

Effectiveness of Newborn Home Care Package (NHCP) on Knowledge and Practices Regarding Newborn Care at Home among Postnatal Mothers in Selected Hospital, Dehradun, Uttarakhand

Anupriya Singh, Rajkumari Sylvia Devi, Dr. Vandana Chauhan

Abstract:

Background: In 2020, the projected neonatal mortality was 20 per 1000 live births (UNICEF, 2020). If skilled health workers perform effective health measure techniques at birth, up to two-thirds of newborn death could be decreased (UNICEF, 2014). It is determined that to minimize infant mortality, health problems that arise during the first month of life must be treated as a high priority. India launched the Newborn Action Plan (INAP) (2014) to decrease neonatal death rate, stillbirths and to reach a single-digit neonatal death rate or stillbirth by the end of 2030. Globally, every year 75% newborns death occurs in first week of life. 1 million neonates die every year in our country.

Aims: To strengthen the mother's newborn home care knowledge and practices.

Methodology: Quantitative research approach was adopted. Total 42 newborn babies were selected from obstetric-1, obstetric-2 or mothers of newborn admitted in NICU of Himalayan hospital through purposive sampling. Data was collected by administering the tools to the participants. Tools consist of socio-demographic profile, Structured Knowledge Questionnaire on NHCP, Self-Reported Practice checklist on newborn care. Interventional teaching program on NHCP was administered to postnatal mothers after 24 hours of delivery, on 7th day, first post-test was conducted and on 14th day second post-test was assessed telephonically. The data was analysed by using descriptive and inferential statistics.

Results: The result revealed that after administration of NHCP to postnatal mothers, the mean knowledge and practice score of post-tests 2 was increased as compared to pre-test and post-test 1. In every domain of structured knowledge questionnaire and self-reported practice checklist there was progressive development.

Conclusion: The study concluded that NHCP helps the postnatal mothers in enhancing their knowledge and improve their practices regarding new-born care. The program was successful in encouraging concerning newborn care at home. If essential newborn care not given by the postnatal mothers that causes a barrier in Newborn growth and development as well as early illness.

Keywords: Postnatal mothers, New-born Home Care Package, New-born Babies, Knowledge, Practice

Table 1: Frequency and percentage distribution of socio-demographic variables of postnatal mothers and newborns (N= 45)

S. No.	Subject Profile	Frequency (f)	Percentage (%)
Mother's Profile			
1.	Age (in years)		
	a. 20-28	29	64.4
	b. 29-36	16	35.6
2.	Income (Monthly)		
	a. 15,000-30,000	33	73.3
	b. 31,000-45,000	12	26.7
3.	Religion		
	a. Hindu	36	80
	b. Christian	2	4.4
	c. Muslim	6	13.3
	d. Sikh	1	2.2
4.	Family Type		
	a. Nuclear	4	8.9
	b. Joint	32	71.1
	c. Extended	9	20
5.	Literacy level		
	a. No formal education	6	13.3
	b. Primary	24	53.3

Volume 14 Issue 4, April 2025

Fully Refereed | Open Access | Double Blind Peer Reviewed Journal

www.ijsr.net

	c. Secondary	10	22.2
	d. Graduation	5	11.1
	Occupation		
6.	a. Housewife	39	86.7
	b. Private sector	6	13.3
	Type of delivery		
7.	a. L.S.C.S.	34	75.6
	b. N.V. D	11	24.4
	No. of child		
8.	a. Primigravida	31	68.8
	b. Multigravida	14	31.2
	Previous knowledge		
9.	a. Yes	26	57.8
	b. No	19	42.2
Baby's Profile			
	Age (in days)		
1.	a. 1-2	34	75.6
	b. 3-5	11	24.4
	Gender		
2.	a. Female	17	37.8
	b. Male	28	62.2
	Weight (in grams)		
3.	a. 2060- 3080	35	77.8
	b. 3081-4100	10	22.2
	Length (in cm)		
4.	a. 42-45	11	24.4
	b. 46- 50	34	75.6
	Gestation week		
5.	a. 37-38	31	68.9
	b. 39-41	14	31.1
	APGAR Score		
6.	a. 7-10	45	100
	Birth Order		
7.	a. 1	29	64.4
	b. 2	13	28.9
	c. 3	2	4.4
	d. 4	1	2.2

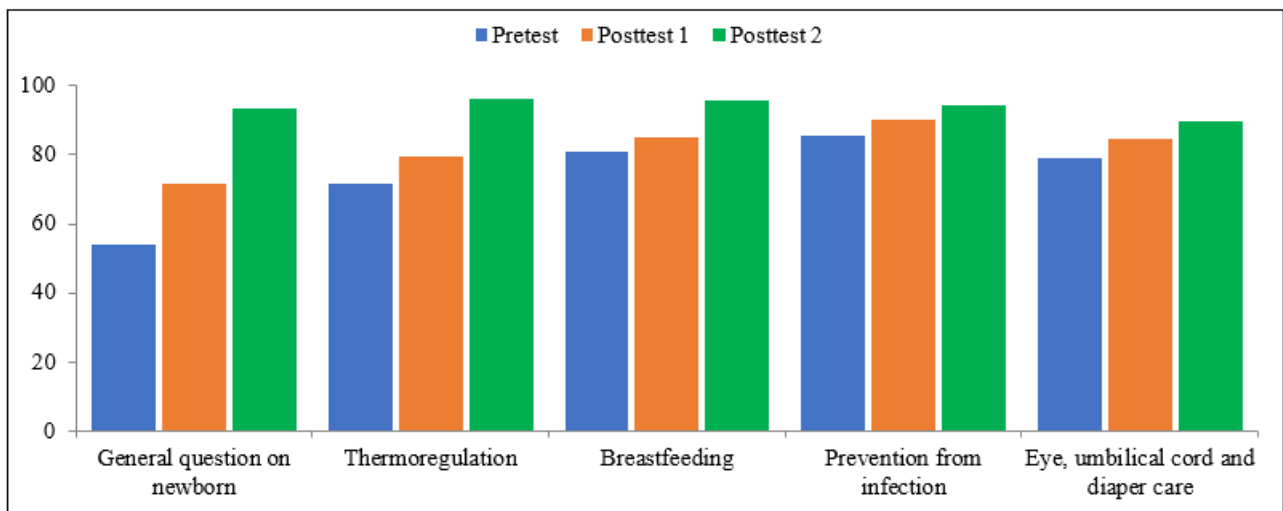


Figure 1: Domain wise distribution of mean percentage of knowledge scores of postnatal mothers

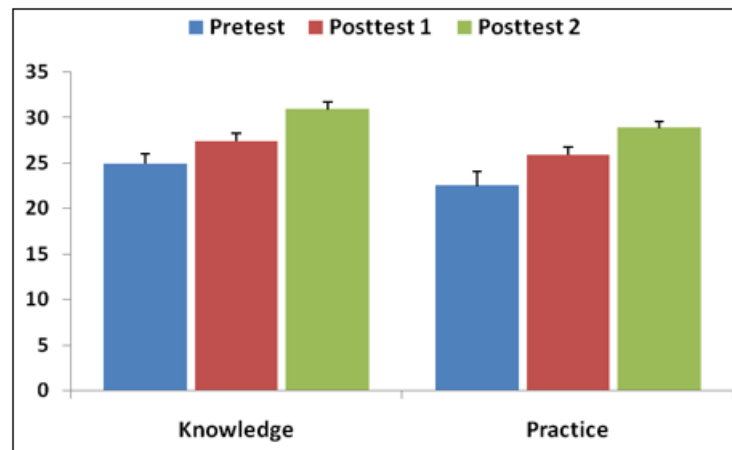


Figure 2: Domain wise distribution of mean percentage of practice scores of postnatal mothers

Table 2: Pairwise comparisons of knowledge of postnatal mothers (within group) using Bonferroni Post Hoc Test

Variable (I)	Variable (J)	Mean difference (I-J)*	P value	95% confidence interval	
				Lower bound	Upper bound
Pretest	Post-test 1	-2.467*	<0.001	-2.867	-2.066
	Post-test 2	-5.933*	<0.001	-6.362	-5.504
Post-test 1	Pre test	2.467*	<0.001	2.066	2.867
	Post-test 2	-3.467*	<0.001	-3.834	-3.099
Post-test 2	Pre test	5.933*	<0.001	5.504	6.36
	Post-test 1	3.467*	<0.001	3.099	3.834

Df=2, *Significant at the 0.05 level

Table 3: Pairwise comparisons of practices of postnatal mothers (within group) using Bonferroni Post Hoc Test

Variable (I)	Variable (J)	Mean difference (I-J)*	P value	95% confidence interval	
				Lower bound	Upper bound
Pretest	Post-test 1	-3.378*	<0.001	-3.768	-2.988
	Post-test 2	-6.489*	<0.001	-6.905	-6.073
Post-test 1	Pre test	3.378*	<0.001	2.066	3.768
	Post-test 2	-3.111*	<0.001	-3.388	-2.835
Post-test 2	Pre test	6.489*	<0.001	6.073	6.905
	Post-test 1	3.111*	<0.001	2.835	3.388

Df=2, *Significant at the 0.05 level

Table 4: Association between pre-test knowledge level of postnatal mothers with that of their selected socio-demographic variables (N=45)

Sl. No.	Subject profile	Below median <25	At and above median ≥ 25	χ^2	df	P value
1	Age of mother (in year)			0.227	1	0.634
	a. 22-28 years	13	16			
	b. 28-33 years	6	10			
2	Family income per month			0.001	1	1.000
	a. 15,000-30,000	22	11			
	b. 31,000-45,000	8	4			
4	Family type			1.85	2	0.395
	a. Joint	2	2			
	b. Nuclear	15	17			
	c. Standard	2	7			
5	Literacy level			2.403	3	0.493
	a. No formal education	1	5			
	b. Primary	11	13			
	c. Secondary	4	6			
	d. Graduation	3	2			
6	Occupation			0.865	1	0.352
	a. Housewife	27	12			
	b. Private sector	3	3			
7	Type of delivery			1.504	1	0.220
	a. NVD	9	2			
	b. LSCS	21	13			

8	Previous knowledge					
a.	Yes	16	10	0.729	1	0.393
b.	No	14	5			

$\chi^2=7.82$, $df=1$, $p<0.05$, *Significant

There was no significant association found with the knowledge and any of the selected socio-demographic variables of the postnatal mothers.

Table 5: Association between pre-test practice level of the postnatal mother with their selected socio-demographic variable (N= 45)

Sl. No.	Subject profile	Below median <22	At and above median ≥ 22	χ^2	df	P value
1	Age of mother (in year)					
a.	22-28 years	15	14	4.60*	1	0.032
b.	28-33 years	8	8			
2	Family income per month					
a.	15,000-30,000	18	15	0.584	1	0.445
b.	31,000-45,000	5	7			
3	Family type					
a.	Joint	1	3	1.88	2	0.390
b.	Nuclear	11	21			
c.	Standard	1	8			
4	Literacy level					
a.	No formal education	1	5	0.86	3	0.834
b.	Primary		16			
c.	Secondary	8	7			
d.	Graduation	3	4			
		1				
5	Occupation					
a.	Housewife	20	19	0.003	1	0.953
b.	Private sector	3	3			
6	Type of delivery					
a.	NVD	7	4	1.02	1	0.163
b.	LSCS	16	18			

Significant at $\chi^2=3.841$, $df=1$, $p<0.05$.

Table 6: Correlation of Mother's posttest knowledge and practices scores

Variable	r value	p value
Knowledge	0.141	0.36
Practice		

There was no relation found between knowledge and practices of postnatal mothers.

References

- [1] Rojamma, Maria C.H. Teaching third trimester pregnant women about newborn care. IJNM. 1999; 2:35-43.
- [2] Belsey MA. The epidemiology of infertility: a review with particular reference to sub-Saharan Africa. Bull. WHO. 1976; 54 (3):319.
- [3] Aribench SL. A study to assess the knowledge of primigravida mothers regarding care of the newborn care. RGUHS, Karnataka, Bangalore. 1998.
- [4] Clare I. Health Begins at Home, the Nursing Journal of India 1973; 64: 119.
- [5] Care of the Baby at Birth, during first hour after birth (National division, AIIMS, New Delhi), available from-URL:www.newbornwhocc.org/enn/Care_at_Birth1.pdf
- [6] Aathi MK, Devi AS, Kohli G. Minor Disorders of Newborn-A Narrative Review. Int. J. Nurs. Pract. 2013 Jul 1;1(2):47.
- [7] Mathur NB, Marmu K, Kumar S. Systemic inflammatory response syndrome in home delivered neonates: a prospective observational study. Indian J. Pediatr. 2010 Oct;77(10):1109-13.
- [8] Deorari AK, et.al. Clinico-epidemiological profile and predictors of severe illness in young infants (< 60 days) reporting to a hospital in North India. Indian pediatrics. 2007 Oct 1;44(10):739.
- [9] Neonatal Mortality Rate: India is 12th worst in the world (online). Available from <https://qrius/neonatal-mortality-rate-in-india-2018/>
- [10] Maternal mortality rate, Neonatal mortality rate Available from: <https://data.unicef.org>
- [11] Times of India: Uttarakhand record rise in infant mortality rate(online). Available from <https://timesofindia.indiatimes.com/city/dehradun/Ukhand-recors-rise-in-infant-mortality-rate/articleshow/55002671.cms>
- [12] (WHO) Newborns: reducing mortality. Fact sheet N°33, 2014.

- [13] Park textbook of preventive and social medicine 16th edition. Jabalpur, India M/s. Banarsidas Bhanot: 2001
- [14] UNICEF. India and Child Mortality in India. Levels, Trends and Determinants. Available from: <http://www.unicef.org/india/FactsheetExperts.pdf>. Accessed October 26, 2014
- [15] http://currentnursing.com/nursing_theory/Ernestiine_Wiedenbach.html
- [16] Andegiorgish AK, Andemariam M, Temesghen S, Ogbai L, Ogbe Z, Zeng L. Neonatal mortality and associated factors in the specialized neonatal care unit Asmara, Eritrea. BMC public health. 2020 Dec; 20(1):1-9.
- [17] Kumar A. Risk Factors and Trends in Neonatal Mortality in a Special Care Newborn Unit in a Tertiary Care Hospital in Bangladesh (Doctoral dissertation, Johns Hopkins University). 2019
- [18] Chhetri BT, Bhandari SS, Karna BK, Chaudhary R, Yadav U. Newborn Care Practices at Home among Mothers of Neonates Admitted with Sepsis. Religion. 2019;29:72.
- [19] Mangu CD., et.al. Trends, patterns and cause-specific neonatal mortality in Tanzania: a hospital-based retrospective survey. International Health. 2021 Jul;13(4):334-43.
- [20] Owusu BA, Lim A, Makaje N, Wobil P, SameAe A. Neonatal mortality at the neonatal unit: the situation at a teaching hospital in Ghana. African health sciences. 2018 Jun 22;18(2):369-77.
- [21] Babaei H, Dehghan M. Study of causes of neonatal mortality and its related factors in the neonatal intensive care unit of Imam Reza hospital in Kermanshah, Iran during (2014-2016). IJP. 2018;6(5):7641-9.
- [22] Zeinalzadeh AH, Khodaei R, Heidarzadeh M. Causes of neonatal mortality in the neonatal intensive care unit of Taleghani Hospital. IJN. 2017;8(3):58-61.