THE RELATIONSHIP OF ANTENATAL CARE SERVICES WITH THE INCIDENT OF LOW BIRTH WEIGHT

Nita Merzalia[1], Ahmad Syafiq[2]

[1.2] Fakultas Kesehatan Masyarakat, Universitas Indonesia
Email correspondence mamaagung.merzalia@gmail.com

ABSTRAK : HUBUNGAN PELAYANAN PERAWATAN ANTENATAL DENGAN KEJADIAN BERAT BADAN LAHIR RENDAH

Latar Belakang: Survei Status Gizi Indonesia (SSGI 2021) angka kejadian BBLR di Indonesia mengalami peningkatan 0,4% dari tahun 2018 yaitu dari 6,2% menjadi 6,6%. Pelayanan ANC dapat mengdientifikasi pelayanan yang diberikan kepada ibu hamil, termasuk penelusuran riwayat penyakit ibu, pemeriksaan tekanan darah, pemeriksaan anemia, pergerakan janin, tindakan pemberian suplementasi zat besi dan asam folat serta pendidikan kesehatan secara keseluruhan. Beberapa penelitian lain juga menunjukkan keterkaitan antara pelayanan ANC dengan kejadian BBLR.

Tujuan: Adapun penelitian ini bertujuan untuk mengetahui hubungan pelayanan ANC dengan kejadian BBLR di Kabupaten Belitung tahun 2022.

Metode: Desain potong lintang (cross-sectional) yang berlokasi penelitian 9 (sembilan) Puskesmas wilayah kerja Dinas Kesehatan Kabupaten Belitung pada periode 1 Januari-31 Desember tahun 2022 yang tercatat di kohort ibu. Analisis menggunakan Uji Chi Square untuk melihat hubungan pelayanan ANC dengan kejadian BBLR. Derajat suatu hubungan diperoleh dengan ukuran asosiasi berupa odds ratio (OR).

Hasil: Didapatkan bahwa Berat Badan Lahir rendah (BBLR) yaitu 33 (10,6%). Ibu dengan jumlah kunjungan ANC tidak sesuai standar (OR=6,12 95% CI 2,44 – 15,31; P value <0,001); jumlah kualitas layanan ANC tidak sesuai standar (OR=5,32 95% CI 1,47 – 19,27; P value 0,021); komposit pelayanan ANC tidak sesuai standar (OR=5,59 95% CI 2,34 – 13,35; P value <0,001) berisiko melahirkan bayi BBLR dibanding dengan ibu yang memiliki pelayanan ANC sesuai standar.

Kesimpulan: Keberhasilan pelayanan ANC pada penelitian ini mendukung dalam menurunkan kejadian BBLR. Jumlah kunjungan, jumlah kualitas layanan ANC, dan komposit pelayanan ANC merupakan faktor yang baik untuk menurunkan kejadian BBLR. Disarankan bahwa peningkatan petugas kesehatan yang memberikan layanan ANC harus berupaya meningkatkan kelengkapan cakupan dan layanan ANC kepada seluruh ibu hamil.

Saran: fokus pada kualitas dan minimum kuantitas layanan ANC adalah suatu yang sangat penting untuk dicapai

Kata Kunci : BBLR, Kabupaten Belitung, Pelayanan Antenatal Care

ABSTRACT

Background: The Indonesian Nutrition Status Survey (SSGI 2021) shows that the incidence of LBW in Indonesia has increased by 0.4% from 2018, namely from 6.2% to 6.6%. ANC services can identify the services provided to pregnant women, including tracing the mother's medical history, checking blood pressure, examining anemia, fetal movements, providing iron and folic acid supplementation and overall health education. Several other studies also show a link between ANC services and the incidence of LBW

Purpose: This research aims to determine the relationship between ANC services and the incidence of LBW in Belitung Regency in 2022.

Methods: Cross-sectional design with research locations in 9 (nine) Community Health Centers in the working area of the Belitung Regency Health Service in the period 1 January-31 December 2022 which were recorded in the maternal cohort. The analysis used the Chi Square Test to see the relationship between ANC services and the incidence of LBW. The degree of a relationship is obtained by measuring the association in the form of the odds ratio (OR).

Results: It was found that low birth weight (LBW) was 33 (10.6%). Mothers whose number of ANC visits did not meet the standard (OR=6.12 95% CI 2.44 – 15.31; P value <0.001); the number of ANC service qualities not up to standard (OR=5.32 95% CI 1.47 – 19.27; P value 0.021); composite ANC services that do not meet

 DOI 10.33024, http://ejurnalmalahayati.ac.id/index.php/kebidanan

standards (OR=5.59 95% CI 2.34 – 13.35; P value <0.001) have a risk of giving birth to LBW babies compared to mothers who have ANC services that meet standards.

Conclusion: The success of ANC services in this study supports reducing the incidence of LBW. The number of visits, the quality of ANC services, and the composite of ANC services are good factors for reducing the incidence of LBW. It is recommended that an increase in health workers providing ANC services should strive to increase the completeness of ANC coverage and services to all pregnant women.

Suggestions; Antenatal care services can improve again.

Keywords: LBW, Belitung Regency, Antenatal Care Services

INTRODUCTION

Low Birth Weight (LBW) is a public health problem that still occurs globally and has short-term and long-term effects (Hidayah, 2017). LBW is a baby with a birth weight of less than 2500 grams (Ningsih, 2020). The percentage of births of babies with LBW is one of the indicators most widely used to measure the health level of the population throughout the world, and is often used as an indicator of Intra Uterine Growth Restriction (IUGR), morbidity, mortality and disability in developing countries due to the unavailability of information regarding nutrition (Ningsih, 2020; Weyori et al., 2022).

LBW is one of the risk factors that most influences the incidence of neonatal death. The World Health Organization (WHO) in 2018 stated that the prevalence of LBW babies in the world is around 15.5% or around 20 million babies born every year and around 96.5% of them occur in developing countries (WHO, 2018). Based on data from the 2012 Indonesian Demographic and Health Survey, the infant mortality rate (IMR) reached 32 per 1,000 births (Sormin et al., 2016). Based on the results of the 2018 Indonesian Basic Health Research (Riskesdas), LBW is the second highest cause of risk factor for infant death in Indonesia at 34%. The birth rate of LBW babies in Indonesia reaches 350,000 every year. In 2019 LBW was the main cause of neonatal death (AKN) at 35.5% (Kementerian Kesehatan RI, 2020).

Based on data from the Indonesian Nutrition Status Survey (SSGI 2021), the incidence of LBW in Indonesia has increased by 0.4% from 2018, namely from 6.2% to 6.6% (Kemenkes RI, 2021). The profile of the Bangka Belitung Islands Provincial Health Service states that the incidence of LBW in the Bangka Belitung Islands Province in 2020-2022 is around 4.20%-4.38%. Of the 7 regencies/cities, Belitung Regency is the district that contributed the most in the last 3 years with a percentage of LBW rates ranging from 6.59% -7.69%. In 2021, Belitung Regency is one of the regencies that is the locus for reducing MMR/IMR out of 200 regencies/cities throughout Indonesia determined by the Ministry of Health of the Republic of Indonesia (Dinas Kesehatan Provinsi Kepulauan Bangka Belitung, 2022).

The impact of LBW incidents has short-term and long-term impacts. Short-term impacts, babies with LBW are at risk of experiencing pain during the neonatal period (such as respiratory problems, infections, body temperature disorders and nutritional disorders), then there are other disorders related to the immaturity of the baby's internal organs and need intensive care so as not to cause pain and death. The long-term impact of LBW, babies are at risk of experiencing growth delays from the start, developmental delays, poor school performance, risk of death in infancy and childhood, risk of experiencing non-communicable diseases in adulthood (Sormin et al., 2016).

The factors that cause LBW are the result of the interaction of various factors through processes that take place while in the womb. Factors that can influence LBW are internal factors (mother), external factors and fetal factors (Daniels, 2011; Kurniasari et al., 2023). Internal factors include antenatal care (ANC) visits, hemoglobin levels of pregnant women, mother's weight during pregnancy, parity, distance between pregnancies, upper arm circumference, age, preeclampsia and nutritional status of the mother. External factors consist of the environment, socio-economics and health facilities. Fetal factors consist of prematurity and multiple pregnancies (Kurniasari et al., 2023; Purwanto & Wahyuni, 2016; Sormin et al., 2016).

Antenatal Care (ANC) is a routine pregnancy check-up which aims to check the condition of the mother and fetus, ensure that the pregnancy can progress normally and prepare for childbirth (Palewang et al., 2019). ANC visits have an important role in efforts to detect and treat possible LBW incidents. ANC provides pregnant women with access to various interventions to improve maternal and child health (Mekonnen et al., 2023; Weyori et al., 2022). Antenatal care can be used as an initial screening for the condition of the baby to be born. Babies can be born with high, normal or low birth

weight. On this occasion the author will focus on low birth weight babies (Sukarni, 2014). Based on data from Riskesdas Indonesia in 2013, K1 coverage nationally was 81.6% and K4 coverage nationally was 70.5%. It was found that the difference between ideal K1 and K4 coverage nationally showed that there were 12% of mothers who received ideal K1 but did not continue ANC according to standards until K4 (Kementerian Kesehatan RI, 2013; Ruindungan et al., 2017).

Reducing the incidence of LBW will have an impact on reducing the Infant Mortality Rate (IMR). Lattof et al's research states that a lack of ANC visits in pregnant women can increase the risk of LBW events 2 mores (Lattof et al., 2020). Guidelines from the World Health Organization (WHO) explain that ANC services can identify services provided to pregnant women, including tracing the mother's medical history, checking blood pressure, checking for anemia, fetal movement, providing iron and folic acid supplementation and overall health education (World Health Organization, 2016).Several other studies also show a link between ANC services and the incidence of LBW (Arsyi et al., 2022; Arsyi & Besral, 2021). Another study conducted at RSU Tangerang showed that poor ANC quality would increase the risk of LBW by 3.7 times compared to good ANC quality, but age and pregnancy complications were not factors that influenced the incidence of LBW (Oktasila, 2015). Ekasari's research (2019) shows that there is a relationship between antenatal care and the incidence of LBW, which obtained an OR value of 8.00, which means that pregnant women who do not have an incomplete ANC are 8 times more likely to experience LBW than pregnant women who have a complete ANC (Ekasari & Natalia, 2019).

RESEARCH METHODS

Design and Location of the Research

This research is using a cross-sectional design, which is when exposure and outcome are measured simultaneously. Nine community health centers—Tanjung Pandan, Air Saga, Perawas, Sijuk, Tanjung Binga, Badau, Membalong, Simpang Rusa, and Selat Nasik—are located in the working area of Belitung Regency, Belitung Islands, where the research is being conducted. Between March and April of 2024, data will be gathered.

Both the population and the sample

All of the study's participants were infants living in the Belitung Regency Health Center's operational area in 2022. A subset of infants who fulfilled the inclusion and exclusion criteria and were born in 2022 in nine community health centers within the Belitung Regency Health Service's service area served as the study's sample. Live births documented in the maternal cohort between January 1, 2022, and December 31, 2022, at nine community health centers in the Belitung District Health Service's service area, met the inclusion criteria for this study. In the Belitung Regency Community Health Center's work area, babies were born surviving as part of the cluster random sample approach employed in the sampling process. 310 samples are needed as the minimum sample, according to the findings of calculating the minimum sample using the hypothesis test formula for various proportions.

Collecting and Analyzing Data

"Researchers chose 2 clusters per village/kelurahan from 9 health centers (the highest proportion of LBW in each community health center), but at the Nasik Strait Community Health Center, there was only 1 village that had an LBW case, so the total of selected villages/subdistricts was 17 villages/subdistricts." The cluster random sampling technique was used in this study to sample, which involves selecting multiple groups at random from the population and then taking some of the elements of each selected group to use as samples. In order to ensure a fair comparison, proportionate sampling was then used to establish the number of samples in the chosen cluster. The frequency distribution of all the variables examined—both dependent (LBW) and independent (number of ANC visits, quality of ANC services, and ANC services composite)—in the Department's work area is then determined by applying univariate analysis to the collected data. Health of Belitung Regency 2022. "The analysis is shown as numbers and frequencies in a tabular format. Subsequently, this research employs bivariate analysis to examine the correlation between the independent and dependent variables. "The test used in this bivariate analysis is the Chi Square test (X^2) because the two variables (independent and dependent) are categorical data using a confidence level of 95%." The relationship can be determined using the Chi Square test. Results of a statistical test are considered significant if the p value is less than 0.05. Comparing the odds in the exposed group with the unexposed group yields the degree of relationship by measuring the association in the form of an odds ratio (OR). In this study When the independent variable's magnitude is compared to the occurrence of the dependent variable, it indicates that the independent variable is either neutral or unrelated to the dependent variable's occurrence,

 DOI 10.33024, http://ejurnalmalahayati.ac.id/index.php/kebidanan

while an OR > 1 indicates that the independent variable is a risk factor and is significantly related to the dependent variable's occurrence. Lastly, if the independent variable has an OR less than 1, it is a protective factor that will lower the incidence of the dependent variable.

RESEARCH RESULTS

The 310 live births that were chosen and registered in the maternal cohort at nine community health centers in the Belitung District Health Service's service region in 2022 served as the research subjects. Table 1 provides the following summary of the incidence of LBW:

Table 1
Description of LBW incidents in Belitung Regency in 2022, (n=310)

Variable	Number (n)	Frequency (%)
Normal	277	89.4
LBW	33	10.6

Table 1 shows that there were 277 babies with normal weight (89.4%). Meanwhile, babies with low birth weight (LBW) were 33 (10.6%).

Table 2
Overview of LBW Risk Factors in Belitung Regency in 2022, (n=310)

Variables	N	%
Number of ANC visits		
Compliant with standards	285	91.9
Non-compliant with stadards	25	8.1
Quality of ANC services		
Compliant with standards	299	96.5
Non-compliant with stadards	11	3.5
ANC sevices composite		
Compliant with standards	280	90.3
Non-compliant with stadards	30	9.7

Table 2 shows that the majority of mothers had the number of ANC visits that compliant with standards (91.9%), the quality of ANC services that compliant with standards (96.5%) and the ANC service composite that compliant with standards (90.3%).

Table 3
Relationship between ANC services and LBW incidence in Belitung Regency in 2022, (n=310)

Variables	Normal		LBW		Total	P-Value	OR (95% CI)
	n	%	n	%			
Number of ANC visits							
Compliant with standards	261	91.6	24	8.4	285	<0.001	1
Non-compliant with stadards	16	64.0	9	36.0	25		6.12 (2.44 – 15.31)
Quality of ANC services							
Compliant with standards	270	90.3	29	9.7	299	0.021	1
Non-compliant with stadards	7	63.6	4	36.4	11		5.32 (1.47– 19.27)
ANC sevices composite							
Compliant with standards	257	91.8	23	8.2	280	<0.001	1
Non-compliant with stadards	20	66.7	10	33.3	30		5.59 (2.34 – 13.35)

Table 3 demonstrates that, in comparison to the group whose number of ANC visits compliant with standards (8.4%), the incidence of LBW was highest in the group whose number of visits non-compliant with standards (36%). The number of ANC visits and the incidence of LBW are related, according to the findings of statistical tests (p value <0.001). Compared to whose ANC visit compliant with standards, mothers whose ANC visit non-compliant with standards of the criterion had a 6.12-fold increased risk of giving birth to LBW babies (OR=6.12 95% CI 2.44 – 15.31).

The incidence of LBW was higher in the ANC service quality ANC that non-compliant with stadards (36.4%) than in the group that did (9.7%), according to the results. The outcomes of statistical analyses indicate that there is a significant (p value = 0.021) between the occurrence of LBW and the caliber of ANC services. Compared to mothers whose ANC service quality meets norms, mothers whose ANC service quality non-compliant with stadards are 5.32 times more likely to give birth to LBW babies (OR=5.32 95% CI 1.47 – 19.27).

The results showed that the incidence of LBW was highest in the composite group of ANC services

that non-compliant with stadards (33.3%) compared to the group that compliant with standards (8.2%). The results of statistical tests show that there is a relationship between composite ANC services and the incidence of LBW (p value <0.001). Mothers whose composite ANC services non-compliant with stadards had a 5.59 times risk of giving birth to LBW babies compared to mothers whose composite ANC services compliant with standards (OR=5.59 95% CI 2.34 – 13.35).

DISCUSSIONS

Overview of LBW incidents in Belitung Regency in 2022

LBW is a very important public health problem and still occurs globally. Apart from being caused by preterm birth (birth before 37 full weeks of gestation), LBW is also caused by small size for gestational age. Low Birth Weight (LBW) is a baby with a birth weight of less than 2500 grams. The percentage of babies born with weight birth is one of the indicators most widely used to measure the health level of the population throughout the world. Reducing the incidence of LBW is also a goal of health policy throughout the world (Tshotetsi, et al. (2019). Based on the results of the analysis, it was found that there were 277 children with Normal Birth Weight (89.4%) and 33 children with Low Birth Weight (10.6%). The results of this research are in line with research by Kurniasari et al (2023) which stated that the incidence of LBW at Ogan Ilir Regional Hospital in 2021 was 31 children (38.3%) and children with Normal Birth Weight were 50 children (61.7%) (Kurniasari et al., 2023).

LBW is a health problem that has received quite a lot of attention. This is because the risk of death in babies with low birth weight is four times greater than babies with normal weight. Apart from that, LBW babies have health complications, namely disorders of the respiratory system, digestion, central nervous system, cardiovascular, hematology, immunology, and so on (Ambarwati, 2015). The incidence of LBW is a health problem that will not only have an impact on survival after birth but will also affect the quality of life in the future related to the potential for disease that will be experienced due to the LBW condition (Bekela et al., 2020).

Overview of LBW Risk Factors in Belitung Regency in 2022

Antenatal Care (ANC) examinations are an important part of health care during pregnancy. Health service providers during pregnancy such as specialist doctors, obstetricians and gynecologists, general practitioners and nurses must be able to provide appropriate information with knowledge and professionalism in order to influence the mother's perceptions and decisions during pregnancy, childbirth and the postpartum period (Ruindungan et al., 2017). Pada setiap kunjungan ANC, petugas pelayanan kesehatan mengumpulkan dan menganalisis data mengenai kondisi ibu melalui anamnesis dan pemeriksaan fisik untuk mendapatkan diagnosis kehamilan. Antenatal care dapat digunakan sebagai screening awal terhadap kondisi bayi yang akan lahir. Bayi dapat lahir dengan kondisi bayi lahir dengan berat badan tinggi, normal ataupun rendah. Pada kesempatan ini penulis akan fokus pada bayi lahir dengan berat badan rendah. Berat Badan Lahir Rendah (BBLR) adalah bayi yang lahir dengan berat badan sama atau kurang dari 2500 gram (Sukarni, 2014).

The research results show that ANC services are a risk factor for LBW. This risk factor is seen based on the number of ANC visits, quality of ANC services and composite ANC services. The number of ANC visits in Belitung Regency in 2022 that met the standards was 91.9% and those that did not meet the standards was 8.1%. These results are in line with research by Ningsih (2020) which stated that the number of visits by respondents in the study that were >4 times or according to standards was 94.9% and ANC visits <4 times or did not meet standards was 5.1%. Pregnancy checks or ANC services are examinations of pregnant women both physically and mentally and save mothers and children during pregnancy, childbirth and the postpartum period (Ningsih, 2020).

The quality of ANC services in Belitung Regency in 2022 that meet standards is 96.5% and those that do not meet standards are 3.5%. The composite of ANC services in Belitung Regency in 2022 that meet standards is 90.3% and those that do not meet standards are 9.7%. The recommended ANC examination is at least 4 times during pregnancy. In this time period, it is hoped that ANC services according to standards can be met both during pregnancy, childbirth and the mother's postpartum period so that babies are born healthy and can reduce maternal and perinatal morbidity and mortality. The quality of ANC services can be seen from the service facilities and also the service staff. Research by Sormin et al (2016) shows that the use of ANC quality can be seen from the general health and laboratory examinations carried out on pregnant women. The research results show that good use of ANC services occurs when pregnant women use public health services and laboratories. The quality of ANC services is also seen from the quality of ANC officers. Research by Sormin et al (2016) shows that

 DOI 10.33024, http://ejurnalmalahayati.ac.id/index.php/kebidanan

97.4% of respondents were satisfied with the quality of ANC officers and 71.8% of respondents were satisfied with the first impression of ANC services (Sormin et al., 2016).

According to Prawirohardjo in 2014, the benefits of ANC services are to help mothers and their families to prepare for birth and emergencies that may occur, detect and treat complications that arise during pregnancy, whether medical, surgical or obstetric, improve and maintain physical and mental health. and social care for mothers and babies by providing education, supplements and immunizations, helping prepare mothers to breastfeed babies, through the normal postpartum period, and maintaining children's health physically, psychologically and socially (Prawirohardjo, 2014).

Relationship between ANC services and LBW incidents in Belitung Regency in 2022

Based on the research results, it shows that ANC services have a significant relationship with the incidence of LBW in Belitung Regency in 2022 with the number of ANC visits (pvalue <0.001), quality of ANC services (pvalue 0.021) and ANC service composite (pvalue <0.001). The results of this study are in line with several studies which state that pregnant women who visit ANC according to standards experience a reduction in the incidence of LBW (Kananura et al., 2017; Kassar et al., 2013; Khatun & Rahman, 2008). Follow ANC services recommended by the World Health Organization (WHO) for pregnant women and families to receive health services and receive information regarding obstetric care and identifying management of infectious diseases. Uwimana's research (2023) also explains that pregnant women who receive quality ANC services that meet standards can reduce the prevalence of LBW incidents (Uwimana et al., 2023).

Ibu hamil yang memiliki kualitas pelayanan kunjungan ANC yang baik dan sesuai standar memungkinkan pengurangan sebesar 4,18% kejadian BBLR (National Institute of Statistics of Rwanda (NISR) & M of H (MOH) [Rwanda], 2021). Good ANC service is a predictor of LBW events. The results of this study are in line with research by Euindungan (2017) which states that there is a relationship between Antenatal Care (ANC) examinations and the incidence of LBW (pvalue 0.0001) (Ruindungan et al., 2017). According to Sistiarani (2008), maternal factors and the quality of antenatal care are at risk of low birth weight (LBW). A study of mothers who had their pregnancy checked by health workers and gave birth at the Banyumas District Hospital in 2008 found that poor quality of antenatal care was a risk factor for LBW (OR 5.85), the quality of antenatal care was assessed by the quality of health workers, the quality of the environment, the quality of visit frequency, examination activities according to 7T service standards (weighing BB, measuring TFU, measuring BP, administering TT, administering Fe tablets, PMS testing, interviewing) as well as communication and health education (Sistiarani, 2008).

The results of the study showed that mothers whose quality of ANC services did not meet standards were 5.32 times more likely to give birth to LBW babies compared to mothers whose quality of ANC services met standards. Mothers whose number of ANC visits does not meet the standards are 6.12 times more likely to give birth to LBW babies compared to mothers whose number of ANC visits meet the standards. Mothers whose composite ANC services did not meet standards had a 5.59 times risk of giving birth to LBW babies compared to mothers whose composite ANC services met standards. Pregnancy examinations have an important role in preventing and detecting abnormalities and complications in mothers and babies, including the risk of low birth weight. Pregnancy examination services are a public health program, especially maternal and child health programs. Pregnancy progress, including improving maternal health and normal fetal development, can be monitored during Antenatal Care examination visits. Apart from that, Antenatal Care examinations can detect early possible danger signs that occur during pregnancy which can affect the health condition of the mother and baby. If a mother gives birth to a LBW baby and is not treated appropriately, it will affect growth and cognitive development as well as the emergence of chronic diseases in the baby throughout life (Brown et al., 2008).

ANC provides pregnant women with access to various interventions to improve maternal and child health (Mekonnen et al., 2023; Weyori et al., 2022). The results of this study are also in line with research by Fatimah (2017) which states that there is a significant relationship between ANC visits made by pregnant women and the incidence of LBW. When visiting ANC, pregnant women can carry out preventive efforts including health promotion during pregnancy. So it can prevent the occurrence of LBW when the mother gives birth (Fatimah et al., 2017). In accordance with provincial regulations, pregnant women must undergo examinations with health workers at least 4 times during pregnancy. ANC services aim to ensure that all pregnant women have the same rights in carrying out services. One of the goals of ANC services is to provide comprehensive and integrated services. Apart from that, ANC

services can also provide early detection of events experienced by pregnant women (Novika et al., 2013).

Lattof's research states that pregnant women who miss standard ANC services are 4 times more at risk of giving birth to LBW children. In low-middle developing countries, LBW cases cause increased natal morbidity and mortality, hamper cognitive development and inhibit growth and increase the risk of chronic diseases in children later in life (Lattof et al., 2020). The incidence of LBW is related to ANC services and the lack of availability of ANC service facilities and infrastructure (Tayebi et al., 2014; Zhou et al., 2019).

CONCLUSIONS

In this study, ANC services were successful in reducing LBW incidence. When mothers have a number of ANC visits that do not meet the standards, they are 6.12 times more likely to have LBW babies (OR=6.12 95% CI 2.44 - 15.31). A mother who receives poor quality ANC services is 5.32 times more likely to give birth to a LBW baby compared to a mother who receives high quality ANC services (OR=5.32 95% CI 1.47 - 19.27). In comparison to mothers whose composite ANC services met standards, those whose composite ANC services did not meet standards had a 5.59 times higher risk of having LBW babies (OR=5.59 95% CI 2.34 - 13.35). The benefits of ANC services include helping women and their families get ready for labor and any emergencies that may arise, identifying and treating any medical, surgical, or obstetric complications that may arise, and improving and maintaining the physical, mental, and social health of mothers and babies by offering education, supplements, and immunizations. Additionally, ANC services help women prepare for breastfeeding and get through a normal postpartum period and maintain the physical, psychological, and social health of their children.

SUGGESTIONS

It is recommended that health workers providing ANC services strive to increase the coverage and availability of ANC for all pregnant women. In addition, maternal health literacy is extremely important for the well-being of mothers and babies (for example emphasizing the importance of comprehensive ANC services). In addition, it is very important to focus on the quality and minimum quantity of ANC services.

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