

How The Body Temperature with Early Initiation of Breastfeeding on Newborn at Independent Practice Midwife (BPM) "E" Lasiana Village, Kupang City

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Article

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Abstract

In developing countries, hypothermia is one of the leading causes of infant mortality and morbidity. Hypothermia is a condition where the body temperature is less than 36.5°C. One of the care for newborns is early initiation of breastfeeding (IMD). IMD can maintain body warmth and prevent heat loss in the baby's body. The purpose of this study was to determine the difference in body temperature of infants who successfully performed IMD and those who failed to perform IMD at BPM "E" Lasiana Village, Kupang City. This study uses an analytical method of cross-sectional design. The population in this study were newborns in the independent practice of midwives from January-November 2021, totaling 105 babies. The sampling technique was purposive sampling. The sample in this study was 105 newborns who met the inclusion criteria. Secondary data sources, data collection with documentation. Data analysis using Mann-Whitney test. Results : Mann-Whitney test obtained p value = 0.000 < 0.05. Hypothesis testing in this study where the p value < so that H0 is rejected and H1 is accepted. A total of 57 babies managed to do IMD, all of them were at normal temperatures and none of them had hypothermia. While the 48 babies who did not successfully perform the IMD, 42 babies were in normal temperature and 6 babies were hypothermic. There is a difference in body temperature of newborns who successfully perform IMD and those who do not succeed in IMD.

Abstrak

Di Negara berkembang hipotermia merupakan salah satu penyebab utama kematian dan kesakitan pada bayi. Hipotermi adalah kondisi dimana suhu tubuh kurang dari 36,5° C. Salah satu asuhan pada bayi baru lahir adalah inisiasi menyusui dini (IMD). IMD dapat menjaga kehangatan tubuh dan mencegah kehilangan panas pada tubuh bayi. Tujuan dari penelitian ini adalah untuk mengetahui perbedaan suhu tubuh bayi yang berhasil melakukan IMD dan yang tidak berhasil melakukan IMD di BPM "E" Kelurahan Lasiana Kota Kupang. Penelitian ini menggunakan metode analitik desain cross sectional. Populasi dalam penelitian ini adalah bayi baru lahir di

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praktik mandiri bidan dari bulan Januari-November 2021 berjumlah 105 bayi. Teknik pengambilan sampel adalah dengan purposive sampling. Sampel dalam penelitian ini adalah bayi baru lahir berjumlah 105 bayi yang memenuhi kriteria inklusi. Sumber data sekunder, pengumpulan data dengan dokumentasi. Analisis data menggunakan uji Mann-Whitney. Uji Mann-Whitney didapatkan nilai $p = 0,000 < \alpha = 0,05$. Pengujian hipotesis dalam penelitian ini dimana nilai $p < \alpha$ sehingga H_0 ditolak dan H_1 diterima. Sebanyak 57 bayi berhasil melakukan IMD, seluruhnya berada pada suhu normal dan tidak ada yang mengalami hipotermi. Sedangkan 48 bayi yang tidak berhasil melakukan IMD, sebanyak 42 bayi berada dalam suhu normal dan 6 bayi mengalami hipotermi. Ada perbedaan suhu tubuh bayi baru lahir yang berhasil melakukan IMD dan yang tidak berhasil melakukan IMD.

Introduction

Newborns (neonates) are babies aged 0-28 days who have to adjust to life outside the womb (Marmi, 2018). World Health Organization (WHO) in 2018 the neonatal mortality rate was around 18/1000 live births, SDKI in 2017 had 15/1000 live births, East Nusa Tenggara Province in 2017 neonatal mortality was 7.7/1000 live births, Kupang City in 2018 neonatal death was 4/1000 live births.

Indonesia, one of the main causes of death and morbidity in infants is hypothermia, with an incidence of 6.8%. Hypothermia being a decrease in body temperature below 36.5°C (Rukiyah, 2013). Neonates are not able to regulate their body temperature so they will quickly lose heat. Preventing the baby from losing heat can be done by drying the baby immediately after birth, putting on a hat, putting on a dry and clean blanket, not weighing the baby immediately, bathing the baby after 6 hours, and initiating early breastfeeding (Marmi, 2011).

Early Breastfeeding Initiation (IMD) is part of newborn care. Contact between the mother's skin and the baby's skin during IMD can provide warmth and prevent heat loss (Marmi, 2011). SDKI 2017 carried out IMD in infants for one hour as much as 26.62%, East Nusa

Tenggara the duration of IMD implementation according to the 0-5 month age group was 74.38% carried out IMD in less than 1 hour and as much as 26.62% IMD was carried out for 1 hour.

Initial data obtained from independent practice midwife (BPM) "E" from January-August 2021 recorded 80 births. Of the 80 births, babies who get IMD were 47.5% and those who didn't get IMD were 52.5%. In the group that successfully performed the IMD, there was no incidence of hypothermia, while in the group that failed to perform the IMD, there was a 25% incidence of hypothermia.

Based on the events above, the researchers wanted to research on the difference in body temperature of newborns who succeeded in performing IMD and those who did not succeed in doing IMD at BPM "E" Lasiana Village, Kupang City.

Method

This study uses an analytic method with a cross-sectional design where the body temperature of newborns who have IMD for one hour will be compared and those of less than one hour. If the baby does all the stages of the IMD, the baby is included in the one hour IMD category, while the baby who doesn't do all the



stages of the IMD is included in the IMD less than one hour. The research was conducted in December 2021. The data source used secondary data with a population of newborns in January-November totaling 105 babies. The sampling technique was purposive sampling. The sample in this study amounted to 105 infants who met the

inclusion criteria. The inclusion criteria in this study were delivery with a gestational age of not less than one month (preterm), delivery without complications, newborns not having low birth weight, not experiencing asphyxia, sepsis, and other complications. Data analysis using Mann-Whitney test.

Results and Discussion

Univariate Analysis

Table 1. Distribution of variables

Variables	Frequency	Percentage (%)
Number of Parity		
Primipara	37	35,2
Multipara	68	64,8
Gestational Age		
Atterm	101	96,2
Postterm	4	3,8
Gender		
Male	60	57,1
Female	45	42,9
Birth Weight		
Normal birth weight	105	100
More birth weight	0	0
IMD Implementasion		
Succeed	57	54,3
Not successful	48	45,7

Source: Secondary Data, 2021

Based on table 1, out of a total of 105 newborns the number of deliveries for primipara mothers was 37 (35.2%) and for multipara mothers as many as 68 (64,8%). 101 mothers gave birth atterm (96.2%) and 4 mothers with post-term pregnancies (3.8%). There were 60 male babies (57.1%) and 45 (42.9%) female babies. total 105 babies, all of them had normal birth weights.

The distribution of IMD implementation. From a total of 105 deliveries and newborns, mothers in labor and babies who successfully performed an IMD were 57 (54.3%) and 48 (45.7%).

The grouping of IMD implementation is divided into two categories, namely successful and unsuccessful. If the IMD is carried out for one hour, it is in the successful category, while if the IMD is

carried out for less than one hour, it is in the unsuccessful category.

It can be seen that the birth mothers who did not succeed in performing the IMD were more than the women giving birth who succeeded in performing the IMD. The distribution of more multiparous maternity mothers did not affect the success rate of IMD implementation. This situation shows that the mother's knowledge, the mother's desire to give early breastfeeding, and the support of health workers in the implementation of IMD are still lacking. Mother's knowledge and mother's desire to give early breastfeeding affect the success of IMD implementation.

Research by Mujiati Novianti (2015), one of the factors that influence the success of early initiation of breastfeeding (IMD) is the support of health workers. Aryani



(2020), there is a relationship between the support of health workers on the implementation of IMD. The support of health workers has a very large role in assisting the implementation of the IMD. Support from health workers can be in the

form of providing information about the benefits of IMD so that mothers have the desire to give early breastfeeding to their babies. Health workers must also accompany the mother during the IMD process (Susilawati, 2015).

Table 2. Body Temperature Distribution of Newborns Who Successfully Perform IMD

Newborns Body Temperature	Frequency	Percentage (%)
Hypothermia	0	0
Normal	57	100
Total	57	100

Source: Secondary Data, 2021

Based on table 2, it shows that as many as 57 babies managed to do IMD. This means that as many as 57 babies had an IMD during the first hour after birth. Of the 57 infants, all were at normal temperature, none had hypothermia.

Marmi (2011), the benefits of IMD for infants, one of which is to prevent the loss

of body heat. According to research by Heny Ekawati (2015), the implementation of IMD given to newborns for one hour will affect on changes in temperature in the baby's body. After the IMD is performed, the newborn's body temperature will increase or change in average temperature between 10-30°C.

Table 3. Distribution of Body Temperature of Newborns Who Did Not Successfully Perform IMD

Newborns Body Temperature	Frequency	Percentage (%)
Hypothermia	6	12,5
Normal	42	87,5
Total	48	100

Source: Secondary Data, 2021

Based on table 3, it shows as many as 48 babies who did not succeed in doing IMD. This means that as many as 48 babies had an IMD less than 1 hour after birth. Of the 48 babies, 42 babies were at normal temperature (87.5%), 6 babies were hypothermic (12.5%) and none had hyperthermia.

According to Sembiring (2019), the temperature of the delivery room at 21 °C is different from the temperature in the womb, which is 37 °C. Babies lose heat

quickly as the amniotic fluid evaporates from the skin.

Research by Hutagaol et al, (2014) , Newborns can experience heat loss four times greater than adults, resulting in a decrease in body temperature. In the first 30 minutes the baby can experience a temperature drop of 3-4 °C. In a room with a temperature of 20-25 °C, the baby's skin temperature drops by about 0.3 °C every minute.

Bivariate analysis

Table 4. Differences in Body Temperature of Newborns Who Successfully Perform IMD and those who do not Successfully Perform IMD

IMD	Body temperature		Percentage (%)	Total	P
	Normal	Hypothermia	Normal	Hypothermia	



Succeed	57	0	100	0	100 %	
Not successful	42	6	87,5	12,5	100 %	0.000
Total	99	6			105	

Source: Secondary Data, 2021

Based on table 4, it shows that the group that succeeded in carrying out IMD as many as 57 babies (100%) were at a normal temperature and no babies had hypothermia, while in the group that did not successfully carry out IMD as many as 42 babies (87.5%) were in normal temperature and 6 infants (12.5%) were hypothermic.

Mann-Whitney test results obtained p value = 0.000 < = 0.05. Hypothesis testing in this study where the p value < α so that H0 is rejected and H1 is accepted. It can be concluded that there is a difference between the body temperature of newborns who successfully perform IMD and those who fail to perform IMD.

The results of this study are in line with research conducted by Reyani Aprilia (2019), babies who successfully IMD are in normal temperatures while babies who do not succeed in IMD are mostly hypothermic.

In the group that successfully performed the IMD, 57 infants (100%) were at normal temperature and none of the infants had hypothermia. During the IMD implementation, there is contact between the mother's skin and the baby's skin which can warm the baby and reduce mortality due to hypothermia (Roesli, 2012). Research by Chaidir (2016), the implementation of IMD can prevent babies from losing heat.

In the group that failed to perform IMD as many as 42 infants (87.5%) were in normal temperature and 6 infants (12.5%) were hypothermic. According to Sembiring (2019), newborns enter a much cooler atmosphere at birth, this

causes the baby to lose heat more quickly. Research by Wardani and Comalasari (2018), the baby's temperature before the IMD was carried out had an abnormal body temperature. In another study conducted by Zulala (2017), inappropriate IMD will increase the risk of hypothermia by 6 times.

A total of 42 infants (87.5%) who failed to perform IMD were in normal temperature and did not experience hypothermia. Reyani Aprilia, (2019) Some babies who fail to do IMD have a normal body temperature because the baby's immune system is good and the baby's skin contact with the mother can keep the baby's body temperature warm.

Roesli (2012), in one hour IMD newborns will go through stages, namely, the first 30 minutes the baby will be silent, this situation is a transition from a state in the womb to a state outside the womb. 30-40 minutes, the baby will taste the top of the palm of his hand, the smell in the palm of the baby's hand will guide the baby to find the mother's nipple, the baby begins to move towards the breast then towards the nipple and the baby begins to suck. Skin contact during the IMD stage will maintain the baby's body temperature so that hypothermia does not occur.

Research Limitations

There is no data on the temperature of newborns before the IMD implementation so that in this study it is not possible to know the average body temperature of newborns before the IMD. There is no room temperature measuring device at the research site so it is not known whether the room temperature is in a normal state or not.



Conclusion

From a total of 105 deliveries and newborns, mothers in labor and infants who successfully performed an IMD were 57 (54.3%) and 48 (45.7%). Of the 57 infants (54.3%) who successfully performed the IMD, all of them were at a normal temperature and none had hypothermia. Meanwhile, 48 infants (45.7%) who failed to perform IMD, as many as 42 infants (87.5%) were in normal temperature and 6 infants (12.5%) were hypothermic. Mann-Whitney test obtained p value = $0.000 < = 0.05$. The p value $<$, it can be concluded that there is a difference between the body temperature of newborns who successfully perform IMD and those who fail to perform IMD.

Suggestion

For institutions, Researchers recommend that the results of this study can be used as reference material for students who want to do further research on IMD and newborn body temperature.

Share the research site, For research sites, especially BPM "E" can provide more education to the community about the importance of implementing early initiation of breastfeeding (IMD).

For further researchers, The use of primary data to find out more about the body temperature of newborns before the implementation of the IMD, so that they can compare the body temperature before and after the implementation of the IMD.

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