



## Research Article

© 2021 D. A. P. M. Kencanawati and N. M. D. P. Anggraeningsih.  
This is an open access article licensed under the Creative Commons  
Attribution-NonCommercial 4.0 International License  
(<https://creativecommons.org/licenses/by-nc/4.0/>)

Received: 18 December 2020 / Accepted: 27 February 2021 / Published: 10 May 2021

# Effectivity of Timor Tribe Traditional Postpartum Care Modification in Kota Soe Community Health Center, South Center Timor Region

**Dewa Ayu Putu Mariana Kencanawati**

*Midwifery Departement, Kupang Health Polytechnic,  
R.A Kartini Road No. 1, Kelapa Lima, Kupang, East Nusa Tenggara, Indonesia  
Corresponding Author*

**Ni Luh Made Diah Putri Anggraeningsih**

*Midwifery Departement, Kupang Health Polytechnic,  
R.A Kartini Road No. 1, Kelapa Lima, Kupang, East Nusa Tenggara, Indonesia*

DOI: <https://doi.org/10.36941/jesr-2021-0071>

## Abstract

*The postpartum period is a sensitive time in which various traditional practices are applied in order to protect the health of the mother and the baby. Furthermore, the traditional postpartum care is believed to be very beneficial, but in reality, the practice can be dangerous for both the mother and baby. It is necessary to modify the traditional treatments in such a way that the mother and the baby are not endangered. This study aims to examine the effectiveness of modification of traditional Timorese Postpartum care during the puerperium. A quantitative research method with pre-experimental techniques using the intact group comparison design was used. The population used were families with postpartum mothers and the sample was determined by a purposive sampling technique. The results were from 8 families that carried out all stages of this modification, having good health status and more breastmilk production than those who did not. A modification of traditional Timorese childbirth practices gives a good effect on the health status of puerperal women. The implication of this research was to reduce the risk of postpartum mothers receiving Timorese traditional postpartum care.*

**Keywords:** *Postpartum, Traditional Care, Timorese*

## 1. Introduction

Postpartum care is very important for both mother and baby. This postnatal care helps manage complications that arise during labor and provides important information for the mother on how to take care of herself and her baby. (Statistic, 2012) It is estimated that about 60 percent of maternal deaths occur due to pregnancy, and after delivery as well as 50 percent of postpartum deaths occur within the first 24 hours. (Titaley et al., 2010) Therefore, it is necessary to care for the puerperium during this period, as it is a critical time for the mother and the baby being born.

Indonesia has fluctuating maternal mortality rates, 390 in 1991 then decreased to 220 in 2007 and 2010, in 2012 there was a further increase to 359. (Statistic, 2012) This figure is far from SDG's target in

2030, which is 70 per 100,000 live births. This condition is not much different from the Maternal Mortality Rate in East Nusa Tenggara (NTT) Province, which is one of the provinces in Indonesia with a high maternal mortality rate. The maternal mortality rate in NTT had decreased from 227 in 2010 to 153 in 2013, then increased to 169 in 2014, and decreased again to 135 in 2015 and in 2017 to 120 per 100,000 live births, while the national rate was 259 per 100,000 live births. The maternal mortality rate with NTT remains a serious problem as it is far from the target set by SDG's, which is 70. (N. P. H. Office, 2017).

South Central Timor is one of the districts in the province of NTT with Timorese, which experiences a serious problem related to maternal and infant mortality rates. Based on data from the District Health Profile 2016, the infant mortality rate in South Central Timor was 96/1000 KH. The Maternal Mortality Rate was 290.2 / 100,000 Live Births. The number of maternal and infant mortality rates that are quite high is due to problems of accessibility, the availability of skilled health workers, and the willingness of the community to change traditional life that is associated with the local culture. (T. D. H. Office, 2016)

Based on data from the South-Central Timor District health profile, Soe City Health Center have the highest maternal, infant and neonatal mortality rates, which was quite worrying among other health centers (T. D. H. Office, 2016) In 2016, 2 mothers died during childbirth, and 7 newborn died before 28 days. This is because the maternal believes in the traditional postpartum care, which place the mothers a dangerous situation. This shows that in addition to childbirth, the birth of a child has also proven to be a very important point in time for health measures, as at this point in time two lives are prone to health problems, but a cultural approach needs to be considered for health workers in approaching the community in providing health education about postnatal care.

For this reason, this research seeks to modify the traditional practices of the postpartum period carried out by Timorese in such a way that it can be carried out by mothers, and safe in terms of health. Therefore, this study aims to determine the effectiveness of the modification of traditional Timorese childbirth care in the work area of the Soe City Community Health Center.

## 2. Review of Literature and Theoretical Framework

The Postpartum period is a critical time for a mother because there are many emergencies such as infection. Therefore, health workers need to provide interventions to prevent infection and accelerate the recovery of the uterine after delivery. (Bari, 2010) Titaley et al., 2010 reported that about 20-30 percent of maternal deaths can be reduced by providing skilled birth care services by health workers. (Titaley, C.R, Hunter L Chyntia, Dibley J Michael, 2010) The maternal mortality analysis carried out by the Directorate for Maternal Health Development in 2010 shows that maternal mortality is closely related to access to health facilities. Providing a mother with good access to health care reduces the risk of maternal mortality. (I. M. of Health, 2013)

Early detection of complications in puerperal women is achieved through monitoring the examination of the puerperal women by conducting puerperal visits at least 3 times with the provisions of the first postpartum visit at 6 hours until after delivery, the second postpartum visit on the fourth day to 28 days after delivery and the third postpartum visit within 29-42 days after delivery. (I. ministry of Health, 2019).

The Postpartum period is a sensitive time and various traditional practices are applied to protect the health of the mother and baby. (Altutug Kamile, Anik Yesim, 2018) The World Health Organization (WHO) defines the postpartum period as the first six weeks after childbirth, from the first one hour of post-delivery after six weeks (42 days), following the birth of the infant. (H.A, 2006) Many women in Asia adhere to many cultural beliefs and practices, such as the perceived prevention of illness and ensuring the wellbeing of mothers and newborns. (Liamputong P, Yimyam S, Parisunyakul S, 2005).

Culture is defined as the values, beliefs, attitudes and behaviors that are imparted, including the knowledge, arts, traditions, customs, abilities, skills and similar habits that people acquire as a member of society. Cultural beliefs and differences also are observed in the child birth and postpartum periods,

where some traditional practices are performed for the protection of the mother and baby. (Altutug Kamile, Anik Yesim, 2018; H.A, 2006) The Timorese woman in South Central Timor believed that traditional puerperal care cannot be completely avoided by the community because it is related to beliefs regarding the cultural treatment. (Yessy, 2018).

According to a study conducted by Kencanawati in 2017, The Timorese have several cultural practices in the care of postpartum mothers. There are three types of cultural practices in the caring for the Timorese postpartum mother, namely, heating the body by lying on hot coals known as "roasting", compressing the whole body, and massaging the uterus to remove dirty blood known as "tatobi", and dietary restrictions (Postpartum mothers abstain from eating animal protein directly). Therefore, the postpartum mothers can only consume animal protein that has been processed such as shredded.

It was reported that postpartum traditional care would continue even though the postpartum mother take medicine from the midwife or Community health center, because there was a cultural attachment that the traditional treatments (*tatobi* and *panggang*) could quickly restore their condition before getting pregnant. This belief is different from the view of health workers, which stated that the traditional puerperal care can increase the risk of infection during the puerperium. (Kencanawati, Dewa ayu putu Mariana; Bakoil, b Mareta; Miron, 2019) This condition is similar with Winthers et al findings, which stated that many Asian women continue to practice a wide range of traditional beliefs and practices during pregnancy, childbirth, and the postpartum period. More information is needed on the benefits of formal maternal healthcare services, such as educational programs should be geared towards not only women but also husbands, parents, and in-laws. By recognizing and appreciating common local beliefs, providers may be able to provide culturally competent care (Winters M, Kharazami N, 2017) needed by the maternal during the postpartum period, including family attention, health care, and nutrition. (Kencanawati, 2019).

### 3. Methods

#### 3.1 Type and design

This research was quantitative study with a pre-experimental design using Intact Group Comparison, namely a variable study by dividing two groups, namely the case group, and the control group. The purpose of this design was to determine the effectiveness of the introduced postnatal care modifications. (Amat, 2011)

#### 3.2 Population and sample

The population were families that had postpartum mothers during the study period. The sample was determined purposively with the inclusion criteria for postpartum mothers that gave birth vaginally at the beginning of the puerperium (0-7 days postpartum), had no comorbidities, and performed postpartum care. While the exclusion criteria were postpartum mothers experiencing late puerperium (8-42 days postpartum). The mother's that did not give birth vaginally and had comorbidities. After visiting the field, 13 families met the inclusion criteria. Then the researcher determined the group that received the treatment and the control group. The determination of this group was that the researcher used one criterion, which was the family that performed the traditional Timorese follow-up and therefore 8 families had performed the follow-up period. The Timor tribe became the treatment group and 5 families did not performed the postpartum care with in the treatment and control group.

Data collection was carried out from June to August 2019 at the Soe City Health Center, TTS. The researchers requested the Puskesmas midwife coordinator and, together with the midwife, contacted families with postpartum mothers according to the criteria. Then for those that met the treatment group, families are given training by researchers on the modification of traditional postpartum care that is introduced. Furthermore, families are asked to carry out this traditional postpartum care for 14

days, the the village midwife visits daily to assess the health status of the postpartum mother, both in the group in the treatment and control groups using the control sheet of postpartum maternal health status, and the results are compared.

This research has passed the ethical test from the research ethics institute of the Health Polytechnic of the Ministry of Health in Kupang in 2019 with an ethical clearance number, namely LB.02.03 / 1/0052/2019.

#### 4. Results

##### 4.1 Respondent characteristics

The results from the characteristics of respondents from the Soe City Community Health Center. The characteristics of respondents based on age and parity.

**Table 1.** Frequency Distribution of Characteristics of Respondents

No	Variables	Group			
		Treatment	Percentage	Control	Percentage
1	Age				
	<20 years	1	12,5	2	40
	20-35 years old	6	75	3	60
	> 35 years	1	12,5	0	0
2	Parity				
	1	5	62,5	3	60
	2-4	3	37,5	2	40
	> 4	0	0	0	0

Based on table 1, it can be seen that the characteristics of respondents based on age in the treatment and control groups are mostly in the reproductive age range of 20-35 years. While parity in the treatment and control groups mostly had parity one.

##### 4.2 Treatment of Modification

**Table 2.** Treatment of Timorese Postpartum Care Modification

Respondent	Treatment of Modification		
	Empowerment of "Panggang Cot"	Tatobi and Oxytocin massage	Supplementary Food
1	Yes	42 x	Milk, egg
2	Yes	28 x	Fish, Milk
3	Yes	38 x	Egg, Fish, Milk
4	Yes	28 x	Fish, Milk
5	Yes	30 x	Egg, Fish, Milk
6	Yes	28 x	Milk, egg
7	Yes	42 x	Fish, Egg
8	Yes	38 x	Fish, Egg

Table 2 describes the results of the implementation of the modification of postnatal care in the treatment group. From the 8 respondents that received the treatment. All agreed to make "panggang" cots according to the provisions, all respondents also did tatobi massage twice a day. The difference in the number of massages was because postpartum mothers are in the early puerperium ranges from 0-7 days. Therefore, the number of massages performed also varies since the postpartum age was first

treated. While for additional food, not all respondents consumed the additional food provided (milk, eggs, and processed fish), 2 respondents consumed the 3 types of additional food, while the other 6 people consumed two of the 3 additional foods provided.

4.3 Health Status between treatment and control group after 14 days of observation.

Table 3. Maternal Health Status between treatment and control group after 14 days observation.

No.	Status	Group			
		treatment	percentage	control	percentage
<b>of Vital Signs</b>					
1	Normal	8	100	5	100
2	Abnormal	0	0	0	0
<b>Lochea</b>					
1	Normal	8	100	3	60
2	Abnormal	0	0	2	40
<b>Bleeding</b>					
1	Normal (<100ml / day)	8	100	3	60
2	Abnormal (> 100 ml / day)	0	0	2	40
<b>Uterine evolution</b>					
1	Normal	8	100	4	80
2	Not Normal	0	0	1	20
<b>Lactation</b>					
1	Enough	8	100	4	80
2	Less	0	0	1	20

Based on Table 2 above, an overview of the health status of maternal in the treatment and control groups is obtained. In a vital sign, the treatment group was treated and the cases were within normal limits, localized expenditure in the treatment group was entirely within the normal limits, namely *lokea sanguilenta* (7th day), while in the control group 2 people were not suitable for postpartum/ abnormal postpartum period (*lokea rubra* on day 7), bleeding results in the treatment group was within the normal range <100 ml/ day, while in the control group two mothers had more than 100 ml / day. Uterine involution was obtained in the whole treatment group within normal limits, while in the control group there was 1 mother that experienced uterine subinvolution. And the last thing about lactation in the treatment group was enough and there was no complaints, but in the control group there was 1 mother experiencing lactation problems in the form of breast swelling.

5. Discussion

5.1 Characteristics of respondents

The characteristics of postpartum mothers that became variables were age and parity. Furthermore, it can be seen that the characteristics of respondents based on age in the treatment and control groups are mostly in the reproductive age range of 20-35 years. While the parity in the treatment and control groups mostly had parity one. This shows that the woman is under the influence of the family, and in this case, the parent should determine proper postnatal care.

5.2 Treatment of Modification of Timorese Traditional Postpartum care

The following is a modification of the traditional Timorese postpartum care introduced to the case group:

### 5.2.1 Empowerment of cots in “Panggang” treatment

“Panggang” is defined as a mother during childbirth having to lie down on the coals made by her husband from “kusambi” wood. The woman lies on a bamboo cot covered with pandanus mats as high as 1.5 meters, and also lies on her stomach (*matono*) as well as on the couch for 15 minutes, the goal is to warm the whole body in such a way that the circulation is smooth.

The cot is modified to be “smoke-friendly”, and the smoke generated by the coals on the roasting cot does not pollute the roasting room but is thrown out. In addition, the height of the cot is also modified higher to reduce the risk of burns to the mother.

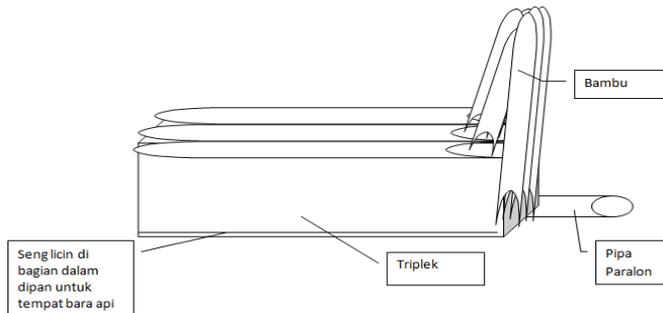


Figure 1. “Panggang” cot model.

### 5.2.2 Tatobi and Oxytocin Massage

Tatobi is heating the body of the post-partum mother by compressing the body with boiling hot water containing the ingredients (*aksikam and tastasi*), previously lubricating the woman's body with coconut oil. The modified Tatobi is heating the mother's body with hot hands unless the abdominal and pubic area apart from that the mother was massaged. The steps are as follows:

1. The mother takes off all the clothes one by one, then applies coconut oil to her body.
2. A warm towel is affixed on the mother's body (shoulders, back, hands)
3. After that, the massage is carried out to improve breastfeeding and maternal blood circulation.
4. The massages performed are as follows:
  - a. Mother is in a sitting position leaning forward, while hugging a pillow to make it more comfortable, but the table in front as an object to lean on.
  - b. Massage started from the top of the neck to the nape with circular movements of the thumb 3 times, then massage straight from top to bottom 3 times.
  - c. Massage the sides of the spine up to the extent of the chest, from the neck to the shoulder blades in a circular motion using the thumbs 3 times, then massage using the palms of the hands 3 times.
  - d. Massage along the spine from top to bottom with the thumbs in a circular motion for 3 times, then using the palms from top to bottom 3 times
  - e. Massage hands on the fist using the outer side of the fist to press the mother's back in a heart-following motion (love) 6 times or until the mother feels relaxed.
  - f. Massage the hands of the mother starting from the shoulders to the fingers.
  - g. Massage both the feet of the mother starting from the knees of the feet to the toes.
  - h. This massage provides a more optimal effect if done by the husband.
5. After the massage, the mother's body is compressed again (except for the abdominal and pubic area) with a warm towel before using the clothes again.

6. Then the mother drank warm water and rested.

Supplementary Feeding, postpartum mothers are given additional food for 14 days in the form of milk and processed fish.

Each family in the case group made this modification, and their health status was assessed for 14 days by the village midwife on duty in their area of residence. The treatment group was doing all the modification introduced, the treatment group accepted the modification and can do all the modification very well by themselves.

### 5.3 *The result of Modification treatment of Postpartum care*

Table 2 describes the results of the implementation of the postnatal care modification in the treatment group. Out of the 8 respondents that received the treatment, they all agreed to make “panggang” cots according to the provisions, all respondents also performed tatobi massage twice a day. The difference in the number of massages was due to the fact that postpartum mothers are between 0 and 7 days old at the beginning of the puerperium. The number of massages performed also varies since the postpartum age was first treated. While for additional food, not all respondents consumed the food provided (milk, eggs, and processed fish), only 2 respondents consumed the 3 types of additional food, while the other 6 people consumed two of the 3 additional foods provided. These findings showed that the community's accepted the traditional modified postpartum care, they accepted all the modifications introduced and did well. According to Altuntug findings, the traditional practices towards mothers after birth are common, to provide better health services, health professionals need to understand the traditional beliefs and practices of the individuals, families, and society that they serve. (Altuntug Kamile, Anik Yesim, 2018) This study is in line with Altuntug's findings, it appears that traditional postpartum care modified in terms of health can also be accepted and carried out well by the community.

### 5.4 *Description of postpartum maternal health status in the treatment and control groups after 14 days of treatment*

The puerperium begins after the birth of the placenta and ends when the uterus returns to its pre-pregnancy state. The puerperium begins after parturition is completed and ends after about 6 weeks or 42 days. There are several indicators used to assess the health status of puerperal, which includes vital signs, lochea, bleeding, uterine involution, and lactation. (I. ministry of Health, 2019) This study provided an overview on the status of mothers in the treatment and control groups. In the TTV, the treatment group was treated and the cases were within normal limits, localized expenditure in the treatment group was entirely within the normal limits, namely lokea sanguilenta (7th day), while in the control group two people were not suitable for postpartum/ abnormal postpartum period (lokea rubra on day 7), the results obtained in the treatment group is within the normal range <100 ml/ day, while in the control group 2 mothers were bleeding more than 100 ml/ day. The uretine involution was obtained in the whole treatment group within normal limits, while in the control group there was 1 mother experiencing uterine subinvolution. And the last thing about lactation in the treatment group was enough and there was no complaints, while in the control group there was 1 mother experiencing lactation problems in the form of breast swelling.

Kencaanawati stated in 2018 that traditional postpartum care would continue even if the postpartum mother took medicine from the midwife or Puskesmas because there was a cultural attachment that the traditional treatments (tatobi and grilled) could quickly restore their condition to pre-pregnancy conditions. This belief is different from the view of health workers, which assume that traditional puerperal care can increase the risk of infection during the puerperium. For this reason, this cultural practice needs to be carried out in several modifications in order not to endanger the health of the mother and baby. This study modified the traditional timor tribe puerperal treatment in the form of smoke-friendly couches, tatobi massage (combining oxytocin and tatobi massage), and a

high-protein diet. A study by Hesti and Siregar (2018) from 2017 shows that there is a significant correlation between postpartum breast milk production when breast care and oxytocin massage are combined. An oxytocin massage can significantly increase milk production. (Hesti et al., 2017; Yessy, 2018) Cultural practices that the community believe in, but pose a risk to the puerperal mother, need to be modified because not all of these cultural practices are dangerous and the puerperal mother cannot be separated from these traditional treatments.

The findings showed that the modification of traditional Timorese childbirth care provides benefits for maternal recovery in the puerperium. The modifications in the form of warming the body of the mother, oxytocin massage is carried out and combined with warm compresses (tatobi), and food rich in protein provide good benefits for postpartum mothers.

This study has several drawbacks, especially in terms of the very small sample. For this reason, the researcher hopes that other researchers can continue with different methods and an adequate number of samples in such a way that it can be useful for improving the health of mothers and children.

## 6. Conclusion

The findings showed that this modification in traditional postpartum care of the Timor tribe is accepted in the community and that it has significantly improved maternal health during the postpartum period. In addition to family participation, the husband and in-laws also provide postpartum care, which increases the attention of the family during the postpartum period because it is vulnerable for both the mother and baby.

Further research related to this study needs to be carried out by considering a large number of samples and a wider area (a region or province) and in collaboration with various scientific groups, including cultural, social and health sciences. Furthermore, researchers can use cultural methods to conduct more in-depth studies on the role of family and society in postpartum maternal health and several health promotion methods. It is hoped that further research can be used as a new approach in providing midwifery care for postpartum mothers by considering local culture.

## References

- Altutug Kamile, Anik Yesim, E. E. (2018). Traditional Practices of Mothers in Postpartum Period: evidence from Turkey. *African Journal of Reproductive Health.*, 22(1), 94. <https://doi.org/DOI : 10.29063/ajrh2018/v22i1.9>
- Amat, J. (2011). *Experiment Research Method* (J. Amat (ed.)). LPMP, Yogyakarta.
- Bari, S. A. (2010). *Maternal and Neonatal Care Handbook*. YBPSP, Jakarta.
- Health, I. M. of. (2013). *Indonesia Health Profile*. Indonesia Ministry of Health, Jakarta.
- Health, I. ministry of. (2019). *Guidelines to Postpartum Services for Mothers and Newborns*.
- Hesti, K. Y., Pramono, N., Wahyuni, S., Widyawati, M. N., & Santoso, B. (2017). Effect of Combination of Breast Care and Oxytocin Massage on Breast Milk Secretion in Postpartum Mothers. *Belitung Nursing Journal*, 3(6), 784–790. <https://doi.org/10.33546/bnj.293>
- Liamputong P, Yimyam S, Parisunyakul S, B. C. and S. N. (2005). Traditional beliefs about pregnancy and childbirth among women from Chiang Mai, Northern Thailand. *Midwifery*, 21(2), 1398–53. <https://doi.org/DOI : 10-.1016/j.midw.2004.05.002>.
- Office, N. P. H. (2017). *NTT Province Health profile*. NTT Province Health Office, Kupang.
- Office, T. D. H. (2016). *TTS District Health Profile*.
- Statistic, C. B. of. (2012). *Indonesian Health Demographic Survey*. Central Bureau of Statistic, Jakarta.
- Titaley, C.R, Hunter L Chyntia, Dibley J Michael, H. P. (2010). Why do some women still prefer traditional birth attendants and home delivery?: a qualitative study on delivery care services in West Java Province. *BMC Pregnancy and Childbirth*, 10, 43.
- Titaley, C. R., Hunter, C. L., Dibley, M. J., & Heywood, P. (2010). Why do some women still prefer traditional birth attendants and home delivery?: a qualitative study on delivery care services in West Java Province, Indonesia. *BMC Pregnancy and Childbirth*, 10, 43. <https://doi.org/10.1186/1471-2393-10-43>
- Yessy, S. R. (2018). *The effect of Oxytocin Massage on Breast Milk Production in Postpartum Mothers in Sally Clinic Medan Tembung District Year 2018*. <http://poltekkes.aplikasi-akademik.com/xmlui/handle/123456789/741>