

## A Study to Assess the Effectiveness of Structured Teaching Program on Knowledge among Postnatal Mothers regarding New Born care in Maternity Ward of Guru Nanak Dev Hospital, Amritsar

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### Abstract

Basic care should be provided to the new born by the mother at home. This includes caring, feeding, basic hygiene and identification of danger signs and seeking help from health personnel whenever required. Therefore, all newborn get home based newborn care as per the perception and socio-cultural behavior of the society. However, various studies showed that the newborn care in the communities include knowledge and the practices of the simple care e.g. prevention of hypothermia, feeding of colostrum and exclusive breastfeeding, are lacking. Therefore, it is necessary for the mother and family to understand these aspects of childbirth and newborn care and be prepared to react for the potential dangers. A Pre-experimental "single group pretest post-test design" was adopted in the study to assess the effectiveness of structured teaching program (STP) on knowledge regarding new born care among post-natal mothers in Guru Nanak Dev Hospital, Amritsar. The objectives of the study were to assess the pretest- post-test level of knowledge, to compare the pre-test- post-test level of knowledge among postnatal mothers regarding new born care in maternity ward of Guru Nanak Dev hospital, Amritsar and to find out the association between level of post-test knowledge score of post-natal mother in relation to selected socio demographic variables. The conceptual framework adopted for the study was based on General System Theory as postulated by Von Ludwig Bertalanffy. Sample size of 60 postnatal mothers was selected using Purposive sampling technique. A STP was developed and administered to enhance knowledge regarding newborn care among postnatal mothers. On the basis of STP, A structured interview schedule questionnaire containing 30 multiple choice questions was developed by investigator for data collection. Findings of the study indicated that there was a significant improvement between pre and post-test knowledge at  $P > 0.05$  level in new born care among Primi Gravid Post Natal Mothers but the mean gain in knowledge scores among study subjects were not significantly ( $p > 0.05$ ) related to their selected Socio demographic variables i.e. age, religion, educational status, occupation, family income, type of family, utilization of health services were not found statistically significant.

**Keywords:** Postnatal mothers, newborn care

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### INTRODUCTION

"Saving the newborn, save the children". The birth of a baby is one of the most happiest and emotional event that can occur in one's life time. After nine months

of anticipation and preparation the baby arrives with full excitement. The newborn baby gives the pleasure and excitement to the parents and family members. The birth of a baby is one of life's most wondrous

moments. Newborn is a continuum of the fetal life and a very important transient time to adopt extra-uterine life<sup>[1]</sup>. Newborn babies have awesome abilities, yet they are completely depended on others for feeding, warmth and comfort. The health of every individual depends on the correct management of events in the prenatal period. Newborn period covers the first four weeks of extra-uterine life. It is an important link in the chain of events from conception to adulthood. The health of an individual depends on the correct management of events in perinatal period start in life. There are critical aspects of newborn care, which all birth attendants and families should be aware of, that aspect to ensure that the body has the best possible start in life<sup>[2]</sup>. The World Health Organization (WHO) guidelines for essential newborn care include clean delivery, keeping the newborn warm, early initiation of breastfeeding, care of the eyes, care during illness, immunization and care of low birth-weight newborns. Therefore it is necessary for the mother and family to understand these aspects of childbirth and newborn care, and be prepared to react for the potential dangers.<sup>7</sup> Breast feeding is recognized worldwide as being the optimal method of feeding for the human baby, as well as important benefits for babies and also advantages for mothers. The infant feeding is important part of parenting<sup>[3]</sup>. A big amount of time is spent for feeding the infant and a woman may derive much of her satisfaction as a mother from her perception of success with feeding. Important contributions of the nurse that requires consciousness of the infant's nutritional needs and the techniques to meet those needs in helping the mother choose a feeding method and feed comfortable. Children are also having the basic human needs like adults which are essential for life to promote growth and development. The physical, emotional and intellectual needs are the motivating force behind human behavior. According to

Maslow (1954) the physiologic needs are primary needs and non-physiologic or secondary needs are higher needs. Parents have duty to fulfill these needs<sup>[4-5]</sup>.

## REVIEW OF LITERATURE

Kesterton AJ, Cleland J<sup>[6]</sup> the study conducted on neonatal care, healthy and harmful practices, the potential for change. The study was carried out in rural Karnataka. It uses quantitative data from a prospective survey following mothers through their experience of pregnancy and postnatal period; and qualitative data from in-depth interviews and focus group discussions conducted with mothers, grandmothers, and birth attendants. The study reveals that many potentially harmful newborn care practices are being carried out in study area, such as unhygienic cord cutting, delayed breast feeding and early bathing. The study conducted on breast feeding practices and newborn care in rural areas. The study was conducted in primary health care centre that is attached to a medical college in Kengeri *i.e.* in rural part of Bangalore. Mothers with children who were 9 months old who came to PHC for measles vaccination were included in the study and data was collected using the pre-tested questionnaire on breast feeding and newborn practices<sup>[7-9]</sup>. The study reveals that 97% of the mothers initiated breast feeding, 19% used pre lacteal feeds, 90% had hospital deliveries and 10% had home deliveries, and 50% used a house knife to cut the umbilical cord among home deliveries. A study on Evaluating the effects of an Internet education programme on newborn care, Graduate Institute of Nurse Midwifery, National Taipei college of nursing, Taipei, Taiwan. A randomized controlled trial was used on 118 primigravida with 3<sup>rd</sup> trimester of pregnancy women's were randomly assigned to the control group n=57, and the experimental group n=61. The study result states that the changes in newborn-

care knowledge were 7.21 for the experimental group, compared with 1.95 for the control group and the statistically significant was  $p < 0.001$ . The changes in maternal confidence were 8.46 for the experimental group and 3.05 for the control group and the statistically significant was  $p < 0.001$ . The study concludes that Internet education programme about newborn care may contribute to maternal confidence, in promoting newborn care and provide health professionals with evidence-based intervention<sup>[10-12]</sup>.

A study on Antenatal education was conducted for expectant mothers resulting in sustained improvement in knowledge of newborn care. The researcher assessed the knowledge of 101 women by using a standardized intervention tool and implemented a 10 minute education programme on neonatal care. The education intervention was a structured face to face interactive module with a pictographic a written material about temperature controlled, umbilical cord care and signs of neonatal illness and again the knowledge was reassessed after the training. The result states that the knowledge of women on neonatal care was increased by 10% after immediate posttest  $P < 0.0001$ , especially regarding knowledge of umbilical cord care and temperature control. Maternal education  $P = 0.025$  and previous births  $P = 0.037$  correlated positively with higher pretest scores. Higher maternal education correlated with higher posttest scores  $P = 0.01$ , less-educated women increased their scores as much as did women with more education. Nulliparous women also increased their posttest scores to comparable levels in women with previous deliveries. Women retested after delivery retained the educational message, achieving similar posttest and post-delivery scores  $P = 0.08$ . The study concludes that brief antenatal education improves mothers knowledge of new born care<sup>[13-15]</sup>.

The study conducted on newborn cared giving by Primipara and Multipara mothers at home in Tanta city. Interviewed questionnaires and observation checklists were designed to fulfill the aim of study. The study revealed that mothers knowledge and practices were within good and satisfactory average scores in most of the studied items related to newborn care giving at home except breast feeding. Significant differences were found between Primipara and Multipara mothers for most of the studied topics related to different topics of newborn care giving. A descriptive study was conducted on knowledge, attitude and neonatal care among post-natal mothers at Jawaharlal institute of postgraduate medical education and research, Puddichery, India. Researchers collected the data from 100 post-natal mothers by using structured pro-forma regarding knowledge attitudes and practices on neonatal care. The study reveals that the knowledge of mothers was inadequate in areas of umbilical cord care 35%, thermal care 76% and vaccine preventable diseases, 19% practices of oil instillation and 61% administers gripe water to their babies. The study concludes that the awareness and attitude of post-natal mothers toward neonatal care has lots of lacunae in those who belongs to lower socio economic status and there is a scope for improvement by providing better care and health education for antenatal mothers. Adle pilletery, Teach parents that when giving a bath; it should proceed from the cleanest to the most soiled area of the body, that is, from the eyes and face to the trunk and extremities and, last to the diaper area. Wipe the eyes with clean water from the inner canthus outward using a clean portion of the wash clothes for each eye to prevent spread of infection to the other eye. Teach parents to wash the infant's hair daily while giving bath<sup>[16, 17]</sup>.

Parents commonly ask how warmly they should dress their infant. A simple rule of

thumb is to dress the infant as they dress themselves, adding and subtracting clothes and wraps for the child as necessary. A shirt and diaper may be sufficient clothing for the young infant<sup>[18-20]</sup>.

## RESEARCH METHODOLOGY

The research design selected for the present study was Pre experimental, one group pre-test and post-test design to assess the effectiveness of structured teaching programme on newborn care among post-natal mothers. This study was conducted on post-natal mothers currently admitted in post-natal wards of Guru Nanak Dev Hospital, Amritsar. . The target population included primi post-natal mothers who delivered normal newborn, currently admitted in post-natal wards of Guru Nanak Dev Hospital, Amritsar, in the month of December 2012. The sample size of the study consisted of 60 post-natal mothers who met the criterion of sample selection. Purposive sampling technique was employed in the selection of the sample. The interview schedule comprised of two sections

- PART- A:** It consists of demographic data with 8 items
- PART- B:** It consists of 30 questions pertaining to knowledge domain regarding new born

care under 5 aspects which is mentioned below:

**ASPECT I:** Maintenance of personal hygiene

**ASPECT II:** Thermoregulation

**ASPECT III:** Breast Feeding

**ASPECT IV:** Immunization

**ASPECT V:** Umbilical cord care

It contains 30 multiple choice questions. Data was collected by self-administration of knowledge assessment questionnaire by study subjects. Each correct answer was given a score of 'one' and wrong answer was given a score of 'zero'. The total score given was 30.

The informed written consent was obtained from the study subjects by the investigator. The subjects were assured of maintaining the anonymity and confidentiality of their identity and data.

The data obtained were analyzed in terms of statistics. The plan of data analysis was done by organizing the data. Paired t-test was employed to know the significant difference in mean knowledge of pre and post-tests performances, further Chi-square test were used to analyze association between level of knowledge and demographic variables.

**Table: 1** Distribution of Level of Knowledge Regarding New Born Care among Primi Gravid Postnatal Mothers in the Pretest

Knowledge Aspects	N=60					
	Inadequate Knowledge <50%		Moderate Knowledge 50-75%		Adequate Knowledge >75%	
	Number	%age	Number	%age	Number	%age
Maintenance of Personal Hygiene	8	13.3	13	21.6	39	65.1
Thermoregulation	11	18.3	32	53.3	17	28.328
Breast-feeding	11	18.3	31	51.6	18	30
Immunization	3	5	11	18.3	46	76.6
Umbilical Cord Care	23	38.3	9	15	28	46.6
Over all	4	6.66	44	73.3	12	20

Table 1 Indicates the Distribution of Level of Knowledge Regarding New Born Care

among Primi Gravid Postnatal Mothers in the Pretest.

A majority of 39 (6.51%) primi gravid postnatal mothers had adequate knowledge on Maintenance of Personal Hygiene and 13 (21.6%) had moderately adequate knowledge and 8(13.3%) had inadequate knowledge.

Regarding Thermoregulation, majority of 32(53.3%) mothers had moderately adequate knowledge, 17(28.3%) had adequate knowledge and 11(18.3%) had inadequate knowledge. Regarding Breastfeeding, majority of 31(51.6%) mothers had moderately adequate knowledge, 18(30%) had adequate

knowledge and 11(18.3%) had inadequate knowledge. Regarding Immunization, 46(76.6%) mothers had adequate knowledge, 11(18.3%) had moderately adequate knowledge and 3(5%) had inadequate knowledge.

Regarding Umbilical Cord Care, 28(46.6%) mothers had adequate knowledge, 23(38.3%) had inadequate knowledge and 9(15%) had moderately adequate knowledge. Regarding overall majority of 44(73.3%) mothers had moderately adequate knowledge, 12(20%) had adequate knowledge and 4(6.66%) had inadequate knowledge.

**Table: 2** Distribution of Level of Knowledge Regarding New Born Care among Primi Gravid Postnatal Mothers in the Post-test

Knowledge Aspects	N=60					
	Inadequate Knowledge <50%		Moderate Knowledge 50–75%		Adequate Knowledge >75%	
	Number	%age	Number	%age	Number	%age
Maintenance of Personal Hygiene	0	0	3	5	57	95
Thermoregulation	0	0	5	8.3	55	91.6
Breast-feeding	0	0	1	1.66	59	98.33
Immunization	0	0	2	3.3	58	96.6
Umbilical Cord Care	4	6.6	4	6.6	52	86.6
Over all	0	0	0	0	60	100

Table 2 indicates the Distribution of Level of Knowledge Regarding New Born Care among Primi Gravid Postnatal Mothers in the Post-test.

A majority of 57(95%) primi gravid postnatal mothers had adequate knowledge on Maintenance of Personal Hygiene and 3(5%) had moderately adequate knowledge and no one had inadequate knowledge. Regarding

Thermoregulation, majority of 55(91.6%) mothers had adequate knowledge, 5(8.3%) had moderately adequate knowledge and no one had inadequate knowledge. Regarding Breastfeeding, majority of

59(98.33%) mothers had adequate knowledge, 1(1.66%) had moderately adequate knowledge and no one had inadequate knowledge. Regarding Immunization, 58(96.6%) mothers had adequate knowledge, 2(3.3%) had moderately adequate knowledge and no one had inadequate knowledge.

Regarding Umbilical Cord Care, 52(86.6%) mothers had adequate knowledge, 4(6.6%) had moderately inadequate knowledge and inadequate knowledge subsequently. Regarding overall 60(100%) mothers had adequate knowledge and no one had moderately adequate knowledge and no one had inadequate knowledge.



**Table: 3** Mean and Standard Deviation of Pre-Test knowledge on New Born Care among primi gravid postnatal mothers.

Knowledge Aspects	Knowledge Score	
	Mean	S.D
Maintenance of Personal Hygiene	2.8	1.14
Thermoregulation	3.63	1.28
Breast feeding	10.13	2.37
Immunization	1.71	0.83
Umbilical cord care	2.33	1.26
Overall	19.86	3.55

Table 3 shows the Mean and Standard Deviation of Pre-Test knowledge on New Born Care among primi gravid postnatal mothers.

Overall mean value was 19.86 with a standard deviation 3.55 which reveals that

the primi gravid postnatal mothers had moderately adequate knowledge regarding newborn care on all aspects like maintenance of personal hygiene, thermoregulation, breastfeeding, immunization & umbilical cord care in the pre-test.

**Table: 4** Mean and Standard Deviation of Post-Test knowledge on New Born Care among primi gravid postnatal mothers.

Knowledge Aspects	Knowledge score	
	Mean	S.D
Maintenance of Personal Hygiene	3.85	0.40
Thermoregulation	5.66	0.67
Breast feeding	14.23	0.92
Immunization	1.96	0.13
Umbilical cord care	2.78	0.53
Overall	28.53	1.29

Table 4 shows the Mean and Standard Deviation of Post-Test knowledge on New Born Care among primi gravid postnatal mothers.

Overall mean value was 28.53 with a standard deviation 1.29 which reveals that

the primi gravid postnatal mothers gained adequate knowledge regarding newborn care on all aspects like maintenance of personal hygiene, thermoregulation, breastfeeding, immunization and umbilical cord care in the pre-test.

**Table: 5** Effectiveness of Structured Teaching Programme between Pre and Post-test Regarding Newborn Care among Primi Gravid Postnatal Mothers.

Variables	Mean	Standard Deviation	Paired 'T' Test Value	Table Value ( At 0.05 Level)
<b>PRE-TEST</b>	19.86	3.55	21.12*	2.05
<b>POST-TEST</b>	28.53	1.29	P>0.05	

\* Significant (NS) Not Significant

Table 5 shows the effectiveness of structured teaching programme between

pre and post-test regarding newborn care among primi gravid postnatal mothers.

There is a significant improvement between pre and post-test knowledge at  $P > 0.05$  level in new born care among Primi Gravid Post Natal Mothers.

**Table: 6** Association between Level of Primi Postnatal Mothers on New Born Care on Post Test and the Demographic Variables

				N=60
S. No	Demographic Variables	Adequate Knowledge (>75%)		X <sup>2</sup> - Value P – Value
		NO	% age	
<b>1</b>	<b>AGE</b>			
a.	< 20 years	18	30%	X <sup>2</sup> – 0
b.	21-25 years	11	18.3%	d.f – 6
c.	26-30 years	20	33.3%	p<0.05
d.	>30 years	11	18.3%	(NS)
<b>2</b>	<b>Religion</b>			
a.	Hindu	12	20%	X <sup>2</sup> – 0
b.	Sikh	17	28.3%	d.f – 6
c.	Christen	12	20.0%	p<0.05
d.	Any other	19	31.6%	(NS)
<b>3</b>	<b>Educational Status</b>			
a.	Up to 5 <sup>th</sup> standard	10	16.6%	X <sup>2</sup> – 0
b.	Up to 10 <sup>th</sup> standard	19	31.6%	d.f – 6
c.	Up to 12 <sup>th</sup>	27	45.0%	p<0.05
d.	Graduation + above	4	6.6%	(NS)
<b>4</b>	<b>Occupation</b>			
a.	Private employed	5	8.30%	X <sup>2</sup> – 0
b.	Government employed	5	8.30%	d.f – 6
c.	Self employed	25	41.6%	p<0.05
d.	housewives	25	41.6%	(NS)
<b>5</b>	<b>Family Income</b>			
a.	Less than Rs. 5000	10	16.6%	X <sup>2</sup> – 0
b.	Rs. 5001–7000	15	25.0%	d.f – 6
c.	Rs. 7001 to 9000	23	38.3%	p<0.05
d.	More than Rs. 9000	12	20.0%	(NS)
<b>6</b>	<b>Type of Family</b>			
a.	Nuclear	22	36.6%	X <sup>2</sup> – 0
b.	Joint	38	63.3%	d.f – 3
				p<0.05
				(NS)
<b>7</b>	<b>Utilizations of Health Services</b>			
a.	Government organization	19	31.6%	X <sup>2</sup> – 0
b.	Private nursing home	23	38.3%	d.f – 4
c.	Voluntary health services	18	30.0%	p<0.05
				(NS)

Table 13 shows the association between level of knowledge of primi postnatal mothers on new born care in the post test and the demographic variables. All variables are statistically not significant with their knowledge.

#### LIMITATIONS OF THE STUDY

The study was limited to the primigravid post-natal mothers admitted in Guru Nanak Dev hospital, Amritsar, Punjab. This study is delimited to only knowledge variables

#### CONCLUSION

It is concluded that STP on new born care was effective as a teaching strategy that helped the primi gravid postnatal mothers in Guru Nanak Dev Hospital, Amritsar to improve their knowledge scores.

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