

Effectiveness of Prenatal Class on Pregnant Mothers' Knowledge and Attitude in Pregnancy Care at Parigi Public Health Center Work Area

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Abstract

The pregnant women class is a health education program that aims to improve the knowledge and skills of mothers regarding pregnancy, pregnancy care, childbirth, postpartum care, newborn care, myths, infectious diseases and birth certificates. This program is expected to be able to reduce the risk of pregnancy complications and improve the welfare of the mother and fetus. This study aims to analyze the effectiveness of pregnant women's classes on pregnant women's knowledge and attitudes about pregnancy care in the Parigi Health Center Working Area. The research is a type of quantitative research with a quasi-experimental method with a pretest-posttest design with two groups. The population is all pregnant women in the Parigi Health Center Working Area with a sample of 38 people in the experimental group and 38 people in the control group. The sampling technique uses the purposive sampling technique and is analyzed using the independent sample t-test, namely the z-test. The results showed that the average knowledge in the experimental group was 34.49 and the control group was 10.73 with p value = 0.000 and the average attitude in the experimental group was 31.77 and in the control group was 17.01 with p value = 0.000. The conclusion in this study is that there is a difference in the average knowledge and attitude in the experimental and control groups. This means that face-to-face classroom learning has an effect on increasing the knowledge and attitude of pregnant women about pregnancy care in the Parigi Health Center Working Area.

Keywords: Pregnant Women's Class, Quasi Experiment, Knowledge, Attitude

Received: October 9, 2024

Revised: November 7, 2024

Accepted: December 18, 2024

Introduction

Prenatal class is a government program proposed as a means of learning for pregnant women about health. In this class, the pregnant women will learn, discuss and exchange experiences about the maternal and child health (KIA) as a whole. The implementation of the Prenatal Class is facilitated by midwives or health workers by providing education through tools in the form of KIA books, flip charts, guidelines for implementing pregnancy classes, facilitator guides for prenatal classes, and prenatal exercise books with the expectation that pregnant women can have safe pregnancy, childbirth and postpartum (Ilmiyani, 2021).

The MMR cases that occurred in Central Sulawesi have fluctuated over the past 5 years (2018 - 2022) from 207/100,000 live births with 109 maternal deaths in 2021, becomes 128/100,000 live births with 67 maternal deaths in 2022. According to Neny & Politon, (2021) in this case, the Maternal Mortality Rate (MMR) is not only affected by the Number of Maternal Deaths but is significantly affected by the number of Live Births. Maternal deaths that occurred in Parigi Moutong Regency from 2021 to 2023 decreased, where there were 12 MMR cases in 2021, 11 MMR cases in 2022 and 4 MMR cases in 2023.

Maternal deaths can occur during pregnancy, childbirth or postpartum period. Maternal death in Parigi Moutong Regency in 2023 decreased to four cases, where three of them occurred during the delivery process and one case during the postpartum period (Anggraini & Putri, 2024)). Pregnant women who attend this class are expected to be able to increase their knowledge, as well as improve their attitudes and behaviors regarding their pregnancy due to the presence of interaction and experience exchange between the participants as well as between the participants and the facilitators. A person with a high level of knowledge will find it easier to absorb the health concepts presented, hence he will have a higher awareness to change their behavior for the better compared to those with low knowledge.

This can also be a reference for a mother in carrying out her pregnancy care properly. Pregnancy care is one of sustainable programs during pregnancy, childbirth, and postpartum period which consists of screening, education, early detection, treatment, preventive efforts, and rehabilitation in order to provide a sense of comfort and safety, so that mothers can take care of their babies well. The Ministry of Health sets a percentage indicator for public health centers in implementing pregnancy classes at 100%. This coverage is obtained by comparing the public health centers that have implemented the class program to the total of public health centers in the regency/city area.

A public health center is considered to have implemented prenatal class if it has conducted 4 prenatal classes (Fitriani & Dewita, 2021). Overall, 90.73% of public health centers in Indonesia have implemented prenatal classes. Meanwhile, 24 public health centers in the Parigi Moutong Regency Work Area have implemented prenatal classes, including the Parigi Public Health Center Unit. In this case, the number of pregnant women in the Parigi Health Center Work Area is 301. The implementation of prenatal classes at this public health center has been found to be ineffective and inefficient, due to challenges found related to the disbursement of health operational assistance funds (BOK).

Therefore, there are several pregnant women who have given birth before completing all prenatal class meetings. Another challenge faced is the lack of awareness of mothers about the importance of attending prenatal classes as a means of obtaining information and knowledge. Based on the description above, the researcher conducted this research aiming to study "the effectiveness of prenatal classes on mothers' knowledge and attitudes about pregnancy care at the Parigi Public Health Center".

Methods

This research applied a quantitative research method through Quasi Experimental design using a pretest-posttest with two group design. This research was conducted in the Parigi Public Health Center Work Area in September 2024. The population involved was all pregnant

women in the Parigi Public Health Center Work Area totaling 301 people with a sample taken is 76 people divided into an experimental group of 38 people and a control group of 38 people. In this case, these samples were chosen through purposive sampling technique. Meanwhile, the data were collected using a questionnaire, while the analysis was done through both univariate analysis and bivariate analysis. In this case, bivariate analysis was done using Two Independent Sample test, namely the Z Test with a confidence level of 95% and $\alpha = 0.05$.

Results and Discussion

Respondents' Characteristics

Table 1. Characteristics of Pregnant Mother in Experimental Group

Characteristic	n	%
Age		
15-19 years old	2	5.3
20-24 years old	6	15.8
25-29 years old	13	34.2
30-34 years old	8	21.1
35-39 years old	5	13.2
40-44 years old	4	10.5
Total	38	100
Education		
Elementary	1	2.6
Junior High School	10	26.3
Senior High School/ Vocational School	23	60.5
D1	1	2.6
D3	1	2.6
Undergraduate	2	5.3
Total	38	100
Occupation		
Honorary	5	13.2
Private Employee	1	2.6
Civil Servant	1	2.6
Housewife	31	81.6
Total	38	100

Source: Primary Data, 2024

Based on table 1, among 38 pregnant women in the experimental group, the age group of 25-29 years old is the highest age group by 13 people (34.2%), while the age group of 15-19 years old is the lowest age group by 2 people (5.3%). Table 1 also shows that the most of the respondents in the experimental group has senior high school/ vocational school education by 23 people (60.5%), while the least of them have elementary school, D1 and D3, each of which is 1 person (2.6%).

Furthermore, the table above also reveals that many of the respondents in the experimental group is a house-wives by 31 people (81.6%), while the least of them working as private employees and civil servants, each of which is 1 person (2.6%).

Table 2. Characteristics of Pregnant Mother in Control Group

Characteristics	n	%
Age		
15-19 years old	2	5.3
20-24 years old	10	26.3
25-29 years old	12	31.6
30-34 years old	7	18.4
35-39 years old	3	7.9
40-44 years old	3	7.9
45-49 years old	1	2.6
Total	38	100
Education		
Elementary	7	18.4
Junior High School	13	34.2
Senior High School/ Vocational School	16	42.1
Undergraduate	2	5.3
Total	38	100
Occupation		
Honorary	8	21.1
Civil Servant	1	2.6
Housewife	29	76.3
Total	38	100

Source: Primary Data, 2024

Furthermore, Table 2 shows that most of the respondents in the control group is at the age group of 25-29 years old by 12 people (31.6%), while the least age group in the control group is 45-49 years old by 1 person (2.6%). In addition, table 2 also shows that most of pregnant women in the control group has senior high school/ vocational school education by 16 people (42.1%), while least of them has undergraduate educational level by 2 people (5.3%).

In addition, table above also shows that of among 35 pregnant women respondents in the control group, most of the women is a housewife, while the least of them working as civil servants by 1 person (2.6%).

Univariate Analysis

Table 3. Respondents' Distribution Based on Pre-test and Post-Test Results of Pregnant Women's Knowledge and Attitude Variables about Pregnancy Care in the Experimental and Control Groups

Variable	Experimental				Control			
	Pre-Test		Post-Test		Pre-Test		Post-Test	
	n	%	n	%	n	%	n	%
Knowledge								
Poor	5	13,3	1	2,6	8	21,1	3	7,9
Sufficient	31	81,6	23	60,5	29	76,3	24	63,2
Good	2	5,3	14	36,8	1	2,6	11	28,9
Total	38	100	38	100	38	100	38	100
Attitude								

Poor	32	84,2	17	44,7	4	10,5	3	7,9
Good	6	15,8	21	55,3	34	89,5	35	92,1
Total	38	100	38	100	38	100	38	100

Source: Primary Data, 2024

Based on table 3 above, most of the respondents in the experimental group have sufficient knowledge by 31 people (81.6%) as proven in the pre-test. During the post-test, most of the respondents in the experimental group still have sufficient knowledge by 23 people (60.5%). However, there was an increase in good knowledge from 2 people (5.3%) to 14 people (36.8%) and a decrease in poor knowledge of less than 5 people (13.3%) to 1 person (2.6%).

Table 3 also describes that most of the respondents in control group also have sufficient knowledge by 29 people (76.3%). Then, during the post-test, most of the respondents still have sufficient knowledge by 24 people (63.2%), yet there was an increase in pregnant women who have good knowledge from 1 person (2.6%) to 11 people (28.9%) and there was a decrease in pregnant women who had poor knowledge from 8 people (21.1%) to 3 people (7.9%).

Furthermore, concerning the attitude of the respondents in the experimental group, 32 of them have bad attitude (84.2%), while the remaining 6 pregnant women have a good attitude (15.8%). After the respondents were provided by treatment the percentage of pregnant women who had a good attitude increased to 21 people (55.3%), while those who have bad attitude decreased to 17 people (44.7%).

Based on table 3, it can also be seen that out of 38 pregnant women respondents in the control group during the pre-test, there were 4 pregnant women who had a bad attitude (10.5%) and 34 pregnant women who had a good attitude (89.5%). After being given treatment, the percentage of pregnant women who had a good attitude increased to 35 people (92.1%) and pregnant women who had a bad attitude decreased to 3 people (7.9%)

Bivariate Analysis

Table 4. Analysis Results of the Mean Score of Pre-test and Post-test on Respondents' Knowledge and Attitudes

Variable/Group	n	Mean
Knowledge		
Experimental		
Pre-test Knowledge	38	30.45
Post-test Knowledge	38	36.79
Control		
Pre-test Knowledge	38	29.26
Post-test Knowledge	38	32.84
Control		
Experimental		
Pre-test Attitude	38	31.74
Post-test Attitude	38	40.89
Control		
Pre-test Attitude	38	29.68
Post-test Attitude	38	47.61

Source: Primary Data, 2024

Based on table 4, the mean score of the pregnant women's knowledge in the experimental group during the pre-test is 30.45, and while during the post-test is 36.79. Therefore, the difference between the score is 6.34. Meanwhile, the mean score obtained by the respondents in the control group during the pre-test is 29.26, while during the post-test is 32.84. So that the average difference obtained between the pre-test and post-test is 3.58. Concerning the attitude of the respondents in the experimental group, the mean score of the pre-test is 31.74, while the mean score of the post-test is 40.89. Hence, the mean score difference between the pre-test and post-test is 9.15. In the control group, the mean score of the the pregnant women's knowledge during the pre-test is 29.68, while during the post-test is 47.61. Therefore, the mean score difference between the pre-test and post-test is 17.63.

Tabel 5. Z-Test Analysis Result on Knowledge Variable in Experimental and Control Group

Variable	Mean	P Value
Knowledge		
Experimental Group	34.49	0.000
Control Group	10.73	
Attitude		
Experimental Group	31.77	0.000
Control Group	17.01	

Source: Primary Data, 2024

Furthermore, table 6 shows that the mean score of the experimental group on their knowledge is 34.49, while in the control group is 10.73. In this case, the result of the Z-test obtained a p value of 0.000, meaning that there was a difference in the mean score of the knowledge in the experimental group and the control group. Therefore, it can be concluded that face-to-face learning treatment affects the knowledge of pregnant women in the experimental group about pregnancy care in the Parigi Public Health Center Work Area.

Meanwhile, the mean score of the experimental group concerning the respondents' attitude is 31.77, while in the control group is 17.01. In this case, the Z test result obtained a p value of 0.000, meaning that there was a difference in the average attitude in the experimental group and the control group. Hence, it can be concluded that the face-to-face learning treatment affects the attitudes of pregnant women in the experimental group about pregnancy care in the Parigi Health Center Work Area.

The Effect of the Effectiveness of Prenatak Classes on Pregnant Women's Knowledge of Pregnancy Care in the Parigi Public Health Center Work Area

Prenatal class is a means to for pregnant women to learn together through face-to-face meeting in groups, with the purpose of improving their knowledge and skills regarding pregnancy, childbirth, postpartum, newborns, infectious diseases including HIV/AIDS, and myths. Low knowledge about Maternal and Child Health (MCH) in pregnant women has a serious impact on the morbidity and mortality cases of mothers and babies, as indicated by the high MMR and IMR (Sutrisnawati et al., 2023).

This study also found that the average knowledge of the respondents in the experimental group is 34.49, while in the control group is 10.73 with a p value of 0.000. This means that there is an average difference in the experimental class (treatment) with the control class where these results explain that face-to-face class learning is effective in improving pregnant women's knowledge about pregnancy care. Face-to-face learning allows direct interaction between

pregnant women and resource persons, thus facilitating clearer delivery of material, fast feedback, and in-depth discussions. In addition, a conducive classroom atmosphere can increase the involvement, attention to the material, and motivation of the pregnant mothers to learn more actively.

On the other hand, the control group that did not receive face-to-face learning classes may use other learning methods. With the development of information technology and social media, pregnant women can also very easily get various information related to pregnancy through various sources, whether it is from the internet, books, or medical personnel. According to Yusnidar & Suriati, (2021) pregnant women often find out various things early on through various platforms. In addition, pregnant women also gain knowledge from friends, family, and previous pregnancy experiences. So that when the study began, the knowledge of pregnant women was adequate. In addition, antenatal visits also help increase basic insight into pregnancy explained by medical personnel (Rosilawati & Khairiah, 2023).

This study is in line with the previous study conducted by Yusnidar & Suriani, (2021) which showed that prenatal class affects the knowledge of primigravida pregnant women about pregnancy care in the Ponrang Health Center Work Area. Another study which supports the results of this study is that conducted by Desysusanti & Wati (2024), which found that education in the prenatal class increased pregnant women's knowledge.

The presence of prenatal class provide and discuss the material in the KIA book so that it can increase the pregnant women's knowledge regarding the pregnancy care (Azulla & Yulian, 2023) by participating in such class, pregnant women can interact with each other or with midwives of health workers, so that they can exchange experiences about pregnancy or discuss matters related to pregnancy, childbirth, postpartum, and family planning until the child is 6 years old. Therefore, this program increases the pregnant mothers' understanding and knowledge about pregnancy care (Mulyaningsih & Ningsih, 2024).

The Effect of the Effectiveness of Prenatal Classes on Pregnant Women's Attitudes about Pregnancy Care in the Parigi Public Health Center Work Area

The implementation of prenatal classes is expected to increase the accessibility of pregnant women to quality maternal and child health services so that it can be one of the efforts in reducing MMR and IMR. The provision of prenatal class materials that are delivered comprehensively and continuously can improve the knowledge, attitudes and behavior of pregnant women in pregnancy, childbirth, and postpartum care (Citra & KM, 2022).

The study results also showed that the average attitude in the experimental group is 31.77, while in the control group is 17.01 with a p value of 0.000. This indicates that there is a difference in the average in the experimental class (treatment) and the control class, meaning that face-to-face meeting is an effective effort in improving their attitudes about pregnancy care.

The provision of face-to-face learning in the experimental class provides additional knowledge which then affects the pregnant women's attitudes regarding pregnancy care. Conversely, in the control group, the increase in scores can be caused by additional experience gained after filling out the questionnaire during the pre-test. When answering questions, some mothers may feel unsure about their answers, which encourages them to discuss or ask their friends next to them. This discussion helps them improve their understanding and build confidence, thus indirectly increasing their knowledge before taking the post-test.

During pregnancy, mothers who attend prenatal classes generally have a more positive and proactive attitude in maintaining their health. This class helps them understand the benefits of proper nutritional intake, regular pregnancy check-ups, and stress management. This understanding is important, because pregnancy is often accompanied by challenging physical and emotional changes. By obtaining the right information, pregnant women tend to be more motivated to maintain a healthy lifestyle and actively carry out the self-care needed during pregnancy, which in turn reduces the risk of complications and improves their well-being (Satria et al., 2022).

These analysis results are in accordance with the previous research done by Hatini, (2019) which found that the prenatal class learning method can improve mothers' attitudes about pregnancy, childbirth and postpartum care in the Lansia Baro Public Health Center Work Area. The learning method of the pregnancy class can affect the mother's attitude because along with the increasing knowledge and insight of the mother about the importance of pregnancy, childbirth and postpartum care so that the mother can have a better perspective.

Prenatal class prepares the mother to face the postpartum period, including the correct way to breastfeed, taking care of the newborns, and how to restore their physical and mental health after giving birth. This knowledge plays an important role in encouraging the mother to have a more prepared and patient attitude during the recovery period. In addition, mothers who have taken this class tend to have a more open attitude to seeking help and support if they experience difficulties, for example in breastfeeding or baby care, which ultimately supports the health of the mother and baby (Ervinawati et al., 2018).

Conclusion

This study concludes that prenatal class affects the knowledge and attitudes of pregnant women regarding pregnancy care in the Parigi Public Health Center Work Area.

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