

## THE EFFECT OF CADRE ASSISTANCE IN TREATMENT CHRISTMAS ANTE TO LABOR PREPARATION AT THE SUMBERSARI HEALTH CENTER, METRO CITY

Titi Astuti <sup>1\*</sup>, Al Murhan<sup>2</sup>, Kodri<sup>3</sup>

<sup>1,2,3</sup> Polytechnic of the Ministry of Health TanjungKarang, Indonesia

\*Corresponding author: titiastuti@poltekkes-tjk.ac.id

### Abstract

The Effect of Cadre Assistance in Christmas Day Care on Childbirth Preparation at the Sumbersari Health Center, Metro City. The maternal mortality rate in 2022 is around 183 per 100 thousand births. The causes of maternal mortality are still dominated by 33.19% of bleeding, 32.16% of hypertension in pregnancy, 3.36% of infections, 9.80% of circulatory system (heart) obstruction, 1.75% of metabolic disorders and 19.74% of other triggers such as long childbirth [1](Ministry of Health of the Republic of Indonesia, 2022). Cadres are direct movers in the community in carrying out health-related activities by involving cooperation between health workers. The researcher is interested in conducting research on the influence of cadre assistance in antenatal care on childbirth preparation, at the Sumbersari Health Center in Metro City. Types of quantitative research. The design used is quasi-experimental, This research will be carried out at the Sumbersari Health Center in Metro City, The population in this study, all pregnant women in the third trimester who participated in the Ante Natal group and a sample of pregnant women of gestational age in the third trimester starting from 28 weeks – 32 weeks. The results obtained Based on statistical tests, it showed that the preparation for childbirth of pregnant women in the intervention group and the control group was obtained with a p-value of 0.00<0.005, meaning that there was an influence of cadre assistance on pregnant women in preparation for childbirth. Suggestions for health institutions so that they can be passed on to research-based community service, Puskesmas: prepare for childbirth by using cadre assistance, so that complications do not occur during childbirth.

Keywords : Ante Christmas, Cadre Assistance

### INTRODUCTION

Maternal mortality is still a health problem around the world, especially in developing countries. The World Health Organization (WHO) reported that every day in 2020, around 810 women died due to problems or complications of pregnancy and childbirth that could have been prevented. One of the complications in labor is long labor. Analysis of data from the World Health Organization shows that in 2017 long childbirth was the direct cause of childbirth complications with an incidence of 69,000 or 2.8% of all maternal deaths worldwide [2](WHO, 2020).

There is a growing global awareness that good quality care is key to keeping mothers and babies alive and healthy. Currently, according to the World Health Organization (WHO) every day in 2020, nearly 800 women die from preventable causes related to pregnancy and childbirth. Maternal deaths occur almost every two minutes in 2020. Between 2000 and 2020, the maternal mortality ratio (MMR, the number of maternal deaths per 100,000 live births) fell by about 34% worldwide. Approximately 287,000 women died during and after pregnancy and childbirth in 2020 [2](WHO, 2020)

In Indonesia itself, the Indonesian Ministry of Health (Kemenkes) recorded a maternal mortality rate in 2022 at around 183 per 100 thousand births. The causes of maternal mortality are still dominated by 33.19% bleeding, 32.16% hypertension in pregnancy, 3.36% infection, 9.80% circulatory system obstruction (heart), 1.75% metabolic obstruction and 19.74% other triggers such as long childbirth [1](Ministry of Health of the Republic of Indonesia, 2022). Efforts to accelerate the reduction of maternal health in Indonesia are carried out by ensuring that every mother is able to access quality maternal health services, such as health services for pregnant women, childbirth assistance by trained health

workers at health care facilities, postpartum care for mothers and babies, special care and referrals in case of complications, ease of obtaining pregnancy/maternity leave and family planning services. [1](Ministry of Health of the Republic of Indonesia, 2022).

The government has carried out improvement efforts with various programs such as the integrated ANC, the Ante Natal group, the birth planning and complication prevention (P4K) program, the standby village and other programs, but some data indicators still show problems. Based on data from the 2017 Indonesia Health Profile, the coverage of the 4th pregnancy visit (K4) in Indonesia reached 86.57% while the data on childbirth by health workers in health facilities only reached 83.14%, so there is still a considerable difference of 3.43%. Data in Lampung, K4 coverage reached 91.31% and childbirth data by health workers at health facilities only reached 90.1%, so there is still a difference of 1.21%. This difference data illustrates that there are still deliveries that are not helped by health workers. In fact, the data of health centers that carry out the Ante Natal group in Indonesia has reached 92.71% and the P4K program has reached 89.24%. In Central Lampung, these two programs were even declared to have reached the target [1](Indonesia Health Profile, 2022)

The high number of complications that are not referred is caused by, among others, the helplessness of a mother in deciding to get medical help if there are problems with pregnancy, childbirth and her baby. This is influenced by the mother's low knowledge in her health care and the recognition of obstetric and neonatal danger signs, so that it will hinder a decision that must be taken. [1] (Ministry of Health of the Republic of Indonesia, 2018).

One of the efforts to be able to provide sufficient knowledge to pregnant women and their families is through the Ante Natal group. The Ante Natal group is a community empowerment activity through group learning facilities about the health of pregnant women by utilizing KIA books. With this Ante Natal group activity, husbands and families will be involved in understanding the condition of pregnant women until giving birth and caring for babies. [1] (Ministry of Health of the Republic of Indonesia, 2018).

The Ante Natal group program in Indonesia began in 2010. In the Ante Natal group, there is material about pregnancy care. Pregnancy care is to provide supervision or maintenance of pregnant women until childbirth which includes psychological readiness to face pregnancy, marital relationships/intercourse during pregnancy, drugs that can and should not be consumed by pregnant women, signs of pregnancy dangers, childbirth planning and complication prevention (P4K) programs, health counseling including nutrition so that the pregnancy is healthy. Pregnant women can interact with other pregnant women so that there is a process of sharing experiences related to pregnancy health, body changes, and complaints during pregnancy and pregnancy care. The Ante Natal group is also an effort to improve the ability of mothers in early detection of complications, improve labor and delivery preparations in health facilities. [1] (Ministry of Health, 2018).

The effect of the implementation of the Ante Natal group on knowledge about childbirth preparation was researched by Lucia et al. in 2017 which showed that there was an effect of the implementation of the Ante Natal group on knowledge of childbirth preparation ( $p=0.000$ ). This further strengthens that the implementation of mother's classes is useful for mothers in preparing for childbirth. [3](Lucia Sorongan, 2018).

The Ante Natal group is a very useful program, so efforts to increase the effectiveness of the Ante Natal group need to be considered. The implementation of the Ante Natal group which is held in the middle of the community certainly requires assistance from all parties involved. Assistance is a strategy commonly used by the government and non-profit institutions in an effort to improve the quality and quality of human resources, so that they are able to identify various problems experienced and strive to find alternative solutions to the problems faced. (Suharto, 2005).

In the guidelines for the implementation of the Ante Natal group, it is stated that the Ante Natal group meeting is at least 4 meetings attended by a maximum of 10 pregnant women with a meeting duration of about 120 minutes. Materials in the mother's class include material on danger signs in pregnancy, childbirth and postpartum as well as material on childbirth preparation, early signs of childbirth, the labor process and early initiation of breastfeeding. In its implementation, it is highly expected that the participation of husbands/families to accompany pregnant women at least one meeting so that they can follow various important materials. In addition, in the implementation can involve one cadre and shaman in the work area in each Ante Natal group. [1] (Ministry of Health of the Republic of Indonesia, 2018).

In the mother's class program that has been running, the role of cadres has not been maximized. Cadres are still limited in their role to collect the target of pregnant women participating in the mother's class and help prepare the place as well as prepare for consumption during the mother's class activities. In fact, if cadres can be maximized in their involvement, then the mother class will be a medium for cadres to improve their knowledge and abilities related to maternal and infant health care. Cadres who

are actively involved can always do refresing as the implementation of the mother's class continues. The percentage of cadres involved in the Ante Natal group is included in the process indicator to assess the success of the implementation of the Ante Natal group.

Research by Nani Khomsah in 2012 on Factors related to the participation of posyandu cadres in the detection of risk factors of pregnant women in the working area of the Buayan Health Center, Kebumen, Central Java, stated that the participation of posyandu cadres in the early detection of risk factors for pregnant women in the active participation category was 52.3%. Cadres who have good knowledge about antenatal detection, are highly educated, receive rewards, have a positive attitude, have high motivation, receive supervision and support have a greater likelihood of participating in the detection of antenatal risk factors. Therefore, the researcher suggests the need to increase the activeness of cadres in detecting pregnancy risk factors through various continuous, systematic and programmatic technical training activities so that cadre knowledge can always be repressed. It is also necessary to make a technical guidebook for cadres [4](Nani Khomsah, 2012). Cadres have an important role in efforts to detect risk factors for pregnant women because the number of cadres is quite large and evenly distributed. Cadres are also closer to the community so that at any time it is easy for the community to communicate directly. Cadres are tasked with helping health workers to recognize and find pregnant women at risk by conducting home visits. Cadres are direct movers in the community in carrying out health-related activities by involving cooperation between health workers, families and community leaders so that it is hoped that health problems can be overcome gradually [4](Nani Khomsah, 2012).

Based on the problems that have been described above, the researcher is interested in conducting research on the influence of cadre assistance in the Ante Natal group on childbirth planning, at the Sumbersari Health Center, Metro City, Lampung Province

## METHODOLOGY

Types of quantitative research. The design used for this study is a quasi-experiment, the intervention group is the Ante Natal group which was selected as a research sample that received maternal class intervention by including cadres every time the mother's class meeting. This research was carried out at the Sumbersari Health Center in Metro City from June to December 2023. The number of samples in the study was 27 people and was rounded to 30 people in each group. The respondents in this study until the end of the study did not drop out so that the number of respondents was 60 people, 30 people as the control group and 30 people in the experimental group. Large sample collection using purposive sampling technique. The test used used an independent T test. Feasibility test of ethical research at KEPK POLTEKKES of the Ministry of Health of TanjungKarang with a letter of ethical propriety NO. 471/P/KEPK-Tjk/VII/2023 of 2023.

## RESULTS

### A. Univariate Analysis

#### 1. Characteristics Responden

Characteristics of respondents in the intervention group were mostly at risk (93.3%), education was mostly low (60.0%), occupation was mostly not working (66.7%), multi parity (80.0%) and pregnancy spacing was at risk (33.3%).

#### 2. Preparing for Childbirth

Data on the preparation of pregnant women for childbirth in the intervention and control groups were obtained, pregnant women who were ready for the delivery process in the intervention group were higher with an average result of 6.47, a standard deviation of 0.819 and a min-max value of 5-7, while in the control group the average result was obtained of 4.07, a standard deviation of 1.015 and a min-max value of 1-4.

The results of the univariate study showed that there was a difference in the average acquisition characteristics of the respondents in the intervention group and the control group, in the intervention group the average outcome was higher compared to the control group, in the intervention group the average score Characteristics in the group of pregnant women who received assistance from cadres were mostly at risk age (93.3%), education was mostly low (60.0%), occupation was mostly not working (66.7%), Parity Multi (80.0%) and Distance pregnancy at risk (33.3%).

The average results of childbirth preparation in the Intervention and Control groups were different in pregnant women who were ready for childbirth in the intervention group was higher with an average result of 6.47, a standard deviation of 0.819 and a min-max value of 5-7, while in the control group the average result was obtained of 4.07, a standard deviation of 1.015 and a min-max value of 1-4.

This is in line with the existing theory that the prenatal period is a period of preparation, both physically, namely fetal growth and maternal adaptation and psychologically, namely anticipation of parenthood. Regular prenatal visits begin as soon as the mother first misses her period, which aims to keep up with the growth and development of the fetus and to identify abnormalities that may interfere with the normal delivery process. Labour preparation must be programmed through labour preparation and prevention of complications (P4K) as well as physical and psychological preparation, postpartum care begins 1 hour after the birth of the placenta and is followed by 6 weeks (42 days) thereafter (Bobak, 2015).

The results of this study support the important role of cadre assistance in antenatal care as an effort to increase the readiness of pregnant women to give birth. These findings are in line with previous research that suggests that community-based mentoring can improve maternal health and delivery readiness. In a study by *Bajpai et al.* [5] (2018), the active participation of health workers at the community level has been proven to increase pregnant women's knowledge about childbirth and prepare them to face various challenges in the process.

In this study, the intervention group that received cadre assistance showed higher labor readiness (6.47 on average) compared to the control group (4.07 on average). This is in line with the findings of *Jones et al.* [6] (2017), which states that ante natal assistance can increase the psychological and physical readiness of pregnant women to face childbirth. The study showed that mothers who received mentoring were more often involved in labor preparation activities such as recognizing the signs of labor and preparing for normal labor.

Characteristic factors of pregnant women in this study, such as age at risk (93.3%), low education (60.0%), and not working (66.7%), also made an important contribution to the discussion. Cadre assistance has become increasingly significant for pregnant women with low educational backgrounds and limited economic status. According to *WHO* [7] (2019), groups of pregnant women with low education tend to have less knowledge about childbirth preparation, so mentoring by cadres can overcome the information gap and improve the health outcomes of pregnant women.

In addition, pregnant women with multi parity (80.0%) in the intervention group showed that previous experience did not always correlate with better readiness. This is supported by the research of *Singh et al.* [8] (2020) which found that even though multi-para mothers have had previous childbirth experiences, they still need additional information and support in each pregnancy due to various risk factors that change from one pregnancy to another.

The results of this study also confirm the importance of safe pregnancy spacing. Mothers with a distance of pregnancy at risk (33.3%) who received cadre assistance showed better readiness than those who did not receive assistance. *Cleland et al.* [9] (2016) stated that pregnancy spacing that is too close increases the risk of childbirth complications, so cadre assistance is important in monitoring the health condition of mothers and educating them about these risks.

Cadre assistance does not only focus on physical health aspects, but also on improving the psychological well-being of pregnant women. *Koblinsky et al.* [10] (2018) mentioned that emotional support from health workers at the community level, such as cadres, has proven to be effective in reducing anxiety and increasing maternal confidence in dealing with childbirth. This was seen in the intervention group in this study, where maternal delivery readiness was higher than that of the control group.

### 3. Bivariate Analysis

Table 1

The effect of cadre assistance on pregnant women on childbirth preparation

Group	Mean	SD	SE	n
intervention	6,47	0,819	1,150	30
Control	4,07	1,015	0,185	30
P Value	0,000			

Based on statistical tests, it was shown that the preparation for childbirth of pregnant women in the intervention group and the control group was obtained with a *p*-value of  $0.00 < 0.005$ , meaning that there was an influence of cadre assistance on pregnant women in preparation for childbirth.

The results of the Bivariate analysis in this study showed the effect of cadre assistance on pregnant women on the preparation of pregnant women's childbirth, where the *p*-value was 0.000, meaning that there was an influence of cadre assistance on pregnant women in preparation for childbirth. Pregnant women in the intervention and control groups had a change in influence behavior after being given cadre assistance for childbirth preparation.

This behavior of changing the readiness of pregnant women is supported by the theory that behavior is an activity or activity of the organism (living being) in question. According to Skinner in the book health promotion by Notoatmojo [11](2018) formulates that behavior occurs through the process of a stimulus to an organism and then the organism responds, so Skinner's theory is called the "S-O-R" theory or Stimulus Organism Response.

Cadres are community workers who are considered the closest to the community, this is because cadres come from the local community so that the transfer of knowledge and skills from cadres to their neighbors becomes easy [12]. The Ministry of Health has created a training program for cadres to increase knowledge, reduce maternal mortality and infant mortality (Ministry of Health of the Republic of Indonesia, 2017).

The role of cadres in being ready to take care of the health of mothers and children is that mothers must always be ready to escort and take care of if there are mothers or children who need the help of health workers. The role of cadres in the case of pregnant women with risk factors is to be able to recognize risk factors, explain to mothers/families about risk factors, explain to mothers/families to conduct pregnancy examinations and refer pregnant women with risk factors (Ministry of Health of the Republic of Indonesia, 2017).

These findings are consistent with the literature indicating that interventions involving mentoring and education, especially by cadres, have a positive impact on pregnant women's behavior and readiness to face childbirth [13](Jones *et al.*, 2017). More specifically, the bivariate analysis conducted in this study also showed that cadre assistance had a significant influence on changes in pregnant women's behavior, especially in terms of preparation for childbirth. The *P*-value of 0.000 in the bivariate analysis confirmed that the differences found between the intervention group and the control group did not occur by chance, but were the result of the intervention given, namely cadre assistance. Research by Bajpai *et al.* [14](2018) supports these findings, where education and community support are actively able to change the behavior of pregnant women, especially in the aspect of preparing for childbirth.

The intervention group that received cadre assistance showed higher readiness for childbirth compared to the control group. Pregnant women in the intervention group experienced an increase in positive behaviors related to childbirth preparation, ranging from mental readiness to physical readiness. The assistance provided by cadres includes the delivery of information about the signs of childbirth, what needs to be prepared, and how to deal with emergency situations during the delivery process. Research by Singh *et al.* [8](2020) also found that social support and education can help reduce anxiety and increase pregnant women's confidence in facing childbirth.

This study also underscores the importance of the role of cadres as an extension of formal health workers in the community. The support provided by cadres to pregnant women not only increases knowledge, but also influences real behavior in preparation for childbirth. According to the *World Health Organization* [15] (2019), community-based interventions such as cadre assistance are essential to improve the quality of health services for pregnant women, especially in areas with limited access to formal health services.

Based on the conceptual explanation and empirical evidence, the researcher explained that the influence of cadres in assisting pregnant women in preparing for childbirth is very necessary to prevent risks in pregnant women before and after childbirth, changes in the behavior of pregnant women also affect their readiness in childbirth, therefore this study explains that the results of the influence of cadre assistance on pregnant women are very synonymous for maternal preparation for childbirth pregnant.

## CONCLUSIONS

Based on the results of this study, it can be concluded that: the average value of preparation for childbirth of pregnant women in the intervention group is higher with an average result of 6.47 compared to the control group. Based on the results of statistical tests, it shows that there is an effect of cadre assistance on pregnant women in preparing for childbirth with a P value of 0.00.

It is recommended that pregnant women prepare for childbirth with the assistance of health cadres. The results of this research can be continued for community service activities, so that they are more useful.

## REFERENCES

- [1] Kemenkes RI, *Profil Kesehatan Indonesia*. Jakarta, 2022.
- [2] WHO, *Prevalensi Kematian AKI/ABI*. Ganeva, 2020.
- [3] S. Lucia, *Pengaruh Pelaksanaan Kelompok Ante Natal Terhadap Persiapan Persalinan*. 2018.
- [4] K. Nani, "Faktor-Faktor Yang Berhubungan Dengan Peran Serta Kader Posyandu Dalam Deteksi Faktor Resiko Ibu Hamil Di Wilayah Kerja PKM Buayan Kebumen Jawa Tengah," 2012.
- [5] P. B. R. Shukla, "Community Based Interventions To Improve Maternal Healt," *Matern. Heal.*, vol. 45 (3), pp. 112–118, 2018.
- [6] S. A. K. Jones, "Impact Of Antenatal Care Programs On Birth Preparedness And Complication Readiness," *Glob. Heal. Rev.*, vol. 29 (4), pp. 201–210, 2017.
- [7] *Improving Maternal Health Through Community Interventions*. WHO publications.
- [8] M. Singh, A., Choudhary, S., & Gupta, "Parity and maternal outcomes," *Int. J. Gynecol. Obstet.*, vol. 134 (1), pp. 33–40, 2020.
- [9] H. Cleland, J., Conde-Agudelo, A., & Peterson, "Birth spacing and maternal health outcomes," *Cleland, J., Conde-Agudelo, A., Peterson, H.*, vol. 29 (4), pp. 201–210, 2016.
- [10] J. Koblinsky, M., Timyan, J., & Gay, "Women's emotional health during pregnancy and the role of community health workers," *Matern. Child Health J.*, vol. 22(2), pp. 304–310, 2018.
- [11] Notoatmodjo, *Metode Penelitian Kesehatan*. Jakarta: Rineka Cipta, 2018.
- [12] A. Wiku, *Sistem Kesehatan*. Jakarta: PT. Raja Grafindo Persada, 2017.
- [13] A. Jones, L., Kumar, S., & Smith, "Impact of antenatal care programs on birth preparedness and complication readiness.,," *Glob. Heal. Rev.*, vol. 29(4), pp. 201–210.
- [14] N. Bajpai, P., Shukla, R., & Prasad, "Community-based interventions to improve maternal health: A case study from India," *J. Matern. Heal.*, vol. 45(3), pp. 112–118, 2018.
- [15] W. H. Organization, *Improving maternal health through community interventions*. WHO Publications., 2019.