STIKES BANYUWANGI INTERNATIONAL HEALTH CONFERENCE

EFFECTIVENESS OF PREGNANT WOMEN'S CLASSES ON IMPROVING PREGNANT WOMEN'S KNOWLEDGE ABOUT THE CHILDBIRTH PLANNING AND PREVENTION PROGRAMME COMPLICATIONS (P4K)

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ABSTRACT~~~~~~

Background: *Pregnancy complications are one of the causes of maternal mortality. One of the programs that aims to prevent complications in pregnancy and reduce maternal mortality is the Childbirth Planning and Complication Prevention Program (P4K).*
Objective: *to determine the effectiveness of pregnant women's classes on increasing knowledge of pregnant women about the childbirth planning and prevention of complications (P4K) programme in Benteng Village, Bogor Regency in 2024.* ***Methods:*** *Experimental study research design Quasi-experimental research design with one group pretest-posttest design. Using the Paired T-Test test where the sample was 40 pregnant women in Benteng Village, Bogor Regency, this research was conducted in November-February 2024.* ***Results:*** *the results of the study state that the average knowledge before the implementation of the class of pregnant women obtained a mean of 40.30, the average knowledge after 68.58, and can be seen the results of the P-Value 0.0001 can be interpreted that the P-Value 0.0001 α & 0.005, it is concluded that there is an effectiveness of knowledge before and after the implementation of the class of pregnant women in Benteng Village, Bogor Regency.* ***Conclusion:*** *There is an effectiveness before and after the implementation of the implementation of pregnant women's classes on increasing knowledge about P4K in Benteng Village, Bogor Regency.*

Keywords: ; Knowledge; Pregnant Women Class;

INTRODUCTION

The high maternal and infant mortality rate is known as "Three too late" and "Four too late". One way to reduce these delays is by identifying risk factors during adequate antenatal care (ANC) visits. (Ministry of Health, 2014). According to data from Indonesia's health profile in 2019, the reduction in maternal mortality in Indonesia has not yet reached the target, which can be seen from the maternal mortality rate from the 2018-2021 period from 390 to 305 per 100,000 live births, while the SDGs target set for MMR is 70 per 100,000 live births. The main factors causing maternal mortality are haemorrhage 30.13%, hypertension during pregnancy, or pre-eclampsia 27.1% and infection 7.3%. Anaemia and Chronic Energy Deficiency (CED) in pregnant women are the main causes of haemorrhage and infection, which are the main maternal mortality factors. (Ministry of Health, 2016).

The maternal mortality rate (MMR) in Bogor Regency in 2023 was 199.53 per 100,000 live births. The period of maternal mortality in Bogor Regency occurred during pregnancy (28.57%), delivery (28.57%) and postpartum (42.86%). The data suggests that the time period of maternal deaths in Bogor is more prevalent in the post partum period. According to the Bogor District Health Office, the picture of death cases in Bogor in the *post partum* period was caused by bleeding as much as 28.57% and eclampsia as much as 14.28%, based on data from the Bogor District Health Office there was 15.7% incidence of uterine atony in 2023. Based on data in the working area of Puskesmas Ciampea itself from 2023 there were 2 cases of maternal deaths including 1 case of PEB and 1 case of Eclampsia. But in 2024 from January to September recorded cases such as anaemia, hypertension history of SEZ is still a lot in 2023 the working area of Puskesmas Ciampea recorded 20 cases of babies born with LBW. And in 2024 from January to September there were 24 babies born with LBW and one neonatal death with asphyxia in a mother with a Posterm pregnancy. (Bogor District Health Office, 2021).

The reduction of maternal and child mortality cannot be separated from the role of community empowerment, one of which is carried out through the implementation of pregnant women's classes and the Childbirth Planning and Complication Prevention (P4K) Program. Pregnant women class is a study group for pregnant women with gestational age between 4 weeks to 36 weeks (before delivery) with a total of 10 participants. Pregnant women's classes are facilitated by midwives/health workers by using a package of pregnant women's classes, namely the MCH Book, flip sheets, Guidelines for implementing pregnant women's classes, pregnant women's class facilitator's handbook and pregnant women's exercise book. The purpose of the pregnant women's class program is to increase knowledge, change attitudes and

behaviour of mothers to understand about pregnancy, body changes and complaints during pregnancy, pregnancy care, childbirth, postpartum care, postpartum family planning, newborn care, local myths/beliefs/customs.

Pregnancy classes are a means for pregnant women and their families to learn together about maternal health in a face-to-face group setting. This activity aims to improve the knowledge and skills of mothers and families regarding pregnancy, childbirth, postpartum, postpartum family planning, prevention of complications, newborn care and physical activity or gymnastics for pregnant women. (Ministry of Health of the Republic of Indonesia, 2018). Based on the results of research conducted by Sudarmi, 2021 where the results of research on providing education using Audio-visual media provided by various disciplines according to their expertise are more quickly understood by pregnant women, marked by an increase in the average level of maternal knowledge by 28% from before being given education compared to the control group using the highest LB media on knowledge about pregnancy which only increased good knowledge by 56%. It is very clear that the implementation of pregnant women's classes has an important role in changing the knowledge of pregnant women. (Sudarmi, 2021).

Based on the results of the study From the sample of pregnant women, 153 (81%) reported attending antenatal classes. Overall, pregnant women wished to have more information about breastfeeding and settling techniques, while a lack of information relating to social support initiatives for the postnatal period was also indicated. Where research results reported that they were missing educational and practical reinforcement of *mothercraft* skills (Buultjens et al., 2017)..

Based on data obtained from the Health Office, the number of health centres that have implemented pregnant women's classes is 25 Puskesmas.Puskesmas Ciampea in 2023 conducted 17 pregnant women's classes, and in 2022 10 times a month (per month 4 meetings) pregnant women's classes only 9 times pregnant women's classes (per month 4 meetings). The implementation of pregnant women's classes held in Benteng village in one month is held 4 times a meeting. Based on the explanation above, the authors are interested in taking the research title "The Effectiveness of Pregnant Women's Classes There is an Increase in Knowledge in Pregnant Women About the Childbirth Planning and Prevention of Complications (P4K) Program in Benteng Village, Bogor Regency in 2024".

METHODS

The research design used in this study was *quasi-experimental* with a *one group pretest-posttest design without control*. The research location was Benteng Village, Ciampea Health Centre Working Area, Bogor Regency in 2024. The population in this study were pregnant women in the first and second trimester who visited the Posyandu, totalling 40 respondents. The sampling technique in this study was total sampling. The data analysis used was *paired t-test.*

RESULTS

Table 1. Knowledge before being given a class of pregnant women about the Childbirth Planning and Complication Prevention Program (P4k)

Variable	n	Min-Max	Mean SD	
Knowledge before	40	17-67	40,30	3,145

Based on table 1, the knowledge before the class of pregnant women about the Childbirth Planning and Complication Prevention Programme (P4K) in Benteng Village, Bogor Regency, obtained an average value of 40.30.

Table 2: Knowledge after being given classes for pregnant women about the Childbirth Planning and Complication Prevention Programme (P4K)

Variable	n	Min-Max Mean	SD
Knowledge after	40	42-92 68,58	2,316

Based on Table 2, the knowledge after the class of pregnant women about the Childbirth Planning and Complication Prevention Program (P4K) in Benteng Village, Bogor Regency, obtained an average value of 68.58.

Table 3. Effectiveness of knowledge before and after the implementation of pregnant women's classes on increasing knowledge about P4K at Ciampea Health Centre

Knowledge	Mean	Difference	SD	*P-Value*
Before	40,30	28,28	3,145	0,0001
After	68,58		2,316	

Based on table 3 above, a *paired t-test* was conducted where the results of knowledge before the class of pregnant women were 40.30 knowledge after being given a class of pregnant women about P4K 68.58 and the results of *P-Value* 0.0001 can be interpreted that *P-Value* 0.0001 α & lt; 0.05, it is concluded that there is an effectiveness of knowledge before and after being given the implementation of classes for pregnant women in Benteng Village, Bogor Regency.

DISCUSSION

1. Knowledge before being given a class of pregnant women about P4K

The results of the study indicate that the knowledge before the class of pregnant women about the Childbirth Planning and Complication Prevention Programme (P4K) in Benteng Village, Bogor Regency, obtained an average value (*mean*) of 40.30 with a standard *deviation of* 3.145. The Childbirth Planning and Complication Prevention Program (P4K) is an activity facilitated by midwives in the village in order to increase the active role of husbands, families and communities in planning safe delivery and preparation for complications for pregnant women, including planning for the use of postpartum contraception using stickers as a target notification medium in order to increase the coverage and quality of health services for mothers and newborns.

A person's knowledge is influenced by many factors including the level of education where the higher a person's education, the better the knowledge, then workers where people who work will have a wide association so that they can exchange ideas with each other. Age also contributes to the maturity of a person's thinking so that this is related to knowledge. Then interest, experience and environment also affect knowledge and the most important thing is information, the higher the information a person gets about an object, their knowledge will also increase. (Dalami, 2014). Before the mother's class in Benteng Village, Bogor Regency, pregnant women when viewed from the results of the P4K knowledge score There are still many pregnant women who do not know about P4K, this is because mothers have not been exposed to information about P4K or also mothers have not received counselling about P4K. Maternal knowledge about P4K is very important for pregnant women who are at risk because by knowing and understanding well about P4K, prevention of complications that may arise can be done.(Ministry of Health, 2014)

This study is in line with Amalia, 2019, with the title Knowledge of the Childbirth Planning and Complication Prevention Program (P4K) in Pregnant Women where the results obtained risk Before and After Counselling at UPTD Puskesmas Cikijing Majalengka Regency in 2019, it was found that the average knowledge of the Childbirth Planning and Complication Prevention Program in pregnant women at risk before counselling at UPTD Puskesmas Cikijing Majalengka Regency in 2019 was between 57.9 and 70.6. The average knowledge of at-risk pregnant women about the Childbirth Planning and Complication Prevention Program (P4K) is 78.6 with a median value of 80.0 and a standard deviation of 9.347. The lowest knowledge is 65 and the highest is 95.(Amalia, 2017).

The researcher assumed that increasing the knowledge of pregnant women about P4K would bring self-perception and motivate their behaviour. Pregnant women who have good knowledge about P4K will insist on seeking pregnancy check-ups until the postpartum period because they know that pregnancy check-ups will have an impact on the welfare of the mother and her baby until the postpartum period. In addition, pregnant women also know that a standardised pregnancy check-up will reduce the risk or danger during pregnancy until the postpartum period. This is an elaboration of Rosenstock's (1974) health belief model and is expanded with the *Selfeffecacy* aspect, which is the belief that individuals are able to make changes.

2. Knowledge after being given classes for pregnant women about P4K

Based on the results of the study, the knowledge obtained after the class of pregnant women about the Childbirth Planning and Complication Prevention Program (P4k) in Benteng Village, Bogor Regency, obtained an average value (*mean*) *of* 68.58 with a *standard deviation of* 2.316. Public knowledge about the health of pregnant women, then a health counselling for pregnant women can be done. Currently, there is still a lot of counselling that is done through individual or case-by-case consultations provided by midwives or other officers during antenatal check-ups or at posyandu activities. However, these activities sometimes cannot be implemented properly considering the knowledge gained by the mother is only limited to the health problems experienced during the consultation. This study is in line with (Nur Hidayati, 2018)(Nur Hidayati, 2018), with the title of the relationship between knowledge and the class of pregnant women that the results of the implementation of P4K where the results of the average knowledge of pregnant women with a mean value of 45.5% were presented while it was not running optimally seen from the aspects of communication, resources, disposition, and bureaucratic structure, namely the aspect of delegation of authority in the bureaucratic structure could not be understood by the implementor in carrying out the task, the understanding of the implementor and the community was not in accordance, the low knowledge of the community or pregnant women and the lack of communicative implementors.

This research is in line with the research of Hasnawati et al. (2014), the implementation of P4K has not been running optimally seen from the aspects of communication, resources, disposition, and bureaucratic structure, namely so far there has been no socialisation with families and communities, the availability of human resources is still not enough, there is no allocation of funds to support P4K socialisation activities,

there are no supporting facilities for counseling in the form of brochures, leaflets, or props at Pukesmas and there is no P4K SOP. (Hasnawati, Mawarni A, 2014). This is also related to Based on research in Chamwino District, Central Tanzania, states that the chances of using health facilities for delivery are four times higher for women who have a birth preparation plan and complication preparedness. Birth preparation plans and complication preparedness were also associated with the selection of skilled birth attendants (Olowokere et al. (Olowokere et al., 2020)..

The Childbirth Planning and Complication Prevention Program (P4K) is an activity facilitated by midwives in the village in order to increase the active role of husbands, families and communities in planning for safe delivery and preparation for complications for pregnant women, including planning for postpartum contraceptive use using stickers as a target notification medium in order to increase the coverage and quality of health services for mothers and newborns. Researchers assume that the implementation of pregnant women's classes has an effect on increasing the knowledge of pregnant women. The need for different methods to improve the knowledge of pregnant women, so the Ministry of Health issued a policy of learning group activities for pregnant women called the Pregnant Women's Class. Pregnant women's class is a study group for pregnant women with gestational age between 4 weeks and 36 weeks with a maximum number of participants of 10 to 15 people. In this class pregnant women will learn together, discuss, exchange experiences about maternal and child health as a whole and systematically and can be carried out in a scheduled, coordinated manner there is continuous monitoring. By coordinating these activities well, it will be able to increase the knowledge of mothers.

3. Effectiveness before and after the implementation of pregnant women's classes on increasing knowledge about P4K in Benteng Village, Bogor Regency.

Based on the results of the analysis carried out by *paired t-test* where the results of knowledge before the class of pregnant women is 40.30, knowledge after given the class of pregnant women about P4K 68.58 and the results of *P-Value* 0.0001 can be interpreted that *p-value* 0.0001 α & 0.005 then it is concluded that there is effectiveness of knowledge before and after given the implementation of the class of pregnant women in Benteng Village, Bogor Regency. To increase the knowledge of the community about the health of pregnant women, a health counselling for pregnant women can be done. Currently, there is still a lot of counselling that is done through individual or case-by-case consultations provided by midwives or other officers during antenatal examinations or at posyandu activities. However, these activities sometimes cannot be carried out properly

since the knowledge gained by the mother is only limited to the health problems experienced during the consultation. In addition, staff usually do not have enough time to provide individual counselling. As a result, the Ministry of Health issued a policy for pregnant women's study groups called the Pregnant Women's Class (Handajani, 2016). (Handajani, 2016).

Pregnant women's class is a study group for pregnant women with gestational age between 4 weeks and 36 weeks with a maximum number of participants of 10 to 15 people. In this class pregnant women will learn together, discuss, exchange experiences about maternal and child health as a whole and systematically and can be carried out in a scheduled, coordinated manner there is continuous monitoring. By coordinating these activities well, it will be able to increase the knowledge of mothers.(Ministry of Health, 2014).

In line with research conducted by Duncan dkk, 2017. with the title of the influence of maternal knowledge on the practice of implementing pregnant women's classes. there is a P-Value result of 0.004 which means that there is an influence on the influence of maternal knowledge on the practice of implementing pregnant women's classes. This is in line with research that there is an influence on the implementation of pregnant women's classes on the knowledge and attitudes of pregnant women in early detection of high risk in pregnancy. The higher a person's knowledge about health, the easier it will be for someone to behave healthily, so that by attending maternity classes, mothers can understand the material conveyed in class, and can implement it in everyday life. This research is in line with (Sudarmi, 2021) with the title of the effect of education using audio-visual media where the results of the study of providing education using *Audio-visual* media provided by various disciplines according to their expertise are more quickly understood by pregnant women, marked by an increase in the average level of maternal knowledge by 28% from before being given education compared to the control group using the highest LB media on knowledge about pregnancy which only increased good knowledge by 56%.(Duncan, dkk 2017)

It is very clear that the implementation of pregnant women's classes has an important role in changing the knowledge of pregnant women. (Sudarmi, 2021). This is in line with research (Buultjens et al., 2017) where the results of 153 (81%) reported attending antenatal classes. Overall, pregnant women wished to have more information about breastfeeding and settling techniques, while a lack of information relating to social support initiatives for the postnatal period was also indicated. Where the results of the

study reported that they were missing educational and practical reinforcement of *mothercraft* skills. (Buultjens, 2017). This is in line with the research of Azizah, 2016 that in the implementation of *online-based* pregnancy classes with the *Whatsaap* Group application in an effort to increase the readiness of pregnant women in facing the process of pregnancy, childbirth and postpartum during the Covid-19 pandemic in Sumbertlaseh Village, Dander District, Bojonegoro Regency, the knowledge of pregnant women's class participants has increased so that pregnant women are better prepared to undergo the process of pregnancy, childbirth and postpartum. Researchers assume that the implementation of pregnant women's classes has an effect on increasing the knowledge of pregnant women. Pregnant women's class is a study group for pregnant women with gestational age between 4 weeks and 36 weeks with a maximum number of participants of 10 to 15 people. In this class pregnant women will learn together, discuss, exchange experiences about maternal and child health as a whole and systematically and can be carried out in a scheduled, coordinated manner there is continuous monitoring. By coordinating these activities well, it will be able to increase the knowledge of mothers.

CONCLUSION

There is an effectiveness before and after the implementation of the implementation of pregnant women's classes on increasing knowledge about P4K in Benteng Village, Bogor Regency with a value of <0.05 *P-Value* = 0.0001. It is suggested that the Puskesmas can evaluate the activities of implementing pregnant women's classes that have been carried out to improve the quality of services and midwives can innovate, especially about the implementation of pregnant women's classes so that pregnant women increase their motivation to attend pregnant women's classes.

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