

The Factors Affecting Post Date Pregnancy in Third Trimester Pregnant Women in Hospital Setting

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ABSTRACT

Introduction: An overdue pregnancy or post date pregnancy is one that lasts between 40 and 42 weeks. Late pregnancy can be caused by several factors, including age, gravida, fetal location, and post date history. **Objective:** The purpose of this study was to identify and analyze the Factors Affecting Post Date Pregnancy at Balung Regional hospital in 2019. Post date can increase the risk of perinatal mortality and morbidity **Methods:** The design in this study is a descriptive analytic method with a cross sectional approach, using simple random sampling consisting of 620 pregnant women in the third trimester. Data were analyzed by chi-square test. The results of this study were 53.5% of pregnant women in the third trimester aged 20-34 years, 52.49% of multigravida mothers, 74.5% of mothers with normal fetal position and 73.7% of mothers without post-date history. **Results:** The results of bivariate analysis showed that the age factor indicated ($p = 0.000$), gravida ($p = 0.000$), fetal location ($p = 0.000$), post date history ($p = 0.000$). Significance value showed $0.000 < 0.050$. Thus (X^2 Count $> X^2$ table) it is concluded that H_0 is rejected. **Conclusion:** It is hoped that the results of community research are more selective in planning pregnancy programs and increasing the role of families in actively participating in the welfare of pregnant women and fetuses.

ABSTRAK

Latar belakang: Kehamilan lewat waktu atau kehamilan postdate adalah kehamilan yang berlangsung antara 40 dan 42 minggu. Kehamilan lewat waktu dapat disebabkan oleh beberapa faktor, antara lain usia, gravida, lokasi janin, dan riwayat post date. **Tujuan:** Tujuan dari penelitian ini adalah untuk mengidentifikasi dan menganalisis faktor-faktor yang mempengaruhi kehamilan postdate di RSUD Balung Tahun 2019. Post date dapat meningkatkan risiko mortalitas dan morbiditas perinatal. **Metode:** Desain dalam penelitian ini adalah metode deskriptif analitik dengan pendekatan cross sectional, menggunakan simple random sampling yang terdiri dari 620 ibu hamil trimester III. Data dianalisis dengan uji chi-square. Hasil penelitian ini adalah 53,5% ibu hamil trimester III usia 20-34 tahun, 52,49% ibu multigravida, 74,5% ibu dengan posisi janin normal dan 73,7% ibu tanpa riwayat post-date. **Hasil:** Hasil analisis bivariat menunjukkan bahwa faktor usia yang ditunjukkan ($p = 0,000$), gravida ($p = 0,000$), lokasi janin ($p = 0,000$), riwayat post date ($p = 0,000$). Nilai signifikansi menunjukkan $0,000 < 0,050$. Dengan demikian (X^2 Hitung $> X^2$ tabel) disimpulkan bahwa H_0 ditolak. **Kesimpulan:** Diharapkan dengan adanya penelitian ini masyarakat lebih selektif dalam merencanakan program kehamilan dan meningkatkan peran keluarga dalam berpartisipasi aktif dalam mensejahterakan ibu hamil dan janin

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Introduction:

Pregnancy is the condition in uterus and a products of conception (the meeting of the ovum and spermatozoa). Pregnancy is a natural and physiological process (Yanti, 2017). Postdate pregnancy is a pregnancy that lasts up to 42 weeks (294 days), or from the first period of your last menstrual period (Nugroho, 2012). According to WHO (World Health Organization) in 2016 among 6,240,830 singleton births with a gestation period of more than 42 weeks was 1.16%. The occurrence of post date births is significantly higher in the western region (USA, Mexico, Chile, etc.) than in the eastern region (China, Indonesia, Thailand, etc.). In general birth rate decreased from 1.49% in 2012 to 0.70% in 2016. Birth prevalence ranges from 1-10% worldwide, but there are large differences between countries. It depends on the diversity of the population studied and variations in obstetric practice. In Indonesia, in 2011 there were 85 people (0.20%) who died out of 31,855 pregnant women who experienced post date pregnancies, while in 2012 there were 91 people (0.26%) who died out of 31,891 pregnant women who experienced these pregnancies (Saifudin, 2016). The numbers of post date pregnancy in Indonesia in 2017 was 11,830 cases spread across all regions in Indonesia. The incidence rate in Indonesia ranges from 10.4% -12%. The Demographic and Health Survey (IDHS) in 2017 had a high maternal mortality rate at 305,000 per 100,000 live births. The highest cause is bleeding, which is 29.11%. Statistical data also shows that the mortality percentage in pregnancy is higher than in term pregnancy, where the pregnancy mortality rate reaches 5-7%. Based on preliminary studies that have been carried out at the Balung Regional Hospital in 2019, there were 620 pregnant women in the third trimester.

The accurate cause of Post Date pregnancy is not yet known. However, the factor that influences the occurrence is hormonal, where progesterone levels do not decrease rapidly even though the pregnancy is full term so that the sensitivity of the uterus to

oxytocin is reduced. The tendency factors for the occurrence of post date are age, gravida, and history of post (Yulistiani, et al., 2017). Post date has an impact on maternal morbidity and mortality. This is evidenced by the large number of post-date studies that explain the risk of postpartum hemorrhage and the risk of perinatal mortality and morbidity, including meconium-containing membranes, macrosomia. The treatments that have been applied include conducting antenatal examinations which are equipped with an examination of amniotic fluid volume and KTG (Cardiotography), labor induction to termination of maternal pregnancy through cesarean section surgery. Based on the description of the background, the problem can be formulated on What Factors Affect Post Date Pregnancy at the Balung Regional Hospital in 2019?

Methods:

This research use descriptive quantitative analytical method with cross sectional approach and the statistic use chi-square test (also known as the kai-square) to determine the magnitude of the relationship between the variables. The populations of this study were 620 third trimester pregnant women who experienced Post Date pregnancy in 2019. To determine the samples used slovin formula, resulting 243 cases of third trimester pregnant women at the Balung Regional Hospital were used as samples for this study.

Random sampling was used as technique in this study.. The advantages of this method can reduce bias and can determine the standard error of research. The inclusion criteria in this study were third trimester pregnant women at the Balung Regional Hospital and the exclusion criteria in this study are incomplete medical record data regarding the factors to be studied and third trimester pregnant women with post date accompanied by disease complications. In this study, use a research instrument in the form of a documentation sheet. The documentation sheet is an assessment sheet tool about the results of observations from patient medical record data

that has been determined according to variable criteria.

Results:

General data presented were some characteristics of respondents which included leopold I examination, leopold II examination, leopold III examination, leopold IV examination, birth spacing and placental location.

a. Leopold I Examination at Balung Regional Hospital in 2019

Table 4.1 Frequency Distribution of Third Trimester Pregnant Women Based on Leopold I Examination at Balung Regional Hospital in 2019

| Leopold I | Total (N) | Percentage (%) |
|--------------|------------|----------------|
| Head | 62 | 25.5 |
| Buttocks | 181 | 74.5 |
| Total | 243 | 100.0 |

Source: Medical Record Data at Balung Regional Hospital in 2019

Based on table 4.1, it was found that of the 243 third trimester pregnant women (100%), 181 pregnant women (74.5%) with Leopold I examination of the buttocks and 62 pregnant women (25.5%) with Leopold I examination of the head.

b. Leopold II Examination at Balung Regional Hospital in 2019

Table 4.2 Frequency Distribution of Third Trimester Pregnant Women Based on Leopold II Examination at Balung Regional Hospital in 2019

| Leopold II | Total (N) | Percentage (%) |
|--------------|------------|----------------|
| Head | 20 | 8.2 |
| Buttocks | 42 | 17.3 |
| Puka/Puki | 181 | 74.5 |
| Total | 243 | 100.0 |

Source: Medical Record Data at Balung Regional Hospital in 2019

Based on table 4.2, it was found that of

the 243 third trimester pregnant women (100%), 181 pregnant women (74.5%) with Leopold II Puka/Puki examination, 42 pregnant women (17.3%) with Leopold II examination of the buttocks. and 20 pregnant women (8.2%) with Leopold II examination head.

c. Leopold III Examination at Balung Regional Hospital in 2019

Table 4.3 Frequency Distribution of Third Trimester Pregnant Women Based on Leopold III Examination at Balung Regional Hospital in 2019

| Leopold III | Total (N) | Percentage(%) |
|--------------|------------|---------------|
| Buttocks | 62 | 25.5 |
| Head | 181 | 74.5 |
| Total | 243 | 100.0 |

Source: Medical Record Data at Balung Regional Hospital in 2019

Based on table 4.3, it was found that of the 243 third trimester pregnant women (100%), 181 pregnant women (74.5%) with Leopold III examination of the head, 62 pregnant women (25.5%) with Leopold III examination of the buttocks.

d. Identifying Post Date History in Third Trimester Pregnant Women at Balung Regional Hospital

Table 4.10 Distribution of Frequency based on Fetal Location in Third trimester Pregnant Women at Balung Regional Hospital in 2019

| Post Date History | Total (N) | Percentage (%) |
|-------------------|------------|----------------|
| Yes | 64 | 26.3 |
| Not | 179 | 73.7 |
| Total | 243 | 100.0 |

Source: Medical Record Data at Balung Regional Hospital in 2019

Based on table 4.10, it was found that of the 243 third trimester pregnant women

(100%), 179 pregnant women (73.7%) did not have a post date history, and 64 pregnant women (26.3%) had a post date history.

e. Identifying Post Date Pregnancy Incidence in Third Trimester Pregnant Women at Balung Regional Hospital

Table 4.11 Frequency Distribution based on Post Date Pregnancy Incidence in Third Trimester Pregnant Women at Balung Regional Hospital in 2019

| Pregnancy Post Date | Frequency (n) | Percentage (%) |
|---------------------|---------------|----------------|
| Post Date | 202 | 83.1 |
| Non post date | 41 | 16.9 |
| amount | 243 | 100.0 |

Source: Medical Record Data at Balung Regional Hospital in 2019

Based on table 4.11, it was found that of the 243 (100%), 202 of them experienced post-date pregnancies (83.1%) and 41 non-post-dates (16.9%).

f. Analyzing the Effect of Age on Third Trimester Pregnant Women with Post Date at Balung Regional Hospital

Table 4.12 Frequency distribution based on the effect of age on third trimester pregnant women with post date at Balung Regional Hospital in 2019

| AGE | Pregnancy Post Date | | Total (N) | X ² Count | | Contingency Coefficient |
|--------------|---------------------|---------------|-----------|----------------------|---------------|-------------------------|
| | Post Date | Non Post Date | | Post Date | Non Post Date | |
| <20 | 8 | 12 | 20 | 52.2 | 0.2 | 0.26 |
| 20-34 | 114 | 16 | 130 | 32.3 | 0.39 | |
| > 35 | 80 | 13 | 93 | 2.39 | 0.03 | |
| TOTAL | 202 | 41 | 243 | 86.89 | 0.62 | |

87.51(0.000)

Source: Medical Record Data at Balung Regional Hospital in 2019

Based on table 4.12, it was found that 130 pregnant women in term III aged between 20-34 years, 114 pregnant women of whom

experienced post-date pregnancies and 16 non-post-date pregnant women. 93 pregnant women TM III more than 35 years old, the result were 80 pregnant women of whom experienced post date pregnancy and 13 non post date pregnant women. At the age of less than 20 years, the results were 20 pregnant women, 8 pregnant women including post date and 12 non post date pregnant women.

In the analysis, between Age and Post Date Pregnancy, the value of X²count of 87.51, X² Table with df = 2 at a significance level of 0.05 = 5.991 with significance value < 0.050 (0,000 < 0,050). Thus because (X² Count > X² Table) then it is concluded to reject H₀ or accept H_a. It showed that there is an effect of age on the numbers of post date pregnancy in third trimester pregnant women. The correlation coefficient (coefficient contingency) of 0.26 is in the low / weak category.

g. Analyzing the Effect of Gravida on Pregnant Women in the Third Trimester with Post Date at Balung Regional Hospital

Table 4.13 Frequency distribution based on the influence of Gravida on pregnant women in the third trimester with post date at Balung Regional Hospital in 2019

| Gravida | Pregnancy Post Date | | Total (N) | X ² Count | | Contingency Coefficient |
|--------------|---------------------|---------------|-----------|----------------------|---------------|-------------------------|
| | Post Date | Non Post Date | | Post Date | Non Post Date | |
| Grande | 4 | 7 | 11 | 59.5 | 3.22 | 0.5 |
| Multi | 132 | 23 | 155 | 62.2 | 6.37 | |
| Primi | 66 | 11 | 77 | 0.02 | 0.52 | |
| TOTAL | 202 | 41 | 243 | 121.72 | 10.11 | |

131.83(0.000)

Source: Medical Record Data at Balung Regional Hospital in 2019

Based on table 4.13, it was found that on 155 multi-tm III pregnant women, 132 pregnant women of whom experienced post-date pregnancies and 23 non- post-date pregnant women. 77 pregnant women TM III primi, the result were 66 pregnant women of whom experienced post date pregnancies and

11 non post date pregnant women. In the third grande, pregnant women found 11, 4 pregnant women including post date pregnancies and 7 non post date pregnant women.

In the analysis between Gravida and Post Date Pregnancy, the value of X^2_{count} amounted to 131.83, X^2 Table with $df = 2$ at a significance level of $0.05 = 5.591$ with significance value < 0.050 ($0,000 < 0,050$). Thus because (X^2 Count $>$ X^2 Table) then it is concluded to reject H_0 or accept H_a . It showed that there is an influence of gravida on the incidence of post date pregnancy in third trimester pregnant women. The correlation coefficient (coefficient contingency) of 0.5 is in the medium category

h. Analyzing the Effect of Fetal Location on Third Trimester Pregnant Women with Post Date at Balung Regional Hospital

Table 4.14 Distribution of Frequency based on the influence of Fetal Location on Pregnant Women in the Third Trimester with Post date at Balung Regional Hospital in 2019

| | Pregnancy Post Date | | Total (N) | X^2 Count | | Contingency Coefficient |
|-----------------|---------------------|---------------|-----------|-------------|---------------|-------------------------|
| | Post Date | Non Post Date | | Post Date | Non Post Date | |
| Place the fetus | breech | 29 | 33 | 62 | 51.33 | 7.62 |
| | Normal | 173 | 8 | 181 | 51.33 | 7.62 |
| | | 202 | 41 | 243 | 102.6 | 15.24 |
| TOTAL | | | | | | 117.9(0.000) |

Source: Medical Record Data at Balung Regional Hospital in 2019

Based on table 4.14, it was found that on 181 third-term pregnant women with normal fetal position, 173 pregnant women of whom experienced post-date pregnancies and 8 non-post-date pregnant women. 62 TM III pregnant women with a breech fetus, the result were 29 pregnant women of whom experienced post date pregnancy and 33 non post date pregnant women.

In the test between the position of the fetus and the Post Date Pregnancy, the value of X^2_{count} of 117.9, X^2 Table with $df = 1$ at a

significance level of $0.05 = 3.84$ with significance value < 0.050 ($0,000 < 0,050$). Thus because ($X^2_{count} > X^2$ Table) then it is concluded to reject H_0 or accept H_a . It showed that there is an influence of the position of the fetus on the incidence of post date pregnancy in third trimester pregnant women. The correlation coefficient (coefficient contingency) of 0.2 is included in the weak/low category.

i. Analyzing the Effect of Post Date History on Third Trimester Pregnant Women with Post Date at Balung Regional Hospital

Table 4.15 Frequency distribution based on the effect of post date history on third trimester pregnant women with post date at Balung Regional Hospital in 2019

| | Pregnancy Post Date | | | X^2 Count | | Contingency Coefficient |
|-------------------|---------------------|---------------|-----------|-------------|---------------|-------------------------|
| | Post Date | Non Post Date | Total (N) | Post Date | Non Post Date | |
| Post Date History | Yes | 61 | 3 | 64 | 0.52 | 0.31 |
| | Not | 141 | 38 | 179 | 1.83 | 0.73 |
| | | 202 | 41 | 243 | 0.25 | 0.11 |
| TOTAL | | | | | | 3.75(0.0132) |

Source: Medical Record Data at Balung Regional Hospital in 2019

Based on table 4.15, it was found that 179 pregnant women in term III had no post date history, 141 pregnant women had post date pregnancies and 38 non post date pregnant women. 64 pregnant women TM III post date history with 61 pregnant women of whom experienced post date pregnancies and 3 non post date pregnant women.

In the test between post date history and Post Date Pregnancy, the value of X^2_{count} of 3.75, X^2 Table with $df = 1$ at a significance level of $0.05 = 3.84$ with a significance value < 0.05 ($0.0132 > 0.005$) Thus because ($X^2_{count} < X^2$ Table) then it is concluded to accept H_0 and reject H_a . There is no effect of post date history on the

incidence of post date pregnancy in third trimester pregnant women.

Discussion:

In the study the number of samples was 243 respondents. This is the result of examination of the data on the respondents' medical record.

1. Identifying Age in Third Trimester Pregnant Women at Balung Regional Hospital

The results of the study based on table 4.7 showed that most of the third trimester pregnant women aged 20-35 years with a total of 130 correspondents (53.5%) meaning that pregnant women at that age were not at risk. Based on existing theory, the ideal reproductive age for women to get pregnant and give birth is 20-35 years (Silvia & Wini, 2017). Mothers who were at risk are those who become pregnant or give birth at the age of less than 20 years or more than 35 years. Giving birth at the young age poses a serious enough risk for a woman. According to Women who become pregnant in their teens or less than 20 years can cause problems, because their physical condition is not 100% ready. Pregnancy and childbirth at that age increase maternal and fetal mortality 4-6 times compared to women who are pregnant and give birth at the age of 20-30 years.

Based on research conducted by Hartuti, et al., (2019) showed that the incidence of post-date pregnancy is more common in the risk age group <20 years, this is because at the age <20 years the mother's uterus and pelvis have not developed properly and at this age is a period where the mother also needs a lot of calcium for growth and development. When the mother is pregnant, the mother must share nutrients with the fetus she is carrying. Calcium is no exception, which is absorbed by the baby for the growth and development of the baby. Calcium plays an important role in activating oxytocin to stimulate the mother. This can trigger the hormone progesterone to drop, and oxytocin not to rise, and cause a more month-long pregnancy.

Based on research conducted by Yulistiani, et al., (2017) shows the incidence of post-date pregnancy is more common in the risky age group, namely > 35 years this is because at the age > 35 years the elasticity of the pelvic and surrounding muscles and the reproductive organs experience decline. As you age, the calcium you have decreases, this can reduce the production of the hormone oxytocin to provide sensitivity to stimulation of the uterus and can lead to more months of pregnancy (post date).

The results of the study in table 4.7 show that most of the mothers in the 20-35 years group experienced more post-date pregnancies than those aged < 20 years and > 35 years. This is contrary to the theory Silvia & Wini (2017) which states that maternal age < 20 years and > 35 years is one of the predisposing factors for post date pregnancy. Whereas in this study at healthy reproductive age (20-35 years) the occurrence of post-date pregnancy can be influenced by other accompanying factors such as feelings of fear or tension when facing childbirth which can cause his disorder, mothers are also prone to experiencing stress in the face of childbirth which will stimulate body to secrete cortisol.

The effect of cortisol is to increase the sympathetic response, so that cardiac output increases and blood pressure also increases. Increased fetal plasma cortisol levels will cause pregnancy to last for months, and in post-date pregnancy, the age factor predisposes to post-date pregnancy. Calcium that is owned by the mother affects the production of the hormone oxytocin which serves to provide sensitivity to stimulation of the uterus to contract. Pregnant women who lack the release of oxytocin from the neurohypophysis in late pregnancy are thought to be one of the factors causing the baby to not be born. Calcium in the body is stored in the bones and obtained from sources of nutrients that enter every day will decrease with age. Other factors that can cause post-date pregnancies in third trimester pregnant women are problems with the ovulation process where in the case of women of childbearing age,

there is an increase in the amount of abnormal estrogen, progesterone decrease; this causes the uterine lining to thicken and the sensitivity of uterine contractions to decrease and cause more months pregnant.

2. Identifying Gravida in Third Trimester Pregnant Women at Balung Regional Hospital

The results of the study based on table 4.8 showed that most of the third trimester pregnant women were multigravida 155 (52.49%). Based on existing theory, gravida is the number of pregnancies of the mother. High gravity is one of the risk factors for postpartum hemorrhage. The influence of gravida is very large because many gravida (more than 4) with maternal age > 35 years can cause complications in pregnancy, childbirth, postpartum. It has a 4.975 times chance of experiencing postpartum hemorrhage compared to parity at risk (Aminudin, 2016).

Based on theory Apriyanti & Fiska (2014) gravida is an important risk factor in determining the fate of the mother during pregnancy and childbirth. The first pregnancy and delivery will go through the birth canal for the fetus to pass so that the baby can be born. On the other hand, if you give birth too often, the uterus will weaken because uterine scar tissue arises due to repeated pregnancies, which can cause the mother to experience complications during pregnancy and childbirth. In multipara women's pregnancies, additional months of pregnancy are often found because the sensitivity of uterine contractions has decreased. This can happen because the uterus has stretched and loosened and causes the head to not quickly enter the pelvic inlet.

From the results of the study obtained from medical record data, it was found that mothers with multiple gravida experienced more post-date pregnancies. This shows agreement with the theory which states that multiple gravida is a predisposing factor for the occurrence of post date pregnancy. This is because the uterus will experience over distention of the uterus (enlargement of the

uterus more than normal) and experience weakness of the myometrium and cause hypotonia of the myometrium and decreased myometrial contractions (reduced uterine sensitivity). Physiologically, oxytocin plays an important role in causing labor. Pregnant women who lack the release of oxytocin from the neurohypophysis in late pregnancy are thought to be one of the factors causing post-date pregnancy (overdue) and at the time of delivery as well as in women when they are about to face normal delivery. This pregnancy is caused by hormonal factors; the lack of oxytocin production will inhibit uterine muscle contractions naturally and adequately, thereby reducing the cervical response to thinning and opening. As a result, pregnancy lasts longer and there is no tendency for vaginal delivery.

3. Identifying the Location of the Fetus in Third Trimester Pregnant Women at Balung Regional Hospital

The results of the study based on table 4.9 found that most of the third trimester pregnant women had a normal fetal position, namely 181 (74.5%). Based on existing theory, the position of the fetus is an important factor in the mother's pregnancy. From research results Hartuti, et al., (2019) The position of the fetus is one of the predisposing factors for the occurrence of post-date pregnancy. This is because as the "signifier" for the start of labor is the fetus. This is thought to be due to increased fetal plasma cortisol levels. Fetal cortisol will affect the placenta so that progesterone production decreases and increases estrogen secretion, which in turn affects the increased production of prostaglandins. In fetuses with congenital defects such as anencephaly, fetal adrenal hypoplasia, and the absence of a pituitary gland will cause fetal cortisol not to be produced properly so that pregnancy can last past months.. Uterine Nerves Pressure on the cervical ganglion from the Frankenhauser plexus will cause uterine contractions. In conditions where there is no pressure on this plexus, such as in the abnormal position, the umbilical cord is short and the lower part is

high, all of these are suspected to be the cause of serotinous pregnancy.

From the results of the study obtained through the respondents' medical records, it was found that most of the third trimester pregnant women had normal fetal locations. This is contrary to the existing theory. Which mentions that the location abnormalities can cause the mother to experience more months of pregnancy (post date). Normal fetal position can cause post-date pregnancy can be caused by other factors because fetal macrosomia and skull bones become harder, causing labor dystocia, in coordinate uterine action, prolonged parturition, increased obstetrical measures, and postpartum hemorrhage and during childbirth also when facing normal labor. The cervix will gradually soften, thin, dilate easily, and move anteriorly towards the time of delivery. The cervix in multigravida women matures faster than primi, in shaping the right time to perform cervical examination in late pregnancy. This pregnancy is caused by hormonal factors; the lack of oxytocin production will inhibit natural and adequate uterine muscle contractions, thereby reducing the cervical response to thinning and open. As a result, pregnancy lasts longer and there is no tendency for vaginal delivery. Other factors can be caused by the location of the placenta is not in a normal position. When the placenta is in a low position or covers the birth canal, it can reduce the role of the fetus in providing stimulation to the mother. This is thought due to increased fetal plasma cortisol levels. Fetal cortisol will affect the placenta so that progesterone production decreases and increases estrogen secretion, which in turn affects the increased production of prostaglandins. Uterine Nerves Pressure on the cervical ganglion from the Frankenhauser plexus will cause uterine contractions. In conditions where there is no pressure on this plexus, such as in abnormalities of the location, the umbilical cord is short and the lower part is high, all of these are suspected to be the cause of post-date pregnancy.

4. Identifying Post Date History in Third Trimester Pregnant Women at Balung Regional Hospital

The results of the study in table 4.10 found that most of the third trimester pregnant women did not have a post date history 179 (73.7%). Based on existing theory, the genetic history of the mother or father who was born in a postmature state also increases the risk of postterm birth. History of pregnancy Previous post date can be a factor in the cause of pregnancy later in the next pregnancy. From the results of research obtained through medical record data of respondents, it was found that most of the third trimester pregnant women did not have a post date history, and this was contrary to the existing theory. The association of not having a post-date history can cause post-date pregnancy because the cervical maturation process factor which can be influenced by other hormones such as estrogen can stimulate the degradation activity of cervical collagen and progesterone is the opposite, namely blocking these activities. So that high levels of progesterone in women or lack of estrogen levels as in placental sulfatase deficiency, cervical maturation becomes inhibited, but the factor of history of childbirth Post date mother as a predisposing factor for the occurrence of post date pregnancy is very rare. Hypothalamic-pituitary system happened by causing the release of follicle stimulating hormone (FSH). If FSH is released, then the level will be greater than desired although with research and technological advances, high FSH levels lead to increased stimulation of ovarian follicles. The occurrence of endocrine changes are important in spurring biomolecular processes in labor and causing levels of the hormone progesterone to fall even though the pregnancy is in full term. So the sensitivity to uterine sensitivity is reduced. Then the levels will be greater than desired although with research and technological advances, high FSH levels lead to increased stimulation of ovarian follicles. So the sensitivity to uterine sensitivity is reduced.

5. Identifying Post Date Pregnancy Incidence in Third Trimester Pregnant Women at Balung Regional Hospital

The results of the study based on the table showed that most of the third trimester pregnant women experienced pregnancy Post Date 202 (83.13%). From the results of this study, it was found that most of the third trimester pregnant women experienced post date pregnancies. Factors causing post-date pregnancy include age, gravida, fetal position, and post-date history. The cause of post-date pregnancy is hormonally caused by decreased production of the hormone progesterone and decreased calcium so that oxytocin decreases and affects the sensitivity of the uterus. Multi mothers have a greater chance of having a post date pregnancy, this is because multi mothers experience uterine over distension so that the myometrium becomes weak and causes the effectiveness of the uterus to reduce oxytocin and causes more months of pregnancy to occur. So from this study the most experienced post-date pregnancies were third trimester pregnant women with multigravida.

6. Analyzing the Effect of Age on Third Trimester Pregnant Women with Post date at Balung Regional Hospital

From the results of the Chi Square test, it is stated that the value on the test between Age and Post Date Pregnancy, obtained the value of X^2 of 87.51, X^2 Table with $df = 2$ at a significance level of $0.05 = 5.991$ with significance value < 0.050 ($0.000 < 0.050$). Thus because (X^2 Count $>$ X^2 Table) then it is concluded to reject H_0 or accept H_a . It showed that there is an effect of age on the numbers of post date pregnancy in third trimester pregnant women. The correlation coefficient (coefficient contingency) of 0.26 is in the low / weak category.

According to Yulistiani, et al., (2017) in post-date pregnancy, the age factor predisposes to post-date pregnancy, the calcium possessed by the mother affects the production of the hormone oxytocin which serves to provide sensitivity to stimulation of the uterus to contract. Pregnant women who

lack the release of oxytocin from the neurohypophysis in late pregnancy are thought to be one of the factors causing the baby to not be born. Calcium in the body is stored in the bones and obtained from sources of nutrients that enter every day will decrease with age. According to Kristanti (2014) Oxytocin is a hormone that plays a role in stimulating uterine smooth muscle contraction through a Ca^{2+} dependent and Ca^{2+} independent mechanism. In the Ca^{2+} dependent pathway, several hormone receptors on smooth muscle membranes open calcium and sodium ion channels and cause membrane depolarization. The Ca^{2+} independent pathway is via Rho kinase. Activated Rho increased myosin light chain phosphorylation at a constant calcium concentration, indicating that Rho has a role in constant calcium concentration and the regulatory mechanism of Ca^{2+} sensitization.

From this study, most of the causes of post-date pregnancies were reproductive age between 20-34 years, namely from 130 third trimester pregnant women, 114 of them were post-date pregnancies and 16 non-post-date pregnant women. Meanwhile, at the age of $<$ 20 years, there were 20 pregnant women with post date, 8 of them were post date pregnancies and 12 non post date pregnant women and at the age above 35 years there were 93 TM III pregnant women, 80 of whom were post date pregnancies and 13 non post-date pregnant women date. Most pregnant women with post date pregnancies at the age of 20-34 years this can be caused by other accompanying factors such as feelings of fear or tension when they are about to face childbirth which can cause his disorder, mothers are also prone to experiencing stress in the face of childbirth which will stimulate the body to produce cortisol. The effect of cortisol is to increase the sympathetic response, so that cardiac output increases and blood pressure also increases. Increased fetal plasma cortisol levels will cause pregnancy to last for months and other factors that can cause post-date pregnancy in third trimester pregnant women are problems with the ovulation process where in the case of women of

childbearing age, there is an increase in the amount of abnormal estrogen, progesterone decreases. This causes the uterine lining to thicken and the sensitivity of uterine contractions to decrease and cause pregnant women to have more months.

7. Analyzing the Effect of Gravida on Pregnant Women in the Third Trimester with Post date at Balung Regional Hospital

From the results of the Chi Square test, it is stated that the value in the test between Gravida and Pregnancy Post Date, obtained the value of X^2_{count} amounted to 131.83, X^2 Table with $df = 2$ at a significance level of $0.05 = 5.991$ with significance value < 0.050 ($0,000 < 0,050$). Thus because ($X^2_{Count} > X^2_{Table}$) then it is concluded to reject H_0 or accept H_a . It showed that there is an influence of gravida on the incidence of post date pregnancy in third trimester pregnant women. The correlation coefficient (coefficient contingency) of 0.5 is in the medium category.

Based on theory Apriyanti & Fiska (2014) gravida is an important risk factor in determining the fate of the mother during pregnancy and childbirth. The first pregnancy and delivery will go through the birth canal for the fetus to pass so that the baby can be born. On the contrary, if you give birth too often, the uterus will weaken because uterine scar tissue arises due to repeated pregnancies, which can cause the mother to experience complications during pregnancy and childbirth. Based on the results of research conducted Aminudin (2016) that post date pregnancies are more common in multiparity and grandemulti. In multipara women's pregnancies, more months of pregnancy are often found because the sensitivity of uterine contractions has decreased. This can happen because the uterus has stretched and loosened and causes the head to not quickly enter the pelvic inlet.

From this study, most of the pregnant women with post date pregnancies were 155 pregnant women. 132 of them were post date and 23 pregnant women were non post date. 77 primi pregnant women, 66 of them post

date and 11 non post date pregnant women. Meanwhile, in grande pregnant women, there were 11 pregnant women, 4 of whom were post-date pregnancies and 7 non-post-date pregnant women. This means that gravida is a predisposing factor causing post date pregnancy. This shows conformity with the theory which states that multiple gravida is a predisposing factor for the occurrence of post date pregnancy. This is because the uterus will experience over distention of the uterus (enlargement of the uterus more than normal) and experience weakness of the myometrium and cause hypotonia of the myometrium and decreased myometrial contractions (reduced uterine sensitivity). Physiologically, oxytocin plays an important role in causing labor. Pregnant women who lack the release of oxytocin from the neurohypophysis in late pregnancy are thought to be one of the factors causing post-date pregnancy (over months) and at the time of delivery when they are about to face normal labor the cervix will gradually soften, thin, easily dilate, and moves anteriorly towards the time of delivery. The cervix in multigravida women matures faster than in primi, and an understanding of gravida is important in determining the right time to perform cervical examinations in late pregnancy.

This pregnancy is caused by hormonal factors, lack of oxytocin production will inhibit uterine muscle contractions naturally and adequately, thereby reducing the response of the cervix to thin and open. As a result, pregnancy lasts longer and there is no tendency for vaginal delivery.

8. Analyzing the Effect of Fetal Location in Third Trimester Pregnant Women with Post date at Balung Regional Hospital

From the results of Chi Square on the test between the position of the fetus and the Pregnancy Post Date, the value of χ^2 t of 117.9, X^2 Table with $df = 1$ at a significance level of $0.05 = 3.84$ with significance value < 0.050 ($0,000$)

$<0,050$). Thus because (X^2 Count $>$ X^2 Table) then it is concluded to reject H_0 or accept H_a . It showed that there is an influence of the position of the fetus on the incidence of post date pregnancy in third trimester pregnant women. The correlation coefficient (coefficient contingency) of 0.2 is included in the weak/low category.

From research results Hartuti, et al. (2019) the position of the fetus is one of the predisposing factors for the occurrence of post-date pregnancy. This is because the "signifier" for the start of labor is the fetus. This is thought to be due to increased fetal plasma cortisol levels. Fetal cortisol will affect the placenta so that progesterone production decreases and increases estrogen secretion, which in turn affects the increased production of prostaglandins. In fetuses with congenital defects such as anencephaly, fetal adrenal hypoplasia, and the absence of a pituitary gland in the fetus will cause fetal cortisol not to be produced properly so that pregnancy can last past months.

From the results of the study obtained through the respondents' medical records, it was found that most of the third trimester pregnant women had a normal fetal position, 181 mothers, 173 of which were post-date pregnancies and 8 were non-post-dates. This is contrary to the existing theory. Which mentions that the location abnormalities can cause the mother to experience more months of pregnancy (post date). Normal fetal position can cause post-date pregnancy can be caused by other factors because fetal macrosomia and skull bones become harder, causing labor dystocia, incoordinate uterine action, prolonged parturition, increased obstetrical measures, and postpartum hemorrhage and during childbirth also in women when will face normal labor. The cervix will gradually soften, thin, dilate easily, and moves anteriorly towards the time of delivery. The cervix in multigravida women matures faster than primi, in determining the right time to perform cervical examination in late pregnancy. This pregnancy is caused by hormonal factors; the lack of oxytocin production will inhibit natural

and adequate uterine muscle contractions, thereby reducing the cervical response to thinning and open. As a result, pregnancy lasts longer and there is no tendency for vaginal delivery. Other factors can be caused by the location of the placenta is not in a normal position. When the placenta is in a low position or covers the birth canal, it can reduce the role of the fetus in providing stimulation (his) to the mother. This is thought to be due to increased fetal plasma cortisol levels. Fetal cortisol will affect the placenta so that progesterone production decreases and increases estrogen secretion, which in turn affects the increased production of prostaglandins. Uterine Nerves Pressure on the cervical ganglion from the Frankenhauser plexus will cause uterine contractions. In conditions where there is no pressure on this plexus, such as in abnormalities of the location, the umbilical cord is short and the lower part is high, all of these are suspected to be the cause of post-date pregnancy.

9. Analyzing the Effect of Post Date History on Third Trimester Pregnant Women with Post Date at Balung Regional Hospital

From the results of Chi Square on the test between post date history and Pregnancy Post Date, the value of χ^2 count of 3.75, X^2 Table with $df = 1$ at a significance level of $0.05 = 3.84$ with a significance value <0.05 ($0.0132 > 0.005$) Thus because (X^2 Count $<$ X^2 Table) then it is concluded to accept H_0 and reject H_a . There is no effect of post date history on the incidence of post date pregnancy in third trimester pregnant women.

Based on existing theory, the genetic history of the mother or father who was born in the post-mature state also increases the risk of post-term delivery. Theory of Yulistiani, et al., (2017) stated that the history of post-term delivery can also be influenced by genes. Matrix metalloproteinases (MMPs) also known as matrixins are calcium-containing endopeptidases. Collectively, these enzymes are able to degrade all types of extracellular matrix proteins, but can also process a number

of bioactive molecules. MMPs also play a major role in cell behavior such as cell proliferation, migration (adhesion/disperse), differentiation. The ability of MMPs to degrade the extracellular matrix and specific evolutionary DNA sequences. Post-date pregnancy history tends to run in the family, this can be passed down through the father and mother by skipping a generation. Based on research Yulistiani, et al., (2017) that the post date history is a predisposing factor for the occurrence of more months of pregnancy (post date).

From the results of research through the medical records of respondents at the Balung regional hospital showed that most of the third trimester pregnant women with post date pregnancies did not have a previous post date history, from the third trimester 179 pregnant women, 141 of whom were post date and 38 non post date pregnant women. This is contrary to the existing theory, not having a post- date history can cause post-date pregnancies caused by other factors, these factors are due to the cervical maturation process which can be influenced by other hormones such as estrogen can stimulate the degradation activity of cervical collagen and progesterone is the opposite, namely block this activity. So that high levels of progesterone in women or lack of estrogen levels as in placental sulfatase deficiency, cervical maturation becomes inhibited, but the factor of history of childbirth Post date mother as a predisposing factor for the occurrence of post date pregnancy is very rare. Hypothalamic-pituitary system happened by causing the release of follicle stimulating hormone (FSH). If FSH is released, then the level will be greater than desired although with research and technological advances, high FSH levels lead to increased stimulation of ovarian follicles. In some cases, this condition can cause progesterone levels to remain high. The occurrence of endocrine changes that are important in spurring the biomolecular processes in labor and causing the level of the hormone progesterone does not fall even

though the pregnancy is full term. So the sensitivity to uterine sensitivity is reduced.

Conclusion:

1. Conclusions

Most of the third trimester pregnant women are 20-35 years with a total of 130 pregnant women (53.5%) meaning that pregnant women in this group are not at risk. Most of the third trimester pregnant women are multigravida with 155 mothers (52.49%). Most of the third trimester pregnant women are mostly third trimester pregnant women who have a normal fetal position, namely 181 (74.5%). Most of the third trimester pregnant women did not have a post date history, specifically 179 (73.7%). Most of the third trimester pregnant women experienced pregnancy Post Date, in particular 202 (83.13%). There is an Effect of Age with Post date pregnancy at Balung Regional Hospital Jember District in 2019. There is Gravida's Effect on Post Date Pregnancy at Balung Regional Hospital Jember District in 2019. There is an Influence of Fetal Location with post date pregnancy at Balung Regional Hospital Jember District in 2019. There is no influence of post date history with post date pregnancy at Balung Regional Hospital Jember District in 2019

2. Research Limitations

Factors that cause postdate pregnancy are very broad and the information obtained during the research is a secondary study so that it can only get information from medical record data/ secondary data without direct observation of respondents. Other factors that have not researched such as the history of pregnancy (ANC), and this research can be continued with primary data

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