Abstract-Postpartum depression is a mood disorder after childbirth that occurs due to unpreparedness to give birth to a baby and become a mother. This will have an impact on the mother's ability to care for newborns. It is essential to educate newborn care management so that mothers can care for their babies well and healthy. This study aims to determine the effect of family-based education on infant care on the mother's ability to care for newborns. The design used in this study is quasi-experimental, using two group posttest-only design. In this study, the sample was taken using cluster sampling with a total of 20 samples in each group. The intervention group was observed, and family-based education about baby care was conducted while the control group was observed and carried out only with leaflets. The analysis be adopted a nonparametric test with the chi-square test. The results of the study were obtained by the value of P (Value) 0.001 <α (0.05) So it can be concluded that there is an effect of family-based education on infant care on the mother's ability to care for newborns in the city of Bengkulu. Health education (educational) is a series of efforts to influence other people, whether individuals, families, groups or communities. The education given to the family has a significant impact on the ability to perform maternal care for the baby.

Keywords: Postpartum Depression, Family Center Care, Prenatal Education

I. INTRODUCTION

Pregnancy, childbirth and being a mother are women's physiology which is a transition period of women's lives. The transition period in some women usually causes stress which can cause negative things, namely feeling afraid and anxious about their new life. Psychological disorders in postpartum mothers are known as postpartum depression [1]. Postpartum depression is a mood disorder after childbirth which causes psychological problems as a sign of symptoms of postpartum depression. Psychological changes include the process of accepting a new role as a parent (mother), emotional discomfort, anxiety and worry about caring for a baby [2]. Postpartum stress is experienced by 80% of new-born women due to unpreparedness to give birth to a baby and become a mother, changes in estrogen, progesterone, prolactin and estriol levels that are too low, age, parity (young age or experienced number of deliveries allows occurrence of postpartum blues), as well as support from husband and family [3]. The incidence of postpartum depression in women in Japan has reached 13.9% [4]. The prevalence of depression in Iran reached 14-21.4%, about 1.89% of depression occurred in women every year [5]. In Indonesia postpartum stress continues to postpartum depression with amounts varying from 5% to more than 25% [6]. Postpartum stress can disrupt the lives of mothers, families, babies and other children that affect children can experience emotional and behavioral disorders, language delays and cognitive impairments. While in the mother alone, in severe conditions can bring the desire to end suffering through dangerous paths self or child [7]. Most child deaths in Indonesia currently occur in the newborn (neonatal) period, not the first month after birth [8]. The National mortality rate for 2016 in Indonesia is 15.5 per 1000 live births. The infant mortality rate in Bengkulu Province in 2014 was 11 per 1000 live births, whereas in 2016 the infant mortality rate was 4.56 per 1000 live births (Profile of the Bengkulu Provincial Health Office, 2016). The presentation of the number of infant deaths in Bengkulu City in 2011 increased by (11.8%) compared to 2010 amounting to (8.4%) [9].

D o w a m w a mer a tb a yi mother requires specialized training and mothers must also understand several procedures and management of newborn care so as not to damage the survival of the baby as
a whole [10]. The problem of neonatal care experienced by the community is the mother's ability to care for a newborn that is lacking so that the care of newborns is carried out by other people without regard to cleanliness or sterilization when treating newborns [11]. That mothers who give birth for the first time need the support of their closest family or people because the mother is not entirely in a stable position, both physically and psychologically [12]. She is not used to the change in her new fantastic role in such a fast time namely the role of being a mother. He is not used to the change in his new role so fantastic happened in such a fast time, namely the role of being a mother. Family-centered care is usually used to describe optimal health care as experienced by a family. This term is often accompanied by terms such as "partnership," "collaboration," and families as "experts" to describe the process of providing care [13]. That family-based education has been shown to increase carers' awareness and self-esteem of stroke patients and cause patient care to be efficient [14]. Based on the preliminary survey, there were interviews with eight postpartum mothers, 3 of whom said they did not know how to care for newborns. Mothers perceive that baby care that has been done so far has been in the right way. Mother said she had not received a simulation about newborn care.

The research was carried out in two Bengkulu city BPM namely BPM Susi Irma Novia, SST and BPM Rusmiyati, Amd. Kep January 2018 to June 2018.

The population in this study were all pregnant women in the third trimester in Bengkulu City BPM.

The sample was taken using cluster sampling method with the number of samples in each group was 20 people so that the total sample was 40 people.

II. RESEARCH METHOD

The type of research conducted was quasi-experimental, using two group posttest-only design.

Univariate analysis was carried out to describe the characteristic variables of respondents using frequency distribution and percentage. Bivariate analysis to determine the effect of education of the mother's ability to care for newborns using non-parametric test with the chi-square test.

III. RESULTS

Univariate Analysis

1. Characteristics of Respondents

<table>
<thead>
<tr>
<th>Variable</th>
<th>Intervention</th>
<th>Control</th>
<th>P (Value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age &lt;20 years</td>
<td>9.5</td>
<td>9.5</td>
<td>0.766</td>
</tr>
<tr>
<td>20-35 years</td>
<td>90.5</td>
<td>90.5</td>
<td></td>
</tr>
<tr>
<td>&gt; 35 years</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Parity Primipara</td>
<td>38.1</td>
<td>57.1</td>
<td>0.000</td>
</tr>
<tr>
<td>Multipara</td>
<td>61.9</td>
<td>42.9</td>
<td></td>
</tr>
<tr>
<td>Education Basic</td>
<td>57.1</td>
<td>14.3</td>
<td></td>
</tr>
<tr>
<td>Middle</td>
<td>57.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>42.9</td>
<td>28.6</td>
<td></td>
</tr>
</tbody>
</table>

| Overview of Respondent Characteristics in Bengkulu City (n = 42) |

Results Table 1 shows you worth the most respondents in the intervention variable is in the range of 20-35 years is 90.5%, and the control variable is in the range of 20-35 years is 90.5%, the highest parity is on parity multipara intervention variables as much as 61.9% and control variables for multiparous parity as much as 57.1% and most education intervention variables were in secondary education as much as 57.1% and control variables were in secondary education as much as 57.1%.
2. Overview of Family-Based Education and Ability to Take Care of Babies

Table 2
Overview of Family-Based Education and Ability to Take Care of Babies at Bengkulu City
(n = 42)

<table>
<thead>
<tr>
<th>Ability to care for babies</th>
<th>Frequency</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not good</td>
<td>13</td>
<td>31.0</td>
</tr>
<tr>
<td>Good</td>
<td>29</td>
<td>69.0</td>
</tr>
</tbody>
</table>

Table results show a picture of family-based education and the ability to care for babies. Family-based education as much as 50% was carried out education and 50% based on leaflets, while the ability to care for babies was 31.0% poor and 69.0% good.

Bivariate analysis

Bivariate analysis was conducted to determine the effect of family-based education on infant care on the mother's ability to care for newborns in the city of Bengkulu.

Table 3
The effect of family-based education on infant care on the mother’s ability to care for newborns in the city of Bengkulu

<table>
<thead>
<tr>
<th>Family-Based Education</th>
<th>Mother’s ability</th>
<th>Total</th>
<th>P (Value)</th>
<th>OR (95%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not good</td>
<td>Good</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Control</td>
<td>12</td>
<td>57.1</td>
<td>9</td>
<td>42.9</td>
</tr>
<tr>
<td>Intervention</td>
<td>1</td>
<td>4.8</td>
<td>20</td>
<td>95.2</td>
</tr>
</tbody>
</table>

Based on the results of the analysis of the effect of family-based education on infant care on the mother’s ability to care for newborns in the city of Bengkulu, it was obtained data that of the respondents who were given 57.1% of poor ability and 42.9% of functional ability and from the respondents who were given education. as much as 4.8% poor ability and 95.2% good ability. Chi-

C. Multivariate Analysis

Table 4
Complete modeling

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE</th>
<th>Beta</th>
<th>P</th>
<th>EXP (B)</th>
<th>95% CI for EXP (B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>-6,941</td>
<td>2,319</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>4,388</td>
<td>1,476</td>
<td>8,841</td>
<td>0,003</td>
<td>80,497</td>
<td>4,462 - 1452,178</td>
</tr>
<tr>
<td>Parity</td>
<td>4,521</td>
<td>1,470</td>
<td>9,456</td>
<td>0,002</td>
<td>91,965</td>
<td></td>
</tr>
</tbody>
</table>

* variable which p-value > 0.05 is excluded from the model
Table 5
Final Modeling

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE</th>
<th>Beta</th>
<th>P</th>
<th>EXP (B)</th>
<th>95% CI for EXP (B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>-0.288</td>
<td>0.441</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>3.283</td>
<td>1.116</td>
<td>8.663</td>
<td>0.003</td>
<td>26.667</td>
<td>2.995 - 237.424</td>
</tr>
</tbody>
</table>

* variables whose p-value > 0.05 are excluded from the model

The results of Table 4 show that the variables that can be selected in the multivariate test include parity and education variables because age and education variables are essential so that they are still included in multivariate modeling.

Based on the final modeling results in Table 5 in mind that there is a relationship education

IV. DISCUSSION

A. Characteristics of R responded

The results showed that the average age of respondents in the range of 20-35 years. The results of this study are in line with previous studies conducted by (Irmayani, 2010) which stated that the highest age of childbirth with SC was 20-35 years, as many as (76.58%). The highest respondent education in this study was high school education. The higher one's education, the easier it is for someone to understand the information provided by the researcher in taking action (Mubarak, 2009).

The parity of 2-4 children becomes the most parity in this study by Saifuddin's opinion, in 2009 in Trivonia, 2012, the safest parity is multigravida. This is influenced by maturity and decreased the function of the organs of labor, pain in the mother and baby.

B. Overview of Family-Based Education about Baby Care and Mother's Ability to Care for Newborn Babies in Bengkulu City

The results showed that 50% of pregnant women were educated and 50% were given leaflets. Poor self-care ability as much as 31.0% and good self-care ability as much as 69.0%.

According to Notoatmodjo (2007), education as part of (educational) health education is a series of efforts to influence other people, whether individuals, families, groups or communities so that healthy living behavior can be carried out by educational expectations. Various factors including age can influence treatment for newborns, education of parity and education are given to families.

of the mother's ability to care for newborns in the city of Bengkulu with the p-value of 0.003 <α0.05. Respondent did not do educational opportunity to care for newborns is less good at 26.667 fold compared to respondents given education.

C. The Influence of Family-Based Education on Mother's Ability in Caring for Newborn Babies in Bengkulu City

The results of the study showed that the respondents who were given 57.1% of poor skills and 42.9% of functional ability and from respondents who were educated were 4.8% of poor ability and 95.2% of functional ability.

The results of the calculation of Odd Ratio (OR) values of families who were only given leaflets with 26.66 times the ability to care for babies compared to families given education. This shows that there is an influence of family-based education on infant care on the mother's ability to care for newborns in the city of Bengkulu.

In this study, two variables influence the ability of mothers to care for newborn babies. Variables that affect the ability of mothers to care for newborns include education and parity

In line with the Theory of Hockenberry & Wilson (2009), the understanding of the importance of the need for relationships between babies and their families has become the basis for the development of the concept of Family Center Care (FCC). The FCC is a philosophy in child nursing that recognizes a separate role from the family and considers the family as the most critical part of care; the family is considered a partner in child care.

According to Runiari (2010), in his study found that the most effective postpartum education method according to the perception of nurses, postpartum mothers and families is individual counseling (individual) because this method is privacy, the mother is more focused and easier to understand the information conveyed so that it can care for newborns well.
V. CONCLUSION

The highest respondents were in the range of 20-35 years (90.5%), the highest parity was in multiparous parity (52.4%), and the highest education was in secondary education (57.1%).

Family-based education as much as 50% was carried out education and 50% based on leaflets, while the ability to care for babies was 31.0% poor and 69.0% good.

There is an effect of family-based education on infant care on the mother's ability to care for newborns in the city of Bengkulu.

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