
PUBLIC HEALTH RESEARCH

The Traditional Practice of Childbirth of the Nuaulu Tribe in Seram Island, Indonesia

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ABSTRACT

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Introduction	Maluku is known as an archipelagic province in Indonesia. One of its island, Seram Island, has a local tribe called Nualu's. This tribe has a unique yet peculiar traditional practice for pregnant women. This practice is called the <i>pregnancy in seclusion</i> , where a Nuaulu's pregnant woman is secluded or concealed in the small house called <i>Posuno</i> for 40 days prior to giving birth.
Methods	Two research methods are applied: qualitative and quantitative approach. The quantitative method used explanatory research with cross section approach. Within this method, questionnaire was used for data collection in order to obtain some information about respondents' characteristics, attitude, and perceptions towards <i>practice of pregnancy in seclusion</i> . The sample was taken from the population of all Nuaulu's mothers with under 3-year-old child. Out of 126 all Nuaulu's women who had experience of being secluded in <i>Posuno</i> , 68 respondents participated in this research. On the other hand, qualitative method was used as a way to validate the finding from the quantitative part. This was done by conducting in depth interview with 10 persons.
Results	Most members of Nuaulu tribe have a "high perception" towards <i>practice of pregnancy in seclusion</i> , meaning that they interpret the practice as a good practice that benefit them in someway or another. In addition, there is no statistical correlation between <i>Nuaulu's perception</i> and <i>Nuaulu's tradition</i> in regard to pregnancy in seclusion.
Conclusion	The majority of Nuaulu's women have a perception that giving birth in <i>Posuno</i> is better than in public healthcare. Finally, Communication, Information, and Education are needed for traditional leader and local witchdoctor in order to enhance their knowledge about a proper way giving birth according to medical recommendation.
Keywords	Childbirth - traditional-Nuaulu's tribe-practise of pregnancy - perception- <i>posuno</i> .

INTRODUCTION

Approximately 20,000 women died every year in Indonesia as a result of serious complication during the process of childbirth.¹ The report also shows that the high maternal mortality rate was also followed by the high infant mortality rate and child mortality rate. Infant mortality rate reached 97 per 1,000 live births in 1997. Despite the fact that the number dropped to 44 per 1,000 live births in 2007, it did not manage to achieve MDG's (*Millennium Development Goals*) target; that is 32 per 1,000 live births. This rate was almost 5 times more than mortality rate in Malaysia,

almost 2 times more than Thailand, and 1.3 times more than Philippine.

Maluku is a name of archipelagic province in Indonesia with the total population of 1,533,506 people (according to national population census in 2010).² It has 559 islands and administratively divided into 11 City, 118 Districts, and 1,169 villages. In term of health infrastructure and facilities, Maluku has 15 public hospitals, 6 private hospitals, 3 TNI (Armed Forces) hospitals, 1 special hospital, and 179 *Puskesmas* or Community Health Center.³



Figure 1 Map of Seram Island

The mortality rate for childbirth in Maluku is still high. Report in 2010 indicated that the mortality rate was 228 per 100,000 childbirths, furthermore infant mortality rate reached 59.⁴ This fact became main issue to Local Health Department in Maluku. This fact was confirmed by some

midwives in Rohua sub-village, where 6 infants died from 85 childbirths during 2007-2011 there.

In spite of the fluctuation of mortality rate in this Province between 2006 and 2010 by Civil Registry Office, the graph shows a slight drop from 369 per 100,000 live births in 2006 to 288 per 100,000 live births in 2010.⁴



Graph 1 Maternal Mortality Rate in Maluku and Indonesia (source: *Profil Kesehatan Kabupaten Maluku, 2010*)

The fluctuation is mainly caused by geographical location (archipelago), economic reason, lack of health worker particularly midwife, little knowledge about healthcare, little or lack of participation by society to involve in health program.⁵

Rohua is a sub-village of Negeri Sepa, a Sub-district Amahai in Seram Island, Regency Central Maluku. This is one of the operation areas covered by *Puskesmas* (Community Healthcare Center) located in Tamilouw village. Rohua is populated by Nuaulu tribe which is descendant from Alune tribe and Wemale tribe: the first two-tribes

occupied this sub-village. Nuaulu tribe also inhibits several sub-villages, i.e., Rohua, Hawalan/Latan, Bonara, Nuanea/Aisuru with total population up to 3,911 people.⁶

When it comes to the health services, Nualu people always go to *Puskesmas* in Tamilow Village as the closest governmental health unit to support community in certain district. In *Puskesmas*, the condition of a pregnant women will be monitored regularly several times. This is known as Antenatal Care. The first Antenatal Care can be said as K1 where a pregnant woman is visiting *Puskesmas* in

order to be checked by the health worker for the first time. Antenatal Care should be performed at least 4 times (K4) according to recommendation by

Indonesian Health Ministry.⁷ Table below shows the data of Antenatal Care from *Puskesmas* in Tamilouw Villages.

Table 1 Antenatal Care in Puskesmas in Tamilouw 2007-2011

Year	Number of Pregnant Women	K1	K4	Number of Childbirth
2007	313	225 (71,88 %)	154 (49,2%)	299
2008	317	232 (73,13%)	219 (69,09%)	302
2009	328	199 (60,67%)	180 (54,88%)	328
2010	330	206 (62,42%)	206 (62,42%)	272
2011	336	258 (76,79%)	278 (82,74%)	262

Nuaulu tribe has a tradition to seclude a pregnant woman when her pregnancy reaches 9 months. She must live separately from her husband

and from other men in the special house called *Posuno*.



Figure 1 Posuno

Normally, the size of *Posuno* is 2 x 2.5 meter, and located further away from the original house (e.g., deep in the forest). However, the location, nowadays, is closer to the original house because Nuaulu's people start to believe that demons will surround the woman and her house. The tradition of isolating a pregnant woman from the society is usually started through a ceremony called *Tinantawa*. This ceremony is important for Nuaulu's people to prevent any danger caused by the demons, which can hamper individual's life from birth to death.⁸

The main reason is that Nuaulu tribe considers the first 8-month of pregnancy as a normal phenomenon. On the contrary, when the pregnancy reaches 9 months, the pregnant woman is believed as a woman who is affected and/or possessed by demons. The demons, can cause various dangers for the pregnant woman, the baby and also the people

around her, especially men. Therefore, to avoid being affected by the demons, a pregnant woman has to be secluded from her original house and stays separately in *Posuno* or *Tikosune* until she is giving childbirth.

Nuaulu's pregnant women usually ask a baby witchdoctor (*Mama Biang*) to help them undergo the pregnancy period until they deliver the baby. This practice is common in Nuaulu tribe because *Mama Biang* is widely believed to have special ability to chase away the demons, so the mother and the baby can survive. One way to perform it is through a particular ceremony when the pregnancy reaches 9th month in order to make the process of giving childbirth success.

In the tribe, *Mama Biang* is usually called *Irihitipue* which is a special title for a lady whose job is to help Nuaulu's pregnant woman delivering a baby. When the time is coming for a Nuaulu's

pregnant woman to deliver a baby, *Irihitipue* will prepare the necessary tools. One of the tools is called *kaitimatana* or *wane* which is a cutter for umbilical cord made of bamboo. Besides *kaitimatana*, particular water is also prepared to bathe a born-baby. Moreover, the water must originate from Special River which according to the tribe is a holy river.⁶

Indonesian Ministry of Health launched a program in 1990-1991 called *Assessment Safe Motherhood* in collaboration with WHO, UNICEF and UNDP.⁹ The result of the program was a recommendation in form of 5-year-workplan (Repelita). This program aims to protect women from any risk that potentially arises during pregnancy, birthing, and postnatal care (peurperium). *Safe Motherhood* in Indonesia is known by its slogan *Make Pregnancy Safer*; that is an effort to reduce the risks during the period of pregnancy and the process of giving childbirth. This program has been implemented in many countries e.g., Malaysia and India, and later on was adapted by Indonesian Health Department in form of operational strategy to suppress maternal mortality rate.

It seems that the situation in Nuauulu does not match with the goals carried by *Save Motherhood Program* which holds 3 key messages and 4 essential pillars of *Making Pregnancy Saver*.¹⁰ Those 3 key messages are as follows:

1. Every process of giving childbirth should be handled by skilled health worker,
2. Every obstetrics and neonatal complication should be handled accurately and correctly,
3. All women should have an easy access to anything (information, services or tools) in order to prevent undesirable pregnancy and access to handle complicated abortion.

Whilst the 4 essential pillars are mentioned below:

1. Improve the quality of accessing public health services for mother and infant, and escalate its scope,
2. Promote effective collaboration through inter-program, inter-sector, and other inter-cooperation,
3. Boost women's and family's empowerment through knowledge development,
4. Boost society's and community's involvement to assure the availability and the use of health services for both the mother and the baby.

However, *Save Motherhood Program* did not well-implemented by all segments of society due to cultural reasons likewise found in Nuauulu tribe, Seram Island, Regency Central Maluku, Maluku.

The process of giving childbirth in Nuauulu tribe is still a very simple and traditional in its process without proper medical equipment. By contrast, this process is different than the process in hospital or healthcare service by doctor or midwife. According to

L. Green (2000), there are several factors affecting a mother in the process of giving childbirth, namely predisposing factors (knowledge, attitude, believe, and perception) and supporting factor (witchdoctor, traditional leader, and healthcare worker).¹¹

RESEARCH METHODS

Two research methods are applied in this research: qualitative and quantitative. The research took place in Sub-village Rohua in Seram Island, Sub-district Amahai, Regency Central Maluku, Maluku where Nuauulu tribe is situated. There are 126 Nuauulu women who have experienced being secluded in *Posuno*. However, only 68 of them were taken as a sample since their youngest child still under 3 years old.

In this research, there are Independent and Dependent variables. The independent variables in this research are respondent's Characteristics (age, education, occupation), Knowledge; Attitude, Believe, and Perception of Nuauulu's women about treatment of pregnancy. However, author will focus only on Perception of Nuauulu's women about the treatment of pregnancy for independent variable. On the other hand, dependent variable is a *practise of pregnancy in seclusion* experienced by Nuauulu's women.

The research starts with quantitative method where we performed structured questionnaires as a way to collect the data for quantitative analysis. There are total 21 questions in the questionnaire and each participant was questioned with the same questions. Subsequently, in depth interview was performed to collect the data for qualitative analysis. However, only 5 questions were asked to respondents as this part is to validate the finding in quantitative part. In depth interview was conducted amongst several respondents. Those are as follow:

- 2 mothers who had given childbirth in *Posuno*,
- 1 respondent from family which lost its mother,
- 2 mothers who have had miscarriage,
- 2 traditional leaders,
- 2 baby witchdoctors,
- 1 midwife.

Quantitative data was processed by using SPSS package version 16. It started with Univariate analysis to give a general insight of independent variables, such as respondent's knowledge, attitude, and believe shown in table below. Later, Bivariate analysis was performed to find the correlation between independent variables and dependent variable. In order to know their correlation, *Chi-Square* method was executed with 0.05 probability level as our critical value.

RESULTS AND DISCUSSION

Characteristic Respondent

Most of our respondents are between 20 and 35 years old (86.8%), and uneducated (47%). Majority of the

respondents have more than 6 children (32.2%) as a result of traditional rule in Rohua sub-village that

prohibits Nuaulu's women to participate in *Keluarga Berencana* (Family Planning) program.

Table 2 Age of respondents

No	Age	Frequency (f)	Percentage
1	< 20 years old	2	2,9
2	20 - 35 years old	59	86,8
3	> 35 years old	7	10,5
Total		68	100%

The majority of the respondents (70.6%) have their first pregnancy at the age of 15 until 19 years old. This fact revealed that there are many Nuaulu's people who get married at their early age. When Nuaulu's girl experiences her first

menstruation and her *pinamou ceremony* (a ceremony when she finally exits *Posuno*), that means she is ready to get married. As a matter of fact, Nuaulu's people do not really apply a minimum age for their people to get married.

Table 3 Age of first pregnancy of respondents

No	Age of first pregnancy	Frequency (f)	Percentage (%)
1	15 - 19 years old	48	70,6
2	20 - 25 years old	20	29,4
Total		68	100%

We also found that every year from 2007 until 2011, one woman die when giving childbirth. All of the cases were handled by *Biang*. The same trend also happened for the baby. Every year from 2007 until 2011, at least 1 baby dies in the process of giving childbirth. Finally, 35 out of 68 participants have a baby who died between 1 – 12 months after giving childbirth in *Posuno*.

our critical value (0.05). This means that, statistically, there is no significant correlation between Perception and *the practise of pregnancy in seclusion* performed by Nuaulu's women in sub-village Rohua, Seram Island, sub-district Amahai, Regency Central Maluku, Maluku. This means that giving childbirth in *Posuno* is an obligation for Nualu women because the mother and the baby can be saved by the *Biang* or baby witchdoctor.

Perception

Perception can be defined as a human's cognitive form which was constructed by interpreting the object, moment, or relationship around him / her. Perception can be categorized as a high perception when someone interprets the information with a high degree of trust that can benefit them in someway or another.

It contrasts with the result obtained in Univariate Analysis: High Perception toward *the practice of pregnancy in seclusion*. The high perception of respondents is mainly caused by their society which pushed them to giving childbirth in *Posuno* as a traditional obligation there. Thus, our respondents are afraid to violate this traditional rule.

Quantitative Analysis

The result of Univariate analysis shows that 88.2% or our respondents have high perception toward the culture in *the practice of pregnancy in seclusion*, leaving 11.8% of our respondents with low perception toward the practice of pregnancy in seclusion. Next to that, 83.8% respondents still believe that giving childbirth in *Posuno* is better than giving childbirth in healthcare. In addition, 91.2% respondents have perception that if the mother does a mistake, the process of delivering the baby will be difficult. Finally, 89.7% respondents also think that bleeding in delivering the baby is normal. The complete questionnaire is presented in Appendix.

Qualitative Analysis

Although our *Chi-Square* analysis found no-correlation between the perception of Nuaulu's women and *the practice of pregnancy in seclusion*, in reality, it showed that there was obedience toward the Nuaulu's tradition (e.g. the perception that the sin of the mother can lead to the difficulties in the pregnancy, the process of giving childbirth and postnatal care). Therefore, the "*Biang*" (baby witchdoctor) helped the mother when entering *Posuno* by the time she wants to giving childbirth.

The p value resulted from *Chi-Square* analysis of perception is 0.903, which is bigger than

Theoretically, the problem above can be explained by Green (2000) in his theory "Precede-Procede" which mentions that the perception or someone's believe toward the benefit of an action can be his / her basic behavior, if it was supported by witchdoctor, indigenous elder, parents, and an factor

that can lead to the existence of behavior, such as practice of pregnancy in seclusion in *Posuno*¹¹. However, this condition can be dangerous for both the mother and the baby.

A practise of pregnancy in seclusion

The result obtained from questionnaire showed that 48 out of 68 respondents had undergone practice of pregnancy in seclusion in *Posuno* without proper healthcare and treatment. For those who did not giving childbirth in *Posuno*, would get traditional sanction or punishment e.g. being secluded or getting traditional fine. Almost all childbirths in Nuauulu tribe are handled by a witchdoctor because of their tradition since a long time. In fact, a witchdoctor is believed as an *Upu Nahatanah* who is able to perform certain charms and able to help the mother during the process of giving childbirth. However, according to *Safe Motherhood*, the process of childbirth must be handled by skilled health worker who have good understanding (clean and safe) of the process of giving childbirth. This also applies for obstetric essential service which includes ability to act and react for handling high risks and complicated health service.¹²

Clearly, this fact is different with a situation in Nuauulu tribe in Rohua sub-village where almost all process of giving childbirth are handled by witchdoctor in the *Posuno* with very traditional equipment.

Example of this traditional practice is cutting the umbilical cord with *sembilu* or *bamboo*. Furthermore, the witchdoctor puts certain concoction, made by *Langsat's* leave or nutmeg, in the umbilical cord which has been cut before. This practice is done by 49 respondents. According to the Manuaba's theory, the process of cutting the umbilical cord must be done by trained / professional health worker¹². The treatment of umbilical cord by using 70% alcohol or *Betadin* (particular medicine) is still allowed as long as the umbilical cord is not wet and humid.¹³ This reality proves that the practice of cutting the umbilical cord in Nuauulu tribe from the past was different with modern medical treatment. This cultural practice can result infection for both the mother and the baby, and can eventually lead to death.

In regard to individual hygiene in *Posuno*, 49 respondents did not shower at all. However, according to the witchdoctor, the first 5-day after giving childbirth, respondent must take shower because she is still bleeding. Once the respondent does not bleeding anymore, then she is not allowed to take shower until she leaves *Posuno* (approximately 40 days). This is certainly a problem, because mother hygiene is the important factor in postnatal care (peurperium) period, meaning that all bacteria that can lead to the diseases should be killed.¹⁴

Most of our respondents also told their Indigenous elders if they experienced difficulty in

delivering the baby and in the period of postnatal care (peurperium). This is mainly because the Indigenous elders have a large role / contribution in Nuauulu's society. One role of the indigenous elders appears when the process of giving childbirth and/or in postnatal care is difficult. They will come in the *Posuno*, and pray for the water that later will be consumed by the mother in order to overcome the difficulty in the process of giving childbirth or during postnatal care. When needed, the mother can also be brought to the hospital. However, the Indigenous elders need to pray for the mother before she leaves, so that the mother leaves the tribe in pure condition. This tradition, it can slow down the process to bring the mother to the hospital and can lead to the death for both the mother and the baby.

Cultural factor is an important factor to determine individual behavior for having health lifestyle. Here are several factors which make someone or community learns something to support / oppose the creation of health behavior. They are Knowledge, Culture, Believe, and Perception.¹¹

CONCLUSION

The perception of most Nuauulu's women toward practice of pregnancy in seclusion in *Posuno*, can be categorized as high perception. For example, the perception of that the mother is better giving childbirth in *Posuno* rather than in proper healthcare institution, and the perception that giving childbirth in *Posuno* can avoid both the mother and the baby from demons' possession.

There is no correlation between the Perception and the culture of the practice of pregnancy in seclusion by Nuauulu tribe in Rohua. However, it appears in reality that there is obedience towards Nualu's cultural tradition, in sub-village Rohua, Seram Island, Regency Central Maluku.

The necessity of Communication, Information, and Education are needed for traditional leader and witchdoctor in order to enrich their knowledge about proper healthcare treatment for pregnant mother.

There are some suggestions for the future research. The author suggests that future research should cover the topic about:

1. The utilization of herbal as a natural medicine for Nualu tribe.
2. The cause of death for Nuauulu women, especially about the risk of eclampsia.
3. Malnutrition for toddlers in Nualu tribe.

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APPENDIX A: QUESTIONNAIRE

No	Question	Answer			
		Yes	%	No	%
1	Do you think that giving childbirth in <i>Posuno</i> can protect the mother and the baby from devil?	68	100	0	0
2	Do you think that <i>Mama Biang</i> is a good helper in childbirth?	67	98,5	1	1,5
3	Do you think that giving childbirth in <i>Posuno</i> is better than public health care institution?	63	92,5	5	7,4
4	Do you think that <i>Mama Biang</i> is the one who determines whether you are ready or not being in <i>Posuno</i> ?	58	85,3	10	14,7
5	Do you think that the equipment in <i>Posuno</i> are the dangerous tools for the mother and the baby?	16	23,5	52	76,5
6	Do you think that cutting the umbilical cord with bamboo can save for the baby?	67	98,5	1	1,5
7	Do you think that if the mother has done something wrong in the past, she will experience difficulty in childbirth?	62	91,2	6	8,8
8	Do you think that bleeding in childbirth is normal?	61	89,7	7	10,3
9	Do you think that death in process of childbirth is due to the sin of the mother?	64	94,1	4	5,9
10	Do you think that the correct position in praying by traditional leader determines the successfulness of childbirth?	27	39,7	41	60,3
11	Do you think that showering the baby immediately after childbirth is a good thing to do?	66	97,1	2	2,9
12	Do you think that showering the baby is a good thing to do?	63	92,6	5	7,4
13	Do you think that showering the baby every day is good for baby?	54	79,4	14	20,6
14	Do you think that the purpose of showering the baby is to free him/her from devil?	44	64,7	24	35,3
15	Do you think that taking traditional medicine from <i>Mama Biang</i> can recover your condition after childbirth?	39	57,4	29	42,6
16	Do you think that the traditional medicine from <i>Mama Biang</i> can heal the wound after cutting umbilical cord?	44	64,7	24	35,3
17	Do you think that breast milk should be given to the baby immediately after childbirth?	31	45,6	37	54,4
18	Do you think shower every day is good for you?	44	64,7	24	35,3
19	Do you think that not eating certain food while in <i>Posuno</i> is good for you?	63	92,6	5	7,4
20	Do you think that roasted food is good food to be consumed?	63	92,6	5	7,4
21	Do you think that your husband will get a protection if you giving childbirth in <i>Posuno</i> ?	56	82,4	12	17,6