

The influence of parenting classes on maternal self-efficacy in caring for the baby

Elin Supliyani, Ina Handayani, Suhartika Suhartika, Dedes Fitria

Bogor Midwifery Study Program, Politeknik Kesehatan Kemenkes Bandung, Bandung, Indonesia

Abstract

Preparing for childbirth is crucial because it was a demanding and exhausting experience for unprepared mothers. Confidence in caring for the baby was one of the important indicators of success as a parent. This study aimed to examine the influence of parenting classes on maternal self-efficacy in caring for the baby. The study used a quasi-experimental pre-test and post-test nonequiva-

lent control group design method. The research was conducted at several Midwife Clinical Practices in Bogor City. The sample consisted of 42 pregnant women, with 21 in the intervention group and 21 in the control group. Sampling used non-probability sampling with a purposive sampling technique. The Perceived Maternal Parenting Self-Efficacy (PMP-SE) questionnaire with a likert scale was used to measure the mother's self-efficacy variable in caring for the baby before and after attending the parenting class. The data were analyzed using the Wilcoxon test. The results showed that the mean self-efficacy of mothers in caring for their babies before the intervention was 42.57 (8.577), and after attending the parenting class, it increased to 47.71 (8.344). There was a significant influence of parenting class on mothering self-efficacy in caring for the baby ($p=0.015$). It is recommended that this model of parenting classes be applied in healthcare settings to educate pregnant women on readiness to become parents, thereby increasing mothers' confidence and ability to take care of their babies after childbirth.

Correspondence: Elin Supliyani, Bogor Midwifery Study Program, Politeknik Kesehatan Kemenkes Bandung, Bandung, Indonesia.
E-mail: elin@staff.poltekkesbandung.ac.id

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Introduction

Pregnancy is a physiological condition that corresponds to the stages of individual development.¹ Giving birth is an exceptional gift for women and a joyous moment. Mothers play a crucial role in caring for their babies, from providing nourishment to fulfilling their emotional and psychological needs.^{2,3} According to Murdie in 2013, newborn babies cannot express their needs, which makes it essential for mothers to be more sensitive and attentive to their babies.⁴ The success of children's growth and development is influenced by environmental factors, ranging from the family environment to the community.⁵ Caring for a newborn can be challenging for first-time mothers due to a lack of experience and knowledge.⁶

Having a first child is challenging for new parents; it brings a mix of emotions and added responsibilities. Proper preparation is critical to help parents cope. Lack of knowledge can cause frustration and exhaustion for new mothers.⁷ Maternal self-efficacy is the belief that a mother can care for her baby well.⁸ Low maternal self-efficacy can lead to self-blame.⁹ Mental health disorders in pregnant/breastfeeding women are common problems experienced by women globally. The disorders are generally in the form of depression and anxiety related to pregnancy and birth. The depression includes depression before birth (antenatal depression) and after birth (postnatal or postpartum depression).¹⁰

Antenatal training is essential to prepare mothers for the postpartum period.¹¹ Misinformation and irrational customs can confuse first-time mothers. Preparation during pregnancy is crucial.⁷ Antenatal care (ANC) is a set of measures aimed at optimizing the mental and physical health of pregnant women so that they are able to cope with childbirth, postpartum, breastfeeding prepara-

tion, and the reasonable restoration of reproductive health.¹²

Postpartum depression is a phenomenon that occurs in the first postpartum days.¹³ Only a small number of epidemiologic studies on maternal mental health have been conducted, including one in Surabaya that found the prevalence of perinatal depression was 22% based on a cut-off point > 10 of the Edinburgh Postnatal Depression Scale (EPDS), far higher than the reported global prevalence of 12%.¹⁴ Postnatal depression or postpartum depression (PPD) is classified as a psychiatric illness that affects women in the postnatal period.¹⁵ New mothers may experience negative emotions, such as sadness, irritability, and fatigue, which can make it challenging for them to care for their newborns. Research by Suryati in 2007 found that many new mothers lacked knowledge about postpartum and newborn care. 41.7% of mothers avoid eating meat and seafood to prevent breast milk from smelling fishy. Almost all mothers drink herbal medicine, and 83.3% do body massages to regain their fitness. Other standard care practices include wrapping babies in a batik cloth to keep them warm and calm. The study also found that 1.7% of mothers had intercourse during the puerperium.¹⁶

Rahayuningsih in 2015 found that 80% of postpartum mothers fear holding their babies and lack confidence in their ability to care for them. As a result, 70% leave their newborns to their parents or in-laws. Most (80%) feel neglected by their partners and find visits from neighbors (40%) unhelpful. Additionally, 60% of mothers feel dependent on others due to restrictions imposed by their husbands about not getting groceries during the puerperium.⁷

Postpartum mothers need support to cope with changes, adapt, and build confidence.¹⁷ Maternal self-efficacy is crucial for raising a child. High self-efficacy leads to better responses to a baby's needs, improving the mother-child relationship. To boost parenting confidence, pregnant women can attend parenting classes, which help parents understand the different stages of parenthood so they can adjust accordingly.¹⁸ Mothers need confidence to care for their babies without feeling pressured. Parenting classes can help increase self-confidence by improving mothers' knowledge, attitudes, and skills. This makes them more prepared and patient in caring for their baby. These classes provide information on infant care, exclusive breastfeeding, umbilical cord care, nutrition, immunizations, and recommended follow-up visits. Educating parents about newborn care during pregnancy will form a deep bond between mother and baby. Based on this, this research was conducted to assess the influence of parenting classes on mothers' self-efficacy in caring for the baby.

Materials and Methods

Research design

This study employs the quasi-experimental method and utilizes a "Nonequivalent Control Group Design" research design to evaluate the effectiveness of parenting classes on mothers' self-efficacy in caring for their babies. The study involves an experimental and control group, both of which underwent a pre-test before the treatment. The experimental group received treatment through an online parenting class, while the control group received the usual standard baby care. The study concluded with a final test (post-test) administered to both groups to assess the mother's self-efficacy in caring for her baby.

Study participants

The research was conducted at several Midwife Clinical Practices in Bogor City. The samples in this study included pregnant women in the third trimester who met the inclusion criteria and did not meet the exclusion criteria. The inclusion criteria were as follows: primigravida, term gestational age, healthy mothers and babies without complications in pregnancy, willing to be respondents by joining the WhatsApp (WA) group and attending meetings via Zoom, mothers who can communicate effectively and can read and write, and mothers who can use the Zoom application. Meanwhile, the exclusion criteria included mothers or babies who experienced complications in pregnancy. The sampling technique used in this research was the non-probability sampling technique, specifically the purposive sampling method. The research sample size formula for Hypothesis Testing Difference in Means for 2 Paired Groups determined a minimum sample size of 21 in the intervention group and 21 in the control group. The limitation of using the purposive sampling technique in this study makes it challenging to generalize the results to all pregnant women because the selection of respondents was based on specific criteria set by the researchers.

Variable, instrument and data collection

The study focuses on the parenting class model as an independent variable, providing education to expectant mothers on preparing for parenthood and caring for their newborns. The dependent variable measured is the mother's self-efficacy in mothering. This refers to the mother's belief in her ability to fulfill her role as a parent in caring for the baby, including breastfeeding, monitoring the baby's needs, massaging the baby, and stimulating the baby's development. The study utilized pre-test and post-test instruments to measure the variables before and after the online parenting class treatment. The parenting classes were conducted online through Zoom meetings and were held three times, starting from the third trimester of pregnancy. The study employed the Perceived Maternal Parenting Self-Efficacy (PMPSE) questionnaire, consisting of 20 questions, to measure the mother's self-efficacy in caring for the baby. The questionnaire used a Likert scale ranging from strongly disagree (1), disagree (2), agree (3), to strongly agree (4), with scores ranging from 20 to 80. A score of 20-40 indicates low self-efficacy, 41-59 indicates sufficient self-efficacy, and 60-80 indicates high self-efficacy.

Data analysis

Before data analysis, a normality test was carried out using the Shapiro-Wilk test to determine whether the data was normally distributed. The results showed that the distribution of data on differences in mothering self-efficacy in caring for babies before and after the intervention was not normally distributed ($p=0.04$), so the statistics used to measure the difference in self-efficacy in caring for a baby before and after attending a parenting class is non-parametric statistics which was the Wilcoxon test.

Ethical clearance

The research has received ethical approval from the Health Research Ethics Committee, Ministry of Health, Bandung Health Polytechnic, based on Ethical certificate 02/KEPK/EC/SIM/X/2020. During the research, the researcher pays attention to the ethical principles of information to consent, respect for human rights, beneficence and non-maleficence. Informed consent was obtained from all subjects involved in the study.

Results

The research was conducted via a WhatsApp group, and parenting class material was provided through Zoom meetings. The parenting classes were divided into three online courses, with 7-8 participants per class. Each class received material over three meetings. The total number of respondents who participated in this research activity was 42 pregnant women, consisting of 21 people in the intervention group and 21 in the control group. The results obtained in carrying out this research are as follows:

Table 1 explain about the respondent characteristics. The age distribution in the intervention group consists entirely of individuals aged 20 to 35 years, comprising 21 individuals, which represents 100% of the group within this age range. Strikingly, there are no participants in the intervention group who are older than 35 years. In contrast, the control group has a majority (95.2%) in the 20-35 years age range, with a small representation (4.8%) of individuals aged over 35 years. Based on the education level, all individuals in the intervention group (100%) have a higher education level. In the control group, the majority (85.7%) also have a higher education level, while a smaller fraction (14.3%) holds a lower education level. Lastly, the table explores the occupational distribution. In the intervention group, there is a balanced representation, with 52.4% identified as housewives and 47.6% as employed individuals. In contrast, the entire control group (100%) comprises employed individuals, without any housewives.

Table 2 explain about the self-efficacy in caring for the baby before and after parenting classes. Before the intervention, the intervention group had a lower self-efficacy score (42.57) compared to the control group (46.67). After the intervention, the intervention group improved significantly, with a higher self-efficacy mean score (47.71), while the control group showed a more modest increase (46.76). To boost confidence in these findings, a 95% confidence interval was used, providing a range within which we can be reasonably sure the true mean lies.

Median values, representing the middle point of scores, offered an additional perspective on each group's self-efficacy. Standard deviations indicated how much individual scores varied from the mean, giving insights into consistency within each group. In summary, the data suggests the intervention positively impacted self-efficacy, seen in the notable increase in mean scores for the intervention group from before to after the intervention.

Based on the data processing results in Table 3, a significant difference in the mean mothering self-efficacy in caring for babies exists before and after attending parenting classes, with a p-value of 0.015. This indicates that there is an influence of self-efficacy in caring for babies after attending parenting classes.

Table 4 shows a statistically significant difference in mothering self-efficacy between the group that participated in the parenting class and the control group (p=0.039).

Discussion

Based on the study results, all respondents are primigravida or were pregnant with their first child. The birth of the first child represents a new experience for both the wife and husband. Parents, especially wives who may feel anxious, afraid, and happy, find themselves confused. The birth of the long-awaited first child is a mix of joy and love, often accompanied by the heavy demands of work, confusion about changing roles, and the transition into parenthood. The first child's birth poses challenges, necessitating

preparation to help parents cope with various situations. Childcare responsibilities and a lack of knowledge and preparation can be sources of frustration and fatigue for new mothers.^{7,19}

The analysis revealed a significant difference (p<0.05) in mothering self-efficacy pre- and post-parenting classes, indicating a positive influence on self-efficacy in caring for the baby. These findings align with other research, which demonstrated that mothers who received counselling during parenting classes had higher self-efficacy scores than those who only received booklets.²

Parenting classes prepare pregnant women emotionally and psychologically to navigate pregnancy, childbirth, and parenting. This preparation enhances their confidence in assuming the role of parents later on.^{20,21} The parenting class conducted in this study

Table 1. Characteristics of participants in each group.

Indicator	Group			
	Intervention n	Intervention (%)	Control n	Control (%)
Age				
20-35 years	21	100	20	95.2
>35 years	0	0	1	4.8
Education level				
Higher education	21	100	18	85.7
Low education	0	0	3	14.3
Occupation				
Housewife	11	52.4	21	100
Employed	10	47.6	0	0

Table 2. Self-efficacy in caring for the baby before and after parenting classes.

Variable n=21	Intervention		Control	
	Mean (SD)	CI 95%	Median (Min-Max)	Mean (SD)
Self-efficacy				
Pre	42.57(8.577)	38.67-46.48	42(26-60)	46.67(8.046)
Post	47.71(8.344)	43.92-51.51	45(39-60)	46.76(7.937)

Table 3. Effect of parenting class on mothering self-efficacy in caring for the baby.

Self efficacy	Median (Mini-Max)	Mean (SD)	p*
Intervention			
Pre	42(26-60)	42.57(8.577)	0.015
Post	45(39-60)	47.71(8.344)	
Control			
Pre	47(24-58)	46.67(8.046)	0.875
Post	48(29-59)	46.76(7.937)	

*p, Wilcoxon-test.

Table 4. Effect of parenting class on mothering self-efficacy.

Variable n=21	Median (Mini-Max)	Mean (SD)	p*
Mothering self efficacy			
Intervention	45 (39-60)	47.71 (8.344)	0.039*
Control	48 (29-59)	46.76 (7.937)	

*p, Mann Whitney-test.

took place online through a Zoom meeting and covered various topics closely related to parenthood readiness. Pregnant women received education and guidance on preparation for breastfeeding, daily baby care, and monitoring child development. The class also covered stimulation and games suitable for children between 0-12 months of age.

Prenatal classes help prepare parents for caring for the baby. These classes provide health education and boost parents' knowledge, skills, and confidence. Self-efficacy, or the belief in their ability to manage tasks related to baby care, is a crucial aspect addressed in these classes.²² Parental self-efficacy is the belief in one's ability to succeed in various parenting tasks, such as breastfeeding, carrying, bathing, playing, and navigating challenging periods.

Mothers with high self-efficacy are more resilient when facing complex tasks, even after experiencing failure.²² They take responsibility for their babies' needs, provide quality care, adapt to changes, accept their children's needs, and cope with difficulties. They also have lower depression levels and better social support satisfaction. On the other hand, parents with low self-efficacy may reject their babies, perceive their baby's condition as worse than it is, experience high stress, and struggle to interact with their infants, causing depression and frustration.¹⁸ Self-efficacy is also linked to responsiveness, which pertains to positive parental behaviours and sensitivity to infants.²³

Parenting classes educate parents-to-be on reproduction, fetal development, self-care during and after pregnancy, stress management, and health care.⁷ Parents need confidence to successfully care for healthy and complex-need infants.²⁴ However, increasing maternal self-efficacy can also be influenced by support. Good family support positively affects their self-efficacy in their ability to handle the challenges of motherhood.²⁵ The level of social support during pregnancy predicts maternal self-efficacy.²⁶

This research was conducted in online parenting classes, providing education through WhatsApp groups and face-to-face sessions via Zoom meetings. The parenting classes were divided into three small groups, each comprising 7-8 participants. Material was presented over three meetings in each class. The division into smaller groups aimed to facilitate participants' comprehension of the material and encourage more in-depth discussions, thereby enhancing their understanding and skills to further increase self-efficacy.

Study limitations

The limitations of this research include a lack of analysis of other factors, such as family support, which can influence self-efficacy in caring for a baby. Additionally, the study did not evaluate the mothers' psychological state and their success in caring for a baby. The observed increase in self-efficacy may be attributed not only to taking parenting classes but also to excellent family support. Furthermore, the study did not assess the mothers' psychological state after recognizing their self-efficacy and success in raising their child. Therefore, further research is necessary to analyze family support factors and assess the mothers' psychological state, as these factors can significantly influence the success of caring for their baby.

Conclusions

Mothers' self-efficacy in caring for the baby increased after attending parenting classes. The mothers' self-efficacy in caring

for the baby was better than before taking the parenting class. Parenting classes positively influence mothers' self-efficacy in caring for the baby. This parenting class model can be applied in healthcare settings, including midwives and community health centers, to educate pregnant women, especially regarding readiness to become parents, thereby increasing maternal self-confidence and the ability to care for the baby after birth.

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