



E-ISSN: 2664-1305  
P-ISSN: 2664-1291  
[www.paediatricnursing.net](http://www.paediatricnursing.net)  
IJRPN 2023; 5(1): 19-21  
Received: 17-11-2022  
Accepted: 05-01-2023

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## A study to evaluate the practices affecting thermoregulation in immediate newborn care after birth within four hours

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**DOI:** <https://doi.org/10.33545/26641291.2023.v5.i1a.113>

### Abstract

**Aim:** A study to evaluate the practices affecting thermoregulation in immediate newborn care after birth within four hours. The study was conducted in the Kushabhau Thakrey District Hospital, Rewa. Research approach adopted for this study was descriptive evaluator approach. The sample composed of 100 normal newborn who born vaginally. The sampling technique used in the study was non probability purposive convenient sampling technique.

**Results:** Immediate after birth. 66% of the babies were in normal range. 34% of the babies were below the normal range. After transferring from the labour room to resuscitation room. 14% babies were below normal range. 86% babies were within normal range. After transferring to postnatal ward. 66% babies were maintaining normal temperature. 34% were maintained below normal range.

**Keywords:** Immediate newborn care practices, newborn, thermoregulation

### Introduction

The cry of the newborn is the only means of communication and brings a message that I need care. (Fernandez 93). The newborn babies need special care to meet their basic physiological and psychological needs. Delivery and the first few days of life are a critical period for the growth and development of the infant (Nelson 1996) <sup>[12]</sup>. More than half of the infant's deaths occurs in the first twenty eight days of the newborn's life, most of these deaths takes place in the first two weeks of life due to birth asphyxia, hypothermia and infection.

(WHO) One of the critical factors in the survival of newborn babies are the satisfactory maintenance of their body temperature. The neonatal period of the baby is a critical period and the birth is the major challenge to the newborn to negotiate successfully from intrauterine to extra-uterine life. Thermoregulation is the significant contributor to neonatal morbidity and mortality for all newborn. Cold injuries occur due to inadequate knowledge and skills (WHO). Many health personnel and mothers are not aware of the importance of keeping the babies warm by simple methods such as drying, wrapping and warming immediately after birth, avoiding harmful practices, encouraging early breastfeeding and keeping newborn in close contact with the mother (WHO). The care of normal newborn and approved practices to reduce the risk of hypothermia and infection is very essential. A newborn have no thermal control and is at high risk of developing hypothermia at the time of birth if precautionary measures are not taken.

### Problem statement

'A study to evaluate the practices affecting thermoregulation in immediate newborn care after birth within four hours'.

### Objectives

1. To find out the practices carried out by the health personnel in newborn care within four hours after birth.
2. To identify the environmental factors influencing the temperature of newborn in labor room, the resuscitation room and postnatal ward.
3. To monitor the temperature of newborn within four hours after birth.

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- a) Immediate care after birth.
- b) After transferring to the resuscitation room.
- c) Before transferring to postnatal ward.
- d) After four hours of birth.

**Review of literature**

Review of literature gave the researcher in-depth complete concrete and profound broad base knowledge of the research topic in detail to identify the problem exists related to topic and to identify the need of study.



The conceptual framework of this study is based on 'General System Theory' given by Ludwig Von Bertalanffy in 1968.

**Ludwig Von Bertalanffy**

**Born:** September 19, 1901 Vienna, Austria-Hungary.

**Died:** June 12, 1972 (aged 70) Buffalo, New York, USA.

**Known for:** General System Theory.

The study was conducted in the *Kushabhau thakrey District Hospital, Rewa.*

Research approach adopted for this study was descriptive evaluatory approach.

The sample composed of 100 normal newborn who born vaginally.

The sampling technique used in the study was non probability purposive convenient sampling technique.

**Tool**

The researcher used 30 item observation checklist with participatory observation and monitor four times temperature of newborn immediate after birth within four hours.

The validity of the tool was obtained by giving it to the experts from nursing fields and neonatologists.

Reliability was done by using inter rater method. The reliability coefficient by kappa method was 0.86.

Pilot study was carried out in the selected *Adarsh hospital &*

*Research center, Rewa.* Total sample was 10 new born.

**Results**

- Temperature of labour room, resuscitation room was maintained 79% at 25- 28 °C and 13% at 30-32 °C.
- Doors of the labour room were 7% fully closed 93% partially closed.
- Doors of the resuscitation room and postnatal ward were 97% & 68% partially closed.
- Speed of the fan was high 96% in labour room 84% high in resuscitation room 96% high in postnatal ward.
- 49% babies were kept in warm clothes. 47% babies were kept in resuscitation room without drying. 4% babies nurse under radiant warmer.
- 90% babies' cords were clamped after 15 minute and 10% babies cord clamped and cut
- Immediately.
- 94% babies were dried with cold sheet. 6% babies were dried with warm sheet.
- Weighing of the baby was done 100% without keeping any cloth on the weighing scale.
- 93% babies nursed less than five minute 7% babies nursed more than 10 minutes.
- 100% babies were transferred with in adequate clothes from labour room to postnatal ward.
- 100% babies were kept with closed skin contacts of mother to maintain body temperature.

**Monitoring of temperature of newborn**

**Immediate after birth**

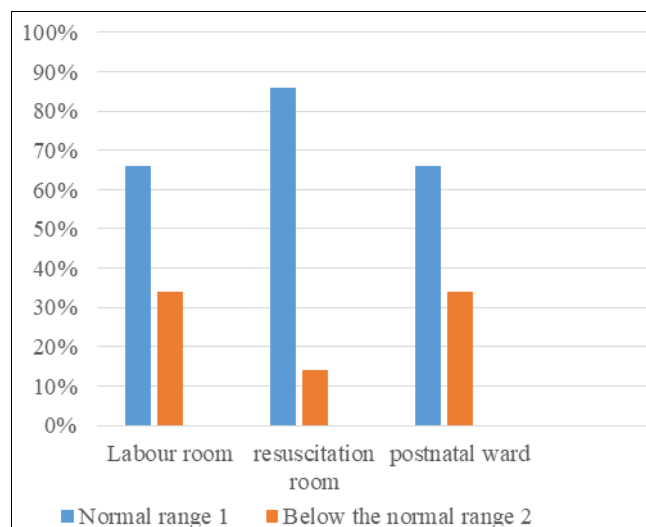
- 66% of the babies were in normal range. 34% of the babies were below the normal range.

**After transferring from the labour room to resuscitation room**

- 14% babies were below normal range. 86% babies were within normal range.

**After transferring to postnatal ward**

- 66% babies were maintaining normal temperature. 34% were maintained below normal range.



**Fig 1:** Comparing Temperature of New Born

**Conclusion**

In order to provide quality care to the newborn the health personnel should be well equipped with adequate

knowledge and skill and attitude regarding thermoregulation. It was observed that knowledge and skill and attitude is required to provide quality care to the

newborn. Quality advanced knowledge and skill helps to maintain good thermoregulation which helps to prevent complication in newborn after birth.

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