

# Factor Analysis of Age and Gravidity with Prolonged Parturition in the Obstetrics Room of the District Hospital, Viqueque City, Timor Leste

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## ABSTRACT

**Background:** Prolonged or obstructed labor accounts for 8% of the causes of maternal mortality globally and is also the cause of fetal death. One of the causes of prolonged labor is maternal age and gravidity. The purpose of this study was to analyze the factors of age and adolescence with the incidence of prolonged labor in the midwifery room of the Viqueque City Hospital, Timor Leste.

**Methods:** This study used an analytical research design with a cross-sectional approach. The population was all women who gave birth for a long time in the midwifery room of the Viqueque City Hospital, Timor Leste, which could be 30 people. The sampling technique used accidental sampling. The research instrument used a questionnaire and observation sheet. The data analysis used Chi Square statistical test.

**Results:** The results showed that more than half of the respondents (66.7%) aged 20-35 years were 20 respondents and more than half (53.3%) were multigravidas as many as 16 respondents, more than half (60%) did not occur during prolonged labor, namely as many as 18 respondents. Based on the results of statistical tests using Chi Square calculations, it is not known that no one knows it is  $0.002 < 0.05$  so it can be shown that there is a relationship between the incidence of prolonged labor.

**Conclusion:** Women with higher parity are at higher risk of prolonged labor because the uterus has weakened the uterine wall muscles due to a previous pregnancy. The solution that needs to be done regarding the results of the research above is to enable health education about the causes and risk factors for the old party to the mother by health workers and early detection of risk factors for prolonged labor must be improved.

## I. Introduction

Old labor or congested accounted for 8% of causes Dead mother globally and is also a cause Dead fetus. reason Dead mother in Indonesia still dominated by Bleeding (32%) and Hypertension in Pregnancy (25%), followed by infection (5%), prolonged labor (5%), and abortion (1 %) (Ministry of Health RI, 2013). Old labor or congested accounted for 8% of causes Dead mother globally and is also a cause Dead fetus. Fetus died from stress overuse of the placenta and cord center ([Haryanti, 2020](#)). Dead fetus could becomes reason happening disseminated intravascular coagulation with consequence bleeding shock, and death ([Amir, 2017](#)). Old labor besides resulted shock, postpartum haemorrhage (PPH), infection, uterine rupture, uterine prolapse, amnionitis, and puerperal sepsis, dehydration, fatigue mother, baby asphyxia can also cause Dead mother and fetus ([Angeby, et al., 2018](#)).

There are several factors that cause old parturition is the mother's factor ie cephalopelvic disproportion (CPD), uterine inertia, his not efficient and not adequacy, age, and parity / gravidity. Whereas from the baby factor ie baby weight, amniotic fluid broken early (KPD), age pregnancy and mal presentation or mal position ([Fitriah, 2022](#)). Reason old parturition is Factor mother like

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cephalopelvic disproportion (CPD), uterine inertia, his not efficient and not adequacy, age, and parity / gravity and factors baby like baby weight, amniotic fluid broken early (KPD), age pregnancy and mal presentation or mal position (Gultom, 2015).

The initial survey in the Midwifery room The Viqueque City District Hospital, Timor Leste, had 10 incidents deep old parturition period 3 months time from September to November 2019. From 10 incidents of these, 8 mothers (80%) with multigravida and 2 mothers (20%) with primigravida, 7 mothers (70%) more of 35 years and 3 mothers (30%) age under 35 years. Necessary solution conducted is education health about factor causes and factors risk old parturition to mother by force health and detection early factor risk old parturition. Destination Study this is analyze Age and gravity factors with parturition Old in Obstetrics Room Viqueque City District Hospital, Timor Leste.

The purpose of this study was to analyze the factors of age and adolescence with the incidence of prolonged labor in the midwifery room of the Viqueque City Hospital, Tomor Leste

## II. METHODS

In study this is design study analytic in a manner cross sectional. Study cross sectional is type pressing research time measurement/observation of variable and dependent and assessed data in a manner simultaneously at one when, so no there is follow continued. Population (N) is all mother maternity with old parturition in space Midwifery Viqueque City District Hospital, Timor Leste. the sample part mother maternity with old parturition in space Midwifery The District Hospital of the City of Viqueque Timor Leste has a total of 30 respondents. The sampling technique uses accidental sampling. Variable free Age on Ordinal Scale, Gravity Ordinal scale, Variable depends Parturition Nominal Scale Lama. Definition operational age is range measured life with years, age is ever life in calculated year since born with categories < 20 years, 20-35 years, and > 35 years. Gravity is Amount whole one pregnancy mother with primigravida, multigravida and grandmultigravida categories. Long parturition is the time in hours needed mother in undergoing childbirth with category > 24 hours on primi and > 18 hours on multi. Measuring tool used for age and gravity is questionnaire and medical record for old pratus. Research time May – June 2020 in space Midwifery Viqueque City District Hospital, Timor Leste. The process of collecting and processing data in study this, before conducted data collection filed letter introduction then submitted to room Midwifery Viqueque City District Hospital, Timor Leste for ask permission initial data collection. After get permission, then researcher ask permission respondent for made subject in to do studies preliminary for knowing Connection Age and gravity factors with parturition Lamadi room Midwifery District Hospital of Viqueque City, Timor-Leste. How to collect data with use Interview questionnaire and observation. Researcher continue to preparation of proposals. After the proposals do study then next with drafting thesis. In step data collection next is Editing, Coding, Tabulating, Cleaning, Data entry. Data analysis using the Chi Square test statistic test interpretation if the p value < level of significance (0.05) then in conclusion is Ho is rejected and H1 is accepted, it means there is Connection Age and gravity factors with parturition Lamadi room Midwifery Viqueque City District Hospital, Timor Leste.

As the ethical consideration, the researcher use the informed consent, anonymity principle and confidentiality principle.

## III. RESULTS

### Relationship between Age and Old Partition

Table 1. Relationship between Age and Long Partition

Age	Old Partition				Total
	Occur		Not occur		
	$\Sigma$	%	$\Sigma$	%	
< 20 years	8	26,6	2	6,7	10
20 – 35	4	13,3	16	53,3	20
> 35 year	0	0	0	0	0
<b>Total</b>	<b>12</b>	<b>40</b>	<b>18</b>	<b>60</b>	<b>30</b>

$$\alpha=0.05 \text{ p-value } =0.000$$

From the table above it is known that most of the respondents were aged 20-35 years and 16 people (53.3%) did not have prolonged labor. Based on the results of statistical tests using the *Chi Square calculation*, it is known that the output above shows the statistical test

results for the variables Age and Prolonged Parturition are  $0.002 < 0.05$  so it can be concluded that there is a relationship between maternal age and prolonged labor.

### The Relationship of Gravidity With Prolonged Parturition

Table 2. Relationship between Age and Long Partition

Gravida	Old Partition				Total
	Occur		Not occur		
	Σ	%	Σ	%	
Primigravida	11	36,6	3	10	14
Multigravida	1	3,4	15	50	16
Grandemultigravida	0	0	0	0	0
<b>Total</b>	<b>12</b>	<b>40</b>	<b>18</b>	<b>60</b>	<b>30</b>

$\alpha=0.05$   $p\text{-value}=0.000$

From the Table above is known that part big respondent is multigravida and not occur old parturition as many as 15 people (50%). Based on statistical test results use calculation *Chi Square*, known that the Output above shows the results of statistical test variables Gravida and Events Old parturition is  $0.000 < 0.05$  so could concluded there is connection Among gravidity mother with incident old parturition

## IV. DISCUSSION

Based on table 1 above show that of 30 respondents, more from half respondents (66.7%) have aged 20-35 years that is as many as 20 respondents. kindly theory aged 20-35 years is period safe for give birth, will but in developing countries about 10-20% of babies born from mother teenager. Risk childbirth too higher in more women old. Age in period reproduction healthy known that safe age for pregnancy and childbirth is 20-35 years. Dead consequence woman's long labor age under 20 years it turns out 2-5 times more tall than those who die at the age of 20-35 years. Prolonged parturition increases return after 35 years old. Age not enough from 20 years is marriage age young will caused pelvis narrow and long parturition. Labor age over 35 years are also included risk high (Nugrawati, 2021). Aged mother over 35 years have condition existing health decreased. At age under 20 years, uterus and pelvis often not yet grow reach size mature. As a result mother pregnant at age that possible experience long labor or disturbance other because unpreparedness mother for accept duties and responsibilities answer as parents (Nurul 2020). Age too young, improve in a manner meaning risk labor around the world (Ardhiyanti, 2016). Instead, risk labor return increase after 30 or 35 years old. In a study conducted in the United States, women aged 40-44 years have number dead mother who is 10 times more tall compared with women aged 24 and 25 years.

Anyhow age Mother, risk happening long parturition always there is remember There are many causal and predisposing factors incident old parturition.

Based on table 5.5 above, it shows that out of 30 respondents, more than half (53.3%) are multigravidas, namely 16 respondents.

According to Rositawati (2019) Several causes of prolonged labor in multigravidas are uterine inertia. In line with the research of Hinelo et al 2013 in his research entitled Outcome of Old Partition at BLU RSU Prof. Dr. RD KANDOU Manado. The statistical test results for the distribution of maternal parity were obtained, derived from data obtained in 2010 parity-1, namely 21 patients (70.0%), parity 2-4 as many as eight patients (26.7%) and parity-5 or more one patient (3.33%). Whereas in 2011 parity-1 was 29 patients (67.5%), parity 2-4 was 13 patients (30.2%) and parity-5 or more was one patient (3.33%). According to the research above, it shows that mothers with parity-1 tend to be at greater risk of experiencing prolonged labor by 3.45 times and it is statistically significant.

According to the researchers, it is known that maternal parity is one of the factors that influence the occurrence of long labor in Primipara mothers and was also found in Multipara mothers at Pringsewu Hospital in 2014.

### Relationship between Age and Old Parturition

Based on the results of statistical tests using the *Chi Square calculation*, it is known that the output above shows the statistical test results for the variables Age and Prolonged Parturition are  $0.002 < 0.05$  so it can be concluded that there is a relationship between maternal age and prolonged labor.

In theory, the age of 20-35 years is a healthy reproductive age (DR.HM. Andalas., SPOG. 2014), which means that within that age range, if a woman gets pregnant, her condition will be safe. The results of this study are in accordance with the research of [Yuliasari, et al, 2018](#) which explains that there is a relationship between age and the incidence of prolonged labor. Deaths due to prolonged labor in women under the age of 20 years are 2-5 times higher than deaths that occur at the age of 20-35 years. The incidence of prolonged labor has increased again after someone is 35 years old or more ([Ruqaiyah, 2019](#)). Age <20 years is at risk for prolonged labor because of the narrow size of the pelvis. Childbirth in mothers aged > 35 years is also a high risk because women over 35 years of age have experienced a decline in their health condition. Biased opinion from results he on is that a woman more good pregnant on the range age 20 – 35 years for avoid happening complications in labor like pelvis narrow and long parturition ([Wijayanti, 2015](#)). If already already pregnant at the age of < 20 years and > 35 years , then must more intense again in inspection pregnancy and complications screening for anticipate happening complications in labor.

### Relationship between Age and Old Parturition

From the table above it is known that most of the respondents were aged 20-35 years and 16 people (53.3%) did not have prolonged labor. Based on the results of statistical tests using the *Chi Square calculation*, it is known that the output above shows the statistical test results for the variables Age and Prolonged Parturition are  $0.002 < 0.05$  so it can be concluded that there is a relationship between maternal age and prolonged labor.

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The opinion that can be concluded from the results above is that a woman is better off getting pregnant in the age range of 20-35 years to avoid complications in childbirth such as a narrow pelvis and prolonged labor ([Riyanto, 2017](#)). If you are already pregnant at the age of < 20 years and > 35 years, then you have to be more intense in your pregnancy checks and screening for complications to anticipate complications in childbirth.

### Relationship of Gravidity and Prolonged Parturition

From the table above it is known that most of the respondents were multigravida and 15 people (50%) did not have prolonged labor. The results of the statistical test using the *Chi Square calculation* , it is known that the output above shows the statistical test results for the variables Age and Prolonged Parturition are  $0.000 < 0.05$  so it can be concluded that there is a relationship between maternal gravidity and prolonged parturition.

Gravidity and parity are the number of times a woman is pregnant or has been (pregnant) and brings the pregnancy to an appropriate gestational age (parity). These terms are usually combined, sometimes with additional terms, to indicate more detail from the woman's obstetric history (Big Indonesian Dictionary, 2018). According to the theory of [Astuti, 2017](#), states that the greater the number of previous pregnancies adopted, the higher the risk of his weakness due to the weakness of the uterine muscles which will result in prolonged parturition. The results of this study are in accordance with previous research by [Maaloe, et al, 2012](#) which concluded that

there is a significant relationship between maternal parity and prolonged labor events. There are some multigravid respondents who experience prolonged labor, possibly this is caused by twisting of the umbilical cord (Ju, et al., 2022). The twisting of the umbilical cord causes the fetal head to descend to the pelvic floor for a long time, causing prolonged parturition (McCue, 2012).

## V. CONCLUSION

30 respondents in the room Midwifery Viqueque City District Hospital, Timor Leste, more from half respondents (66.7%) have aged 20-35 years that is as many as 20 respondents, more from half (53.3%) were multigravida ie as many as 16 respondents, more from half (60%) do not occur old parturition ie as many as 18 respondents. Variable statistical test results Age and Occurrence Old parturition is  $0.002 < 0.05$  so could concluded there is connection Among age mother with incident parturition long. Statistical test results variable gravidity and Genesis Old parturition is  $0.000 < 0.05$  so could concluded there is connection Among gravidity mother with incident old parturition

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