

The influence of ANC community health worker empowerment on ANC visits of pregnant women in Bengkulu City

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ABSTRACT

Background: Services during pregnancy are pregnancy health check-up services carried out by health workers, especially midwives or doctors for pregnant women which are carried out at least four times in pregnancy with details, namely one time gestational age 0-12 weeks, one time ANC gestational age 13-27 weeks and twice when the gestational age is 28-36 weeks. Based on the profile of K1 and K4 visits from 20 Public Health Centers in Bengkulu City, there are 3 Public Health Centers with K1 and K4 visits which are still low and have not reached the set targets and there is still a drop out where there is a decrease between K1 and K4 visits.

Objectives: The study community health worker to knowing the influence of the empowerment of ANC the community health worker on the visit of ANC Pregnant Women in Bengkulu City.

Methods: This research uses a quasi-experimental method. The samples taken for the study were all pregnant women in Bengkulu City who were selected by purposive sampling. The sample consisted of 2 groups, namely the experimental group on pregnant women with the empowerment of ANC the community health worker and the ontrol group with counseling totaling 40 people. Data collection is carried out through data collection sheets and analyzed data with univariate and bivariate Data analysis used bivariate

Results: The results of the study found that there was an Effect of Empowerment of ANC the community health worker on ANC visits to pregnant women in Bengkulu City in 2020

Conclusions: The results Thisstudy was used as an alternative recommendation for increasing ANC visits

KEYWORD: community health worker empowerment; ANC; pregnant

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INTRODUCTION

Services during pregnancy are pregnancy health check-up services carried out by health workers, especially midwives or doctors in pregnant women who held at least four meetings during pregnancy(1).

Pregnancy services are carried out to maintain normal pregnancy and increase women's knowledge about the consequences and impacts as well as detection of complications of pregnancy, childbirth and postpartum where services from health workers are still uneven(2).

ANC is one of the programs currently used to reduce MMR and IMR. The ANC that done correctly during pregnancy can monitor the health of the mother and baby, as well as detect early risks of pregnancy, so that appropriate management can be planned(3).

Previous research indicates that good ANC can detect and monitor the health of mothers and babies with quality ANC consisting of 4 times during pregnancy which can be seen from K1-K4 visits and is effective if there is empowerment carried out by health workers, one of which involves the community health worker , because the community health worker are the successors of Health workers who have direct contact with the community(4).

In the health sector, the role of the community is to improve community health by becoming health the community health worker . The assistance provided by the community health worker is an effort to empower the community so that they can play

an active role in reducing MMR and IMR. The community health worker are tasked with communicating all health problems to mothers and children and become facilitators in community organizations in their area. The community health worker have the task of providing motivation to pregnant women to carry out pregnancy checks or ANC(5).

Increasing health monitoring of pregnant women needs to be carried out through community empowerment through community health worker who play a role in the process of reducing maternal mortality(6).

According to the World Health Organization (WHO), 99% of maternal deaths occur in developing countries due to childbirth problems. Indonesia is one of the countries with the highest MMR and IMR in Asia, number three and four in ASEAN. The maternal mortality rate in 2007 was 228/100,000 births, in 2012 it was 359/100,000 and in 2015 it was 305/100,000 live births. The infant mortality rate in 200 was 734/1,000 live births, in 2012 it was 32/1.000 live births and in 2015 it was 22.23/1,000 live births. MMR and IMR in Indonesia have not reached the MDG target that should have been achieved in 2015, namely 102/100,000 live births for maternal mortality and 23/1,000 live births for infant mortality(7).

One of the Millennium Development Goals (MDGs) in Indonesia is to improve maternal health and reduce infant and toddler mortality. Efforts to improve the health of mothers and children in Indonesia have long been carried out by the government since the

establishment of the Mother and Child Health Center (BKIA) in 1950 which provides services in the form of pregnancy care, childbirth, baby and child care, health education and family planning services. However, until now there are still various problems that often occur in mothers and babies, including many pregnant women who experience chronic energy deficiency (KEK), babies born with low birth weight (LBW), and maternal and infant mortality is still high(8).

Maternal health can be done by looking at the coverage of K1 and K4. K1 coverage is the number of pregnant women who have received their first antenatal care from health workers compared to the target number of pregnant women in one work area within one year. Meanwhile, K4 coverage is the number of pregnant women who have received antenatal care according to the standards at least four times according to the recommended schedule in each trimester compared to the target number of pregnant women in one work area over one year. This indicator shows access to health services for pregnant women and the level of compliance of pregnant women in checking their pregnancies with health workers.

K1 pregnancy checks in Indonesia are only at 82%, while in Bengkulu Province K1 is 81.3% and K4 is 77%. This shows that it is still very far from the National target with a minimum target of 95% (9). Antenatal care visits should be done at least 4 (four) times during pregnancy, with the following time provisions: 1 time in trimester 1, 1 time in

trimester 2, and 2 times in trimester 3.

Based on the profile of K1 and K4 visits from 20 Public Health Centres in Bengkulu City, there are 3 Public Health Centres with K1 and K4 visits which are still low and have not reached the set targets and there is still a drop out where there is a decrease between K1 and K4 visits, for this reason it is necessary to carry out research on the influence of empowerment. ANC the community health worker regarding ANC visits to pregnant women in Bengkulu City in 2020.

MATERIALS AND METHODS

The research design used was a quasi-experiment with two measurements before and after the intervention. The sample calculated the average value estimated for the group based on research results (5), namely 0.53, so the sample size of 40 people was taken purposive sample.

The inclusion criteria in this study were community health worker at the Community Health Center in Bengkulu City area and pregnant women in the 1st to 3rd trimester in Bengkulu City and willing to be respondents. Exclusion: Community health worker and pregnant women who are sick and did not take part in mentoring training.

Data collection was carried out using a knowledge and attitudes questionnaire about ANC. The technique of collecting data directly from pregnant women is that one group is intervened with empowerment before the intervention is first assessed for knowledge and manner, then the intervention is for 2

weeks, and one group is intervened with counseling before the intervention is first assessed for knowledge and manner, then the intervention is for 2 weeks.

Univariate data analysis techniques were carried out to identify variable characteristics and proportions of research subject characteristics. Bivariate analysis used the Wilcoxon sign rank test.

The validity test of the questionnaire in this study used the Pearson Product Moment correlation test. The question is considered valid if the calculated R-value is greater than the R table (N = 25, R table = 0.396). The reliability test of the questionnaire in this study used the Cronbach alpha coefficient test. The questionnaire is considered reliable if the Cronbach alpha coefficient value is above 0.6.

Declared to be ethically appropriate in accordance to 7 (seven) WHO 2011 Standards, 1) Sosial Values, 2) Scientific Values, 3) Equitable Assessment and Benefits, 4) Risks, 5) Persuasion/Exploitation, 6) Confidentiality and Privacy, and 7) Informed Consent, referring to the 2016 CIOMS Guidelines. This is as indicated by the fulfillment of the indicators of each standard, No.KEPK/091/12/2020.

RESULTS AND DISCUSSION

RESULTS

Univariate analysis

Table 1 explains the comparison between two groups, namely the treatment group or those given intervention with a

smaller high risk age, (40%; 45%). The intervention group mostly had higher education (75%; 50%), the intervention group had fewer people working (50%; 75%), the intervention group had fewer high risk parities (40%; 45%) and the intervention group had smaller high risk pregnancy spacing (70%;20%).

Table 1. The Characteristics Description of Pregnant Women

Variable	intervention group n=20		Control Group n=20	
	f	%	F	%
Age				
High risk	8	40	9	45
Low risk	12	60	11	55
Education				
High	15	75	10	50
Low	5	25	10	50
Job				
Have a job	10	50	15	75
Don't have a job	10	50	5	25
Parity				
High risk	8	40	9	45
Low risk	12	60	11	55
Spacing				
High risk	8	20	14	70
Low risk	12	30	6	30

Table 2 shows that in the case group the average knowledge of teenagers before the intervention with ANC community health worker empowerment resulted in an average value of 53.80 and the knowledge of pregnant women after the intervention with ANC community health worker empowerment increased to an average of 73.90, while the attitude of women before the intervention was

carried out. with a mean of 35.35 and the attitude of pregnant women after intervention with ANC community health worker empowerment increased to an average of 38.25. for the control group, the average knowledge of pregnant women before the intervention with ANC community health worker

empowerment was an average of 52.14 and the knowledge of pregnant women after the intervention with ANC community health worker empowerment increased to an average of 52.90, while the mother's attitude before the intervention was 33.14 and the attitude of pregnant women after intervention with ANC

Table 2. Description of knowledge and attitudes of pregnant women

Variable	N	Mean	SD	Min-maks
Intervention group				
Knowledge Before Intervention	20	53.8	17.353	31-92
Knowledge After Intervention	20	73.9	19.265	31-100
Attitude Before Intervention	20	35.35	4.356	28-43
Attitude after intervention	20	38.25	4.356	30-43
Control Group				
Knowledge Before Intervention	20	52.14	13.074	23-69
Knowledge After Intervention	20	52.9	13.074	38-69
Attitude Before Intervention	20	35.35	4.683	32-48
Attitude after intervention	20	38.25	4.654	32-48

Table 3. Description of ANC Visits of Pregnant Women

Variable	N
Intervention Group (Community health worker Empowerment ANC frequency	20
Control Group (Extension) ANC frequency	20

community health worker empowerment increased to an average of 35.19.

Table 3 shows that for the case group, the average ANC was 4 times a month, while for the case group the average visit was 3 times a month. Based on the univariate results, it was found that there was an increase in the average value of knowledge in

the case group before and after the intervention. This shows that there was an increase in knowledge in the case group after health education was carried out by the community health worker with media in the form of an ANC book, a guide to assisting ANC the community health worker which was previously given to participants, which

can be concluded from the training in this training, means balancing the increase in cadre knowledge obtained in line with research carried out by (10) that the training or mentoring carried out will increase standards and knowledge for implementing ANC. In line with theory (11) training can directly emphasize tasks or roles because giving tasks can immediately get a response to the training given so that changes in behavior can be immediately assessed.

The attitude variable shows an increase in the average attitude value in the case group before and after the intervention. This is in accordance with the theory (12), that the formation of a person's attitude occurs due to the influence of educational experience, culture, information media, and a person's character. Factors that influence attitudes directly can be seen from a person's reaction or response when assistance or empowerment is provided by ANC the community health worker.

Respondents' attitudes can also be influenced by reactions to the material presented in ANC assistance. According to (13) factors that influence a person's behavior include emotions, character and response. This research shows that attitude can determine a person's personality. The research results seen after participating in mentoring by ANC the community health worker were positive responses from respondents regarding the evaluation of the implementation of ANC community health worker empowerment. According to (14),

attitude is a reaction that can be closed from a person to something that can cause a stimulus or object.

Table 4. Influence of knowledge and attitudes before and after the intervention for pregnant women

Variable	N	Mran Rank	Z	P
Intervention Group (Community Health Worker Empowerment)				
Knowledge	20	5	2.333	0.02
Attitude	20	5	2.449	0.014
Control Group (Extension)				
Knowledge	20	1	1	0.317
Attitude	20	1	1.2	0.32

Bivariate Analysis

Based on **Table 4**, it is known that in the case group after knowledge and attitudes were intervened through cadre training, it was found that $p < \alpha 0.05$, it can be concluded that knowledge and attitudes influenced ANC visits, whereas in the control group after knowledge and attitudes were intervened through counseling, the value was $p > \alpha 0.05$ can be concluded that there is no influence on the knowledge and attitudes of pregnant women after the intervention.

Based on **Table 5**, it is known that in the case group after empowering ANC the community health worker it was found that $p < \alpha 0.05$, it was concluded that empowering ANC the community health worker had an effect on ANC visits, while in the control group it was found that $p > \alpha 0.05$ so it was

concluded that empowering ANC the community health worker had no effect on ANC visits.

Based on **Table 6**, the difference value is 3.44 and $p < \alpha 0.05$. which means there is a difference in the empowerment of ANC the community health worker regarding visits by Pregnant women at the Community Health Center in the Bengkulu City working area in 2020.

Table 5. The Effect of Empowering ANC The community health worker on ANC visits by pregnant women

Variable	N	Mean Rank	Z	P
Intervention Group (Community Health Worker Empowerment)				
Visits	20	6	2.559	0.001
Control Group (Extension)				
Visits	20	1	1	0.12

Table 6. Differences in Empowerment of ANC The community health worker on ANC Visits by Pregnant Women

Variable	Mann Whitney	Z	p
Visits	73.5	3.44	0.001

DISCUSSION

Based on **Table 1**, it is known that the control group with a higher risk age, most of the control group with working status, have a high risk and have a risky pregnancy interval. In general, this research is in line with research (15) which found that the majority of respondents had working status and a high

number of parity. Age, parity and their interaction will increase the risk of pregnancy complications such as gestational hypertension, premature labor, placental disorders and fetal distress (16).

Table 2 explains that there was an increase in knowledge and attitudes after the empowerment of community health worker. This is because of the role of community health worker in increasing mother's knowledge when making ANC visits to Posyandu which influences mother's awareness of making visits. Research conducted by Destariyani 2023 stated that training carried out on community health worker had a positive impact on increasing visits during pregnancy. This is because the community health worker are part of the community so it will be easier to convey health information related to pregnancy (17). Based on the results of **Table 3**, it can be seen that there was an increase in the average value of knowledge in the case group before and after the intervention. This shows that there was an increase in knowledge in the case group after the health education was carried out by community health worker using the ANC book as a guide to assisting ANC cadres which was previously provided. to participants, which can be concluded that this training balances the increase in community health worker knowledge obtained, in line with research carried out by (18) that the training or mentoring will increase standards and knowledge for implementing ANC. In line with theory (19) training can directly emphasize tasks or roles because giving

tasks would immediately show a response to the training given so that changes in behavior can be immediately assessed. The attitude variable shows an increase in the average attitude value in the case group before and after the intervention. This is in line with the theory (19) that the formation of a person's attitude occurs due to the influence of educational experience, culture, information media, and a person's character. Factors that directly influence attitudes can be seen from a person's reaction or response when assistance or empowerment is provided by ANC community health worker. Respondents' attitudes can also be influenced by reactions to the material presented in ANC assistance. According to (19) factors that influence a person's behavior include emotions, character and response. This research shows that attitude can determine a person's personality. The research results seen after participating in mentoring by ANC community health worker were positive responses from respondents regarding the evaluation of the implementation of ANC community health worker empowerment. According to (20) attitude is a reaction that can be closed from a person to something that can cause a stimulus or object.

Bivariate results were obtained ($p=0.020 < 0.05$) **Table 4** which means that there is an influence of ANC community health worker empowerment through knowledge on ANC visits. In line with research (21) which states that empowerment can improve the quality of antenatal care and pregnant women

can get access to ANC services. Empowerment through health education provided is an activity of conveying messages, providing confidence that can make people aware, know and understand, even want and will carry out recommendations given regarding health (22). Mentoring provided by ANC the community health worker to respondents using the ANC community health worker guidebook. This media contains complete information about ANC, with this health education media it becomes an alternative for health education to make it easier for respondents to understand the education or counseling provided (23).

The bivariate results showed that $p=0.014$, **Table 4** meaning that empowerment of ANC the community health worker through attitudes had an influence on ANC visits. These results are in accordance with the statement, that attitude is an important factor for changing behavior. With a change in attitude, pregnant women will carry out ANC visits. A person can change their attitude due to the delivery of information, knowing the impact of not being able to do so. Empowering ANC the community health worker is a persuasive activity which influences individual or community behavior so that it can maintain and improve health status. Through empowering ANC the community health worker, this is a form of community participation to increase knowledge and attitudes, especially about ANC. Empowering the community health worker can change respondents' behavior towards health

services, in this case regarding ANC visits. Apart from providing counseling, ANC the community health worker also directly accompany pregnant women during ANC visits to Pratik. independent midwife or other health service center.

According to a person's behavior is created based on the relationship between stimulation and response, those who provide stimulation are the community health worker, where proactive the community health worker can invite and accompany pregnant women to make ANC visits (24). It is through this stimulation that will make pregnant women to willing to be accompanied in the implementation of ANC by the community health worker which has an impact on increasing ANC visits. Factors that can influence behavior change are internal factors, namely encouragement that raises awareness to change one's behavior, apart from that, there are also external factors, namely the surrounding environment(25).

Based on **Table 5** Empowerment carried out by the community health worker is emphasized on how respondents master the material presented and the extent to which the material or knowledge can be applied persuasively(4). Based on the bivariate results, it was found that $p=0.001$ ($p<0.05$), this means that there is an influence of ANC community health worker empowerment on ANC visits. According to research states that ANC services provide a positive contribution for pregnant women to be able to carry out ANC visits according to the standards(26).

The community health worker play an active role in maternal and child health services where the community health worker can provide information about health problems directly to the community because the community health worker are closest to the community, the community health worker work together with the community, and directly with the community mobilize community groups to make regular ANC visits (5).

The results of the research show that ANC visits should receive assistance from the community health worker to increase awareness of pregnant women about carrying out ANC. Assistance can change the behavior of pregnant women in carrying out visits because the community health worker directly invite pregnant women to carry out examinations so that pregnant women are encouraged by their conscience to change their initial behavior. not knowing the benefits of pregnancy and finally having an ANC examination(27).

The mentoring process is very influential because mentoring will improve knowledge, attitudes and morals. In saving the health of mothers and children, one of the roles of the community health worker is needed, namely through mentoring. Mentoring is a process of direct approach by the community health worker to the community where the community health worker can provide positive encouragement so that they can stimulate the community to change behavior, improve ideas through

direct experience so as time goes by there is a change in behavior by the community(28).

Health the community health worker are very much needed in society because they can help provide health services in the community. The community health worker are people who are close to the community so they can directly monitor the community, making it easier to carry out their duties. The community health worker who can bring about change are the community health worker who play an active role in society. Empowering the community health worker can make it easier for mothers in their pregnancy process so that abnormalities in pregnancy can be detected early, through ANC visits, efforts are made to ensure mothers can give birth physiologically without any complications. Collaboration between the community health worker and midwives is very necessary because it can create a healthy society (28). Based on **Table 6** the results of the Mann Whitney test, it was found that the p value for the difference before the intervention and after the visit intervention for the case group and for the control group was $p=0.001$, it was concluded that there was a significant difference between the difference before the intervention and after the intervention in the group that received treatment in the form of cadre empowerment. ANC compared with groups without empowerment of ANC the community health worker . This research is in accordance with which states that the support provided by the family in the form of mentoring will change the

behavior of pregnant women in the form of providing information about ANC, which can increase awareness about pregnancy and will influence the pregnancy process and increase pregnancy checks(29).

CONCLUSION AND RECOMMENDATION

Empowering ANC the community health worker influences ANC visits among pregnant women. The results of this research are used as alternative recommendations for increasing ANC visits of pregnant women.

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