutrition is a key factor for achieving good pregnancy outcomes.<sup>11</sup> Nutritional status of pregnant women is known to influence the quality and health of neonates.<sup>12</sup> Birth weight is the most sensitive and reliable indicator of the health of an infant and associated with the health and survival of them.<sup>12</sup> Low birth weight (LBW) is an indicator of the poor health of neonates.<sup>13</sup>

Breastfeeding provides benefits for infants, including as the best source of nutrition for infants, support on child health and growth, protection from infectious disease, and certain chronic diseases.<sup>14</sup> Breastfeeding problems were experienced by all Indonesian adolescent mothers.<sup>15</sup> This present study revealed that a significant correlation between breastfeeding and self-care management. Pregnant women with good self-care management was continued their full breastfeeding. This finding showed that important for pregnant women for breast care during pregnancy as a dimension of self-care management.

Self-care management of pregnant women can be improved by improving their health literacy about their pregnancy. Part of this study has shown that health literacy has a correlation with self-care management of pregnant women.<sup>16</sup> It is shown particularly participants have low health literacy in communicative and critical aspect. This might result due to their lack of access to health information. Maternal health nurses and midwifery plays an important role in improving the health literacy of pregnant women. However, a condition in Indonesia, especially in the eastern part of Indonesia, health staff who are working in a community health center do not perform health education optimally due to multitasking job they have in the center. Some midwives are also responsible for another program such as for elderly program and others.<sup>17,18</sup> This situation forces them to divide their time and cannot focus on their main task as a midwife. Majority of midwifery working in a community center in Indonesia only hold diploma one (one year midwife education) and this education do not prepare them well to work with the complex problem of pregnant women.<sup>19</sup> Midwifery institution in Indonesia, especially in the eastern part of Indonesia including Makassar, South Sulawesi also consider low in quality due to low in accreditation process.<sup>20</sup> Midwife and maternal health are not prepared with sufficient knowledge and skills on how to improve pregnant women health literacy to help them improving their self-care management.<sup>19</sup>

**Table 3** The correlation between self-care management and health outcomes in pregnant women.

Independent variable	Dependent variable					
	Type of birth		Birth weight baby		Breastfeeding	
	OR (95%CI)	<i>p</i> -value	OR (95%CI)	<i>p</i> -value	OR (95%CI)	<i>p</i> -value
Self-care management	4.533 (0.455–45.156)	0.340	0.000 (0.000–0.000)	0.486	5.556 (1.2–25.7)	0.022

95%CI, 95% confidence interval; OR, odds ratio.

## Conclusions

It can be concluded that the average of Indonesian pregnant women has less self-care management. There was a statistic correlation between self-care management and breastfeeding. However, there was no correlation in self-care management with the type of birth and birth weight baby.

Overall, the results provide insight and awareness of an important of self-care management during pregnancy. Therefore, maternity nurses should pay attention to self-care in prenatal services. If the maternal health staff cannot perform their task optimally due to lack of knowledge and skills on how to improve health literacy pregnant women surely they will not be able to help those women to have good self-care management and health outcomes eventually.

## Conflict of interest

The authors declare no conflict of interest.

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