



Effect of Skin to Skin Contact on Vital Parameters and Neonatal Behaviour of New-Born Babies

Arunima Joji

MSc (N), Sree Gokulam Nursing college

Prof. Mrs. Bindu
C GVice Principal & HOD - Obstetrics and Gynaecology Nursing, Sree
Gokulam Nursing College, Trivandrum-695607

ABSTRACT

The present study was aimed to assess the effect of skin to skin contact on vital parameters and neonatal behavior of newborn babies. Objectives: (1) To assess the effect of skin to skin contact on vital parameters of newborn babies (2) To assess the effect of skin to skin contact on neonatal behaviour of newborn babies (3) To assess the mother's perception on skin to skin contact. Methodology: Quasiexperimental approach with non-equivalent control group pre-test post-test design was used. Sixty mother baby dyads, who satisfied the inclusion criteria, were selected by purposive sampling. The tool used for data collection consisted of socio demographic variables, Clinical data sheet, Observation checklist to assess the vital parameters, Neonatal behavior assessment scale, Via Christi Breastfeeding Assessment Scale and Mother infant bonding questionnaire. The vital parameters, general neonatal behavior and breastfeeding behaviour of the experimental and control group were assessed at 25 minutes after the delivery. The intervention was given at 30 minutes after the delivery to the experimental group for 30 minutes. Changes in vital parameters, general neonatal behaviour, breastfeeding behaviour and mother's perception was assessed for both groups at 1 hour after the delivery. Results: Results showed that there was significant difference in the temperature and breastfeeding behaviour.

KEYWORDS : skin to skin contact, vital parameters, neonatal behaviour, new-born babies

Introduction

The transition from intrauterine to extra uterine life is perhaps the greatest challenge any human being can fall in the curse of lifetime. Approximately 3% to 7% of all newborns require some sort of support¹. The normal newborn continues to adapt to the extra uterine life within the first week after childbirth remaining vulnerable to hypothermia. Acrocyanosis and respiratory distress may occur as the infant increases oxygen consumption in an attempt to increase heat production. If hypothermia continues, apnea, bradycardia, and central cyanosis may occur. Normal body temperature in neonate is 36.5 °C-37.5 °C. Hypothermia refers to body temperature below 36.5 °C⁵. The WHO recognizes thermoregulation of the newborn as a major threat to the health of newborn throughout the world. Thermoregulation of the healthy term newborn immediately after birth has traditionally been obtained through the use of radiant warmers and swaddling in warm blankets. Through research it has become apparent that the mother is the preferred heat source. Newborns in close contact with the skin of their mothers are more likely to maintain temperatures in the neutral thermal range. The mother as a heat source is uniquely adapted to the thermoregulatory needs of the newborn. Mothers are capable of providing heat to newborns at temperature less than 36.30°C. Newborns placed skin to skin with mothers remained considerably warmer during the first three hours of life than did newborns swaddled in mother's arms or receiving nursery care. Additionally, the utilization of the mother as a heat source for rewarming low risk newborns has been demonstrated to be more effective than the traditional use of an isolette. In the event of the mother's absence, effective thermoregulation can be attained from skin to skin contact between the newborn and the father. The implementation of routine skin to skin contact immediately after birth ensures the most effective means of thermoregulation during the initial transition period and beyond the first day of life¹⁰.

Need and significance of the study

According to WHO reports most of the newborn deaths are due to hypothermia that is about 42% and 3.6 million develop moderate to severe hypothermia. World Health Organisation estimates that each year five million children die within the first 8 month of their life. Neonatal mortality rate in our country is nearly 53 per 1000 live births. One of the main causes for neonatal death is hypothermia, infections and inadequacy of proper neonatal care¹. The respiratory, cardiovascular system, thermoregulatory and immunologic systems undergo significant physiologic changes and adaptations during transition from fetal to neonatal life. Hypothermia in the newborns can cause cold stress, in which the increased metabolic rate required to generate body heat causes increased respiratory rate and oxygen consumption.

If the newborn cannot supply the increased demand for the oxygen, hypoxia will result and cause further problems²⁹.

Statement of the problem

A study on the effect of skin to skin contact on vital parameters and neonatal behaviour of newborn babies in selected hospital at Trivandrum.

Objectives of the study

- To assess the effect of skin to skin contact on vital parameters of newborn babies
- To assess the effect of skin to skin contact on neonatal behaviour of newborn babies
- To assess the mother's perception on skin to skin contact

Hypotheses

H1: There is a significant difference in neonatal vital parameters after skin to skin contact.

H2: There is a significant difference in neonatal behaviour after skin to skin contact H3: There is a significant difference in mother's perception towards baby after skin to skin contact

Research approach

quantitative approach

Research design

Quasi experimental design

The design can be abbreviated as follows

E	O1	X	O2
C	O1	--	O2

E-Experimental group

C-Control group

X-Intervention

O1-Pretest to assess vital parameters, neonatal behaviour

O2-Post test to assess vital parameters, neonatal behavior and mother's perception

Variables

Independent variable

Skin to skin contact.

Dependent Variable

Temperature, heart rate, respiratory rate, oxygen saturation, neonatal behaviour and breastfeeding behaviour

Research setting

The study was conducted at labour room and immediate postnatal unit of Sree Gokulam Medical College Hospital and Research Foundation, Venjaramoodu.

Sample

The study sample comprised of mother baby dyads in the labour room and immediate postnatal unit who fulfills the inclusion criteria.

Sampling technique

Purposive sampling

Sample size

The sample size for the present study is 60 mother baby dyads, where 30 mother baby dyads in experimental group and 30 mother baby dyads in control group.

Inclusion criteria

- Newborn babies who were delivered by normal vaginal delivery.
- Mothers who have completed 37 wks of gestation and had a normal vaginal delivery.
- Newborns with Apgar score>7, weight>2.5kg.

Exclusion criteria

- Newborn babies with any congenital anomalies and neonatal complication
- Newborn babies born to high risk mother.
- Mothers who are not willing to participate in the study
- Mothers with any pregnancy associated complications

Tools/instruments

- 1 Socio Demographic Variables (Mother age, Religion, Education, Occupation and Monthly income)
- 2 Clinical data sheet(Parity, Gender of the child, Weight of the newborn, Apgar score at 1 minute after delivery and Apgar score at 5 minute after delivery)
- 3 Observation checklist to assess the vital parameters (Temperature, Heart rate, Respiratory rate and Oxygen saturation)
- 4 Neonatal behavior assessment Scale Rating scale to assess general neonatal behavior
- 5 Via Christi Breastfeeding Assessment Scale to assess breastfeeding behavior of newborn

Data collection procedure

The main study was conducted from 4.02.2013 to 30.04.2013 in labour room of Sree Gokulam Medical College And Research Foundation. A formal consent was 48 obtained from the samples by providing adequate explanation . The vital parameters ,general neonatal behavior and breastfeeding behaviour of the experimental and control group were assessed at 25 minutes after the delivery. The intervention was given at 30 minutes after the delivery to the experimental group for 30 minutes. Experimental group: The naked newborn baby was placed prone on the mother's bare chest with the head tilt on one side and covered with a sheet for 30 minutes after 30 minutes of normal vaginal delivery Control group : Made the baby to lie down comfortably covered with dry cotton cloth as per routine care Changes in vital parameters , general neonatal behaviour , breastfeeding behaviour and mother's perception was assessed for both groups at 1 hour after the delivery.

Results:

Table 1.Comparison of temperature based on group (n=60)

Stage	Group	Mean	SD	N	t	p
Pretest	control	36.4	0.4	30	0.828	0.163
	experimental	36.5	0.2	30		

Post test	control	36.7	0.4	30	5.68**	0.000
	experimental	37.2	0.3	30		

**Significant at P>0.05

Table 1 shows, using independent t test, it is found that at pre test level, both groups showed no significant difference (t value 0.828 P>0.05) in temperature. At the same time, in the post test level both group showed significant difference (t value 5.68 P >0.05) in mean temperature. So it can be inferred that skin to skin contact has significant effect on temperature.

Table 2.Comparison of breastfeeding behaviour based on group (n=60)

Stage	Group	Mean	SD	N	t	p
Pretest	control	5.6	3.0	30	1.02	0.795
	experimental	6.3	2.5	30		
Post test	control	6.7	2.5	30	2.91	0.005
	experimental	8.4	2.1	30		

**Significant at P>0.01

Table 2 shows using independent t test, it is found that at pre test level, both groups showed no significant difference (t value 1.02, P>0.05) in breastfeeding behaviour. At the same time, in the post test level both group showed significant difference (t value 2.91, P>0.05) in mean breastfeeding behaviour. So it can be inferred that skin to skin contact has significant effect on breastfeeding behavior.

Conclusion

Skin to skin contact significantly maintaining stable temperature and good breastfeeding behavior. So in future nurses can incorporate skin to skin contact soon after birth as a part of nursing intervention.

Nursing implications

The findings of the study have the following implication in nursing practice

Implications for Nursing Practice

- Nurses can promote skin to skin contact as a routine practice in the immediate postnatal unit and labour room
- Nurses can include skin to skin contact in the antenatal teaching section

Implications for Nursing Education

- Skin to skin contact can be implemented in the curriculum of GNM, B Sc. Nursing, and M. Sc Nursing as a topic in the care of newborns
- Faculty can teach the student about skin to skin contact and see that theyimplement it in the labour room and immediate post natal unit

Implications for Nursing Research

- A study can be done to identify the factors which prevent the mothers in practicing skin to skin contact
- A study can be conducted to assess the effect of skin to skin contact on thebehavioural states of preterm babies

Implications for Nursing

- Nurse administrator can emphasis it as a policy of the hospital
- Nurse administrator can see that all students and staff working in the labour roomare trained in giving skin to skin contact and its practice
- Education programme should be conducted to create awareness to all the staffabout skin to skin contact

Limitations

- It needs much explanation to get consent from the mothers and her relatives
- The samples taken were only 30 for the experimental group and 30 for the control group and the data was collected using purposive sampling method

Recommendation

- Similar studies can be conducted in another health care setting
- A similar study can be replicated on a larger sample in premature babies
- Education programme should be conducted to create awareness to all the staff

REFERENCES

1. Rangappa S, Prevention of hypothermia in neonates. Nightingale Nursing Times 2011; 6(12):39-41
2. Agarwal KN. Textbook of Paediatrics. 1st edition. New Delhi: The Books Pvt Limited; 2010.
3. Karan Mercdente J, Robert Kniegman M. Essentials of Paediatrics. 6th edition. New Delhi: Elsevier publication; 2011.
4. Gardner, Carter, Enzman et al. Neonatal Intensive care. 7th edition. Missouri: Elsevier Publication; 2006 .
5. Santhosh Kumar A. Manual of Newborn Care. 2nd edition. New Delhi: Pares Publication; 2011.
6. Treasa.E, Janice.S, Rogers. Manual of Paediatric Emergency. 1st edition. USA: Mosby Publications; 1998.