B-ICON Proceeding

Proceeding Paper

FAMILY CENTERED EDUCATION CAN INCREASE KNOWLEDGE IN HIGH RISK PREGNANT MOTHERS IN THE INDEPENDENT PRACTICE OF MIDWIVES IN BENGKULU CITY

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Abstract

High-risk pregnancy (HRP) is one of the threats of obstetric emergencies that can affect the mother and fetus. Families can help HRP women identify and seek appropriate health care, which can significantly minimise morbidity and mortality and improve the well-being of women with HRP. Purpose of the study to determine the improvement of knowledge of HRP women about pregnancy danger signs and childbirth preparation through family centreed education (FCE) treatment. Research method: pre-post-test with control group design. The sample of this study were third trimester HRP mothers who had a prenatal check-up at clinic in Bengkulu City. High risk factors were assessed with the 'Poedji Rochjati' scorecard. The total sample was 60 people divided into intervention and control groups of 30 people each. The sampling technique used purposive sampling. Measurement of knowledge using a questionnaire, consisting of 20 question items that have been tested for validity. Education in the intervention group was carried out by involving the family, in the control group education was carried out with the provision of modules. Data analysis was performed with the Man-Whitney Test. Research results is the average increase in knowledge was more significant in the group given FCE (P-Value=0.014). Family Centered Education is an effective educational model to improve the knowledge of HRP women about pregnancy danger signs and childbirth preparation.

Keywords: High Risk, Labor, Pregnancy, Family Centered Education

Presented at The 4th Bengkulu International Conference on Health (B-ICON), Bengkulu-Indonesia, September 24-26th, 2024

Published: December 31st, 2024

ISSN : 2986-027X

INTRODUCTION

Pregnancy does not always proceed normally. Certain factors may cause the mother to be classified as a high risk pregnancy (HRP). HRP is a pregnancy where the mother and fetus during pregnancy, labour and after birth are at risk of death or morbidity (Umba et al., 2014). Based on data from the Ministry of Health, 2018, pregnant women with pregnancy complications in Indonesia were 24.7%, with the highest number in North Sulawesi at 38.8%, Maluku at 37.2%, and Yogyakarta Special Region at 36.5%.

Bengkulu Province is 24.8% and Bengkulu City is 1,489 mothers (Dinas Kesehatan Kota Bengkulu, 2022).

Some conditions that are classified as high risk factors for pregnancy include being too old to get pregnant, getting pregnant again too soon, having too many children, anemia, history of cesarean section, gestational hypertension, pre-eclampsia, gestational diabetes, mothers with a history of pre-pregnancy illness, and others. HRP can have a serious impact on the wellbeing of both the pregnant mother and the fetus (Rochjati, 2011). Three factors such as hemorrhage at 28%, eclampsia at 24% and infection at 11% as conditions that develop from high risk factors of pregnancy are reported as major contributors to maternal mortality (Loisza, 2020). Indirect causes of maternal deaths are also due to late decision-making, late arrival at the referral centre, and late access to care at the health facility (Bappeda Aceh, 2016).

Delays in decision-making are closely related to family duties in the health care of their family members (Friedman, 2010). Appropriate decision-making by the family for HRP women can be done appropriately if it is based on the family's knowledge and ability to recognize the danger signs of pregnancy and the appropriate actions that should be taken in addressing maternal pregnancy hazards. Therefore, mothers and families need to recognize and seek appropriate health care, so that morbidity and mortality rates of HRP women can be significantly reduced (Diriba et al., 2023), (Yosef & Tesfaye, 2021).

Studies by Rohmah, (2017); Naha and Handayani (2018), revealed that pregnant women who had good knowledge about danger signs and pregnancy preparation were only 41.2%. The study proved that there was a significant relationship between the knowledge of pregnant women with readiness to face childbirth in trimester III at Puskesmas Umbulharjo Yogyakarta (p-value=0.001 with coefficient correlation=0.555) [6,7]. The study by Qudriani and Hidayah (2017), also revealed that there was a significant relationship between pregnant women's perceptions of high-risk pregnancy and decision-making to seek appropriate health care with the results of the correlation test p value=0.030 <0.05 (Qudriani & Hidayah, 2017).

Pregnant women's knowledge of high risk is crucial to managing and minimizing possible complications. A good understanding of risk factors, pregnancy danger signs, and prevention efforts can encourage pregnant women and families to be more proactive in maintaining the health of the mother with HRP and her fetus. adequate knowledge and awareness can help HRP women and their families make better decisions regarding prenatal care, and undergo regular check-ups and necessary treatment (Alves et al., 2019).

HRP women and their families need structured knowledge in the form of information both during pregnancy and the delivery process including maternal and fetal risk factors, psychological and physiological changes, recognition of pregnancy danger signs and how to respond, and preparation for signs of labour, and family-centered care (Azizi et al., 2021). This is expected to be achieved through education with a family-centered education approach (FCE).

FCE is an effort to improve maternal understanding by prioritizing family support, participation and decision-making (Natasubagyo & Kusrohmaniah, 2019). Family plays an important and inseparable role in the life and well-being of high-risk pregnant women. The provision of FCE focuses on the needs, abilities, and adaptability of the family, with the output that HRP women are ready for labour.

The implementation of the FCE model seeks to involve the family early on, with the family acting as advocates and educators for the mother. Nurses are responsible for facilitating mothers and families in obtaining information related to care, especially in the case of HRP women facing labour (Nezamodini et al., 2017). Study conducted by Marqiati et al., (2022) said that, after being given an educational intervention in an effort to increase the knowledge of pregnant women by involving families in pregnant women's classes using WhatsApp, it was found that there was an increase in maternal knowledge in HRP women (Marqiati et al., 2022).

A number of literatures have described the importance of family-centered education in improving pregnant women's knowledge. However, no studies have identified the knowledge of facing childbirth or the knowledge of HRP women in Bengkulu Province and no family-centered educational interventions have been conducted to improve knowledge of facing labour and birth. Therefore, this study will investigate the effect of FCE on knowledge of facing labour among HRP women with an emphasis on increasing knowledge of pregnancy danger signs, preparation for labour, signs of fetal distress, and how to reduce anxiety facing labour.

Based on preliminary studies conducted by researchers at the Independent Midwife Practice S. and M. Pratama Clinic on 3 November 2023, it was found that knowledge improvement through education conducted by midwives at PMB S, PMB R, PMB K, and M. Pratama Clinic was to provide brief and unstructured education during ANC visits or pregnant women's classes without conducting education involving family members and found that education was given when the mother was in labor.

Based on the description that has been presented, the researcher considers it necessary and is interested in examining "The Effect of Family Centered Education on Knowledge of pregnancy danger signs and preparation for childbirth in HRP women in Independent Midwife Practices Bengkulu City"

MATERIALS AND METHODS

This study uses a quantitative design quasi-experimental approach using a pre-test and post-test with control group design, where the experimental group is given FCE intervention, while the control group is education accompanied by module provision. The sample was pregnant women with HRP in the third trimester who had antenatal care at a clinic in Bengkulu City. High risk factors were determined using the "Poedji Rochjati" score card. The total sample was 60 people divided into intervention and control groups of 30 people each. The study was conducted from April to June 2023 in 4 PMB namely PMB S, Klinic Pratama M, PMB R, and PMB K.

This study examined the effect of Family Centered Education on increasing average knowledge. The FCE intervention involves family members as care givers carried out in 4 educational sessions within one week, in educational sessions presented maternal and fetal risk factors, psychological and physiological changes, recognition of danger signs of pregnancy and how to respond, and preparation for signs when wanting to give birth, and family-centered care and provide opportunities for mothers to convey pregnancy-related problems at the end of the fourth session measured knowledge about danger signs of pregnancy and preparation for labor of pregnant women. While the control group, given education accompanied by the provision of modules, on the seventh day measured knowledge about the danger signs of pregnancy and preparation for labor of pregnant women.

RESULTS AND DISCUSSION

Table 1: Characteristics of respondents in terms of age, gender, and education

Variables	Intervention	Control
1. Age		
Not at risk	19 (63,3%)	21 (70%)
At risk	11 (36,7%)	9 (30%)
2. Education Level		
High (≥D3/S1)	9 (30%)	4 (13,3%)
Secondary (Senior High School)	10 (33,3%)	10 (33,3%)
Elementary (SD-SMP)	11 (36,7%)	16 (53,3%)
3. Work		
Employed	14 (46,7%)	11 (36,7%)
Not Working	16 (53,3%)	19 (63,3%)

Table 1 illustrates that the characteristics of mothers in both groups were mostly of non-risk age (20-34 years). Mothers' education was mostly low (SD-SMP). Based on occupation, the majority in both groups were not working.

Table 2: Pre-treatment Knowledge Score

Knowledge	Intervention	Control	*p*-Value
Mean	71,33	73,00	0.533
Min	50	50	
Max	90	90	
Std Deviation	12.794	13.170	
CI 95%	66,56:76,11	78,08:77,92	

Table 2 shows that the average knowledge in both groups before the intervention was almost the same, namely in the control group 73.00 (13.170) and the intervention group 71.33 (12.79).

Table 3: Mean Knowledge Difference of HRP women in independent midwife practice in Bengkulu City in 2024

Variable	Mean (SD)	Mean Difference	*p*-Value
Knowledge			
Intervention	13,667 (6.149)	9.666	0.014
Control	4,000 (7.701)		

Table 3 illustrates the significant difference in the mean knowledge score in the intervention group of 13 (SD 6.149) while the control was 4.000 (SD 7.701) (p-value 0.014). It was concluded that H0 was rejected and Ha failed to reject, meaning that Family Centered Education proved to be meaningful in improving the knowledge of HRP women in PMB Bengkulu City compared to education using modules.

Characteristic of respondens

Age

Most mothers were of normal reproductive age, 20-35 years. This is a safe age to conceive and give birth compared to <20 years old or >35 years old. similar to the study of (Sulastri & Nurhayati, 2021), that the age of HRP women is mostly at normal reproductive age 81.20%. As well as the age distribution of female HRP in the reproductive age category (20-35 years) (Heriani, 2016). In the age range of 20-35 years, there is a low risk of medical complications because the mother has a good physical condition, the uterus is able to maintain, and has a mature mentality in caring for pregnancy (Kajdy et al., 2023).

Education Level

Most mothers have low education (elementary to junior high school). similar to the study of Nursyam & Sari, (2023), where almost half of the mothers have low education (elementary to junior high school). and obtained 48.3% (almost half) have elementary to junior high school education (Topal & Terzioglu, 2019). The mother's low education is related to her current pregnancy, because low education causes the mother to not know the conditions of pregnancy that can experience high risk. (Ratnaningtyas & Indrawati, 2023).

Work

It was found that most (70%) mothers did not work, similar to the study Topal & Terzioglu, (2019), where 70% of mothers did not work. And in line with the study (Baroah et al., 2020) most mothers do not work. Work routines that cannot be left behind so there is rarely time to check their pregnancy at a health facility (Fitrianingsih et al., 2019).

Effect of Family Centered Education on Knowledge of HRP Women

The results showed pregnancy danger signs & childbirth preparation knowledge increased in the intervention group by 13.67 points and control by 3 points. study by (Chowdhury & Chakraborty, 2017), on 170 pregnant women in India stated that (54.70%) had adequate knowledge about danger signs in pregnancy.

Improved knowledge of pregnancy danger signs and childbirth preparation by involving families can increase support and understanding so that families can contribute significantly to both managing risks, preparing for childbirth, medical help-seeking behavior (appropriate and timely referral to obstetric services), and can improve the safety and well-being of HRP women and fetuses.

The results of this study illustrate the increase in knowledge scores after being given FCE. Similar to research conducted by Astuti, (2023), on 20 mothers with HRP and families in Bojong, obtained knowledge before FCE intervention 71.28 and became 89.4 (18.1 point increase). Similar to research conducted by (istikhomah, 2018) on 50 women with HRP and their families in the work area of Klaten Selatan Puskesmas, there was an increase in average knowledge after being given FCE from 47.14 to 74.8 (Istikhomah, 2018)

The intervention in this study was the delivery of information with the mother and family about pregnancy danger signs and labour preparation. FCE involves families to be empowered to provide strengthening, support, and family assistance in caring for mothers with the output of improving the welfare of pregnant women and fetuses (Istikhomah, 2018). Study by Asmuji & Indriyani, (2016)., mentioned that education involving families will optimize knowledge improvement.

Information provided through FCE that is repeated 4 times based on the memory consolidation process will be increasingly remembered by mothers. Information that enters through a combination of the five senses (from the eyes and ears) is processed to the visual cortex and auditory cortex, Information that is really noticed is transferred to the short-term memory system, when repeated will be stored into the mother's long-term memory (Magda Bhinnety, 2019)

CONCLUSION

1. The age of respondents in this study was mostly 20-35 years old, with primary education and non-working employment status.
2. The average knowledge of mothers before treatment in the intervention group was 71.33 and control 73.00.
3. There was a mean difference in pre-post knowledge in the intervention group of 13.667 points and control of 4.000 points.
4. There was a significant difference in mean knowledge (p value 0.011) in the FCE and education using modules groups. FCE is more influential in increasing the average knowledge of mothers compared to education using modules.

Acknowledgements

The researcher expresses his gratitude for the support, inspiration and assistance to all parties in helping the researcher complete this research, including the respondents who have been willing to participate in this study until it is completed.

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