



Original Research Article

A STUDY TO ASSESS THE KNOWLEDGE REGARDING ROUTINE NEWBORN CARE AMONG MOTHERS OF URBAN AND RURAL GOVERNMENT HOSPITAL IN DAVANGERE, KARNATAKA

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ABSTRACT

Background: Children are the future of a country and healthy children are the asset of the country. They are more vulnerable during infancy so knowledge regarding routine newborn care among mothers is important for their growth and development. The aim and objectives are to assess the knowledge regarding routine newborn care among urban and rural mothers. To determine the association between socio-demographic factors with level of Knowledge among urban and rural mothers.

Materials and Methods: A cross sectional study was conducted for 06 months among 150 primipara mothers. Out of 150 primipara mothers, 75 mothers at Rural Primary Health Centers and 75 mothers of post natal wards of C.G. Hospital, Davangere were selected. A predesigned and pretested questionnaire was administered to mothers containing information on socio-demographic variables and knowledge of routine newborn care.

Results: Among 150 study subjects 58% belongs to the age group of below 20 years, 46% completed primary education, and 58% were house wives.

Conclusion: The Present study concluded that 48.6% mothers had adequate knowledge, 28% had moderately adequate knowledge and 23.4% had inadequate knowledge depicting a knowledge gap among mothers about routine newborn care.

Keywords: Urban mothers; Rural mothers; Routine care; new-born care; Knowledge.

INTRODUCTION

Healthy children are the greatest resource and pride of a nation. A healthy infant born at full term (between 38 – 42 weeks) should have an average birth weight 2500 grams, cries immediately following birth, establishes independent rhythmic respiration and quickly adapts to the changed environment. Recent researches are concerned with topics of newborn care to assess the maternal knowledge and practices because it facilitates growth and development, protection against infection and detection of any abnormalities.

Variations exist from place to place in the care of the newborn infant. However, although often neglected,

their basic needs are the same. Adequate nutrition is critical to child health and development. Growth during the first years of life is greater than at any other time after birth. Breast milk provides immunologic protection against death from infectious diseases, such as diarrhea, respiratory infections, otitis media, pneumonia and meningitis. Good nutrition during this period of rapid growth is vital to ensure that the infant develops both physically and mentally to the fullest potential.^[1]

Poor knowledge on part of mothers can lead to disastrous results in the field of care giving. If the mothers are not acquainted with knowledge pertaining to feeding, weaning, health and nutrition including growth and behavior of children, it might

affect the rearing of their children. Providing timely education in the form of intervention to the mothers could fill this gap in knowledge.^[2]

The present study intends to assess the knowledge regarding routine newborn care and its association with socio-demographic factors among mothers of urban and rural Government Hospital in Davangere, Karnataka.

MATERIALS AND METHODS

A cross sectional study was conducted at Rural Primary Health Centers (PHC) in Davangere District and Chigatterri Government (C.G.) Hospital, Davangere for 06 months from 01st December 2024 to 31st May 2025. 150 primipara mothers, who gave informed consent to participate in the study, were selected using convenient sampling technique. Out of 150 primipara mothers, 75 mothers at Rural Primary Health Centers and 75 mothers of post natal wards of C.G. Hospital, Davangere were selected.

People with life threatening conditions were excluded from the study. The Institutional Ethics Committee approval was obtained from the Gadag Institute of Medical Sciences, Gadag. After taking informed consent in local Kannada language and the study subjects were interviewed using predesigned and pretested questionnaire containing information on demographic variables like age, religion, habitat, type of family, educational status, occupation, income, parity, type of delivery, gender of the child, source of information and living status and knowledge of routine newborn care among urban and rural mothers. **Statistical Analysis:** Data was coded and entered in Microsoft excel sheet. Descriptive statistics was analyzed for frequency and proportions. Association between socio-demographic factors with knowledge

of routine newborn was calculated using chi-square test by SPSS statistical software trial (version 16). Two-sided 'p' value of ≤ 0.05 was considered as statistically significant.

RESULTS

Out of 150 primipara mothers, majority of them belongs to the age group of below 20 years (49.3% of rural & 66.7% urban mothers), were Hindus (80% rural & 72% urban) followed by Muslims (13.3% rural & 24% urban) and Christians (6.7% rural & 4% urban), belong to nuclear family (44% rural & 48% urban), completed primary education (52% rural & 40% urban), were house wives (58.7% rural & 57.3% urban) and belongs to income of 3001 – 5000 rupees per month (44% rural & 40% urban). [Table 1]

In rural mothers majority 74.7% had normal delivery and 25.3% underwent caesarean section and among urban mothers majority 78.7% had normal delivery and 21.3% had caesarean section. Majority of mothers 68% had one child in rural areas and 85.3% had one child in urban areas. 54.7% rural mothers had female babies and 45.3% had male babies and among urban mothers majority of them 56% had female babies and 44% had male babies. [Table 1]

The source of information obtained by majority of mothers through health care professionals (74.7% rural & 88% urban) and information obtained through (newspaper) mass media (22.7% rural & 2.7% urban). Majority of mothers reside more than 20 years in the same residence (57.3% rural & 44% urban) followed by 10-19 years at the same residence (28% rural & 40% urban) and less than 9 years at the same residence (14.7% rural & 16% urban). [Table 1]

Table 1: Distribution of subjects according to socio-demographic variables

Variables	Category	Rural group		Urban group	
		No	%	No	%
Age (yrs)	a. Below 20 years	37	49.3	50	66.7
	b. 21-30 years	27	36.0	17	22.7
	c. Above 30 years	11	14.7	8	10.6
Religion	a. Hindu	60	80.0	54	72.0
	b. Muslims	10	13.3	18	24.0
	c. Christian	5	6.7	3	4.0
Type of family	a. Nuclear family	33	44.0	36	48.0
	b. Joint family	24	32.0	29	38.7
	c. Extended family	18	24.0	10	13.3
Education	a. No formal education	20	26.7	17	22.7
	b. Primary education	39	52.0	30	40.0
	c. Secondary education	16	21.3	27	36.0
	d. Collegiate education and above	-	-	1	1.3
Occupation	a. Agriculture	21	28.0	22	29.3
	b. Housewife	44	58.7	43	57.3
	c. Employee	6	8.0	6	8.0
	d. Business	4	5.3	4	5.3
Family income per month	a. Below 3000/-	29	38.7	18	24.0
	b. 3000 – 5000	33	44.0	30	40.0
	c. 5000 and above	13	17.3	27	36.0
Type of delivery	a. Normal	56	74.7	59	78.7
	b. Caesarean section	19	25.3	16	21.3
Parity	a. One	51	68.0	64	85.3
	b. Two	11	14.7	10	13.3

	c. More than two	13	17.3	1	1.3
Gender of the child	a. Male	34	45.3	33	44.0
	b. Female	41	54.7	42	56.0
Source	a. Through (news paper) mass media	17	22.7	2	2.7
	b. Through self reading	2	2.7	6	8.0
	c. Through health care professionals	56	74.7	66	88.0
	d. Any other	0	0	1	1.3
Living status	a. Less than 9 years	11	14.7	12	16.0
	b. 10-19 years	21	28.0	30	40.0
	c. More than 20 years	43	57.3	33	44.0

[Figure 1] revealed that among rural mothers 41.3% of them had adequate knowledge, 32% of them had inadequate knowledge and 26.7% of them had moderately adequate knowledge about routine newborn care whereas among urban mothers 56% of them had adequate knowledge, 29.3% of them had moderately adequate knowledge and 14.7% of them had inadequate knowledge.

In the [Table 2], it is evident that demographic variables such as age, religion, habitat, educational status, occupation, income, type of delivery, parity, gender of child, source of information and living status are not significantly associated with levels of knowledge of rural mothers. Out of this, the

knowledge level of the rural mothers have positive significant association with type of family as demographic variable. ($X^2 = 9.50$, $p < 0.05$, $t = 4.0$).

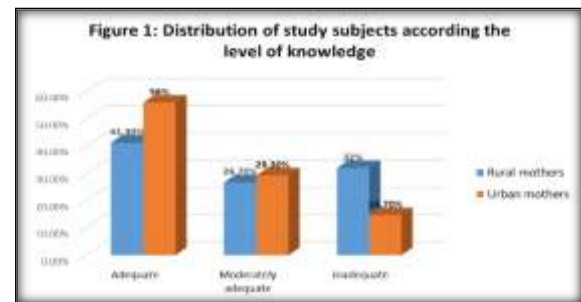


Table 2: Distribution of the rural mothers according to the association between level of Knowledge and socio-demographic factors.

Socio-demographic factors	Category	No	Level of knowledge			Chi-square	Df	P value	Inference
			Adequate	Moderately adequate	Inadequate				
Age	a. 20-25 years	37	15	11	11	4.83	4	0.31	NS
	b. 26-30 years	27	10	9	8				
	c. More than 30 years	11	6	-	5				
Religion	a. Hindu	60	23	17	20	2.68	4	0.61	NS
	b. Muslims	10	6	1	3				
	c. Christian	5	2	2	1				
Habitat	a. Urban	20	8	5	7	0.12	2	0.94	NS
	b. Rural	55	23	15	17				
Type of family	a. Nuclear family	33	16	4	13	9.50	4	0.05	S
	b. Joint family	24	9	11	4				
	c. Extended family	18	6	5	7				
Educational status	a. No formal education	20	7	7	6	3.49	4	0.48	NS
	b. Primary education	39	19	7	13				
	c. Secondary education	16	5	6	5				
	d. Collegiate education and above	-	-	-	-				
Occupation	a. Agriculture	21	10	7	4	8.51	6	0.20	NS
	b. Housewife	44	16	12	16				
	c. Employee	6	2	-	4				
	d. Business	4	3	1	-				
Income	a. Below 3000/-	29	14	9	6	5.80	4	0.21	NS
	b. 3000 – 5000	33	12	10	11				
	c. 5000 and above	13	5	1	7				
Type of delivery	a. Normal	56	23	15	18	0.01	2	0.99	NS
	b. Caesarean section	19	8	5	6				
Parity	a. One	51	19	12	20	4.22	4	0.38	NS
	b. Two	11	6	3	2				
	c. More than two	13	6	5	2				
Gender	a. Male	34	15	7	12	1.19	2	0.55	NS
	b. Female	41	16	13	12				
Source	a. Through (news paper) mass media	17	5	76	5	5.15	4	0.27	NS
	b. Through self reading	2	2	-	-				
	c. Through health care professionals	56	24	13	19				
	d. Any other	-	-	-	-				
Living status	a. Less than 9 years	11	4	4	3	1.26	4	0.87	NS
	b. 10-19 years	21	10	4	7				
	c. More than 20 years	43	17	12	14				

Note: Chi-square test $P \leq 0.05$, significant, $P \geq 0.05$ not significant.

[Table 3] depicts that demographic variables such as age, religion, habitat, type of family, educational status, occupation, income, type of delivery, parity,

gender of child, source of information and living status are not significantly associated with knowledge levels of urban mothers.

Table 3: Distribution of the urban mothers according the association between level of Knowledge and socio-demographic factors.

Socio-demographic factors	Category	No	Level of knowledge			Chi-square	df	P value	Inference
			Adequate	Moderately adequate	In-adequate				
Age	a. 20-25 years	50	26	17	7	4.45	4	0.35	NS
	b. 26-30 years	17	9	5	3				
	c. More than 30 years	8	7	-	1				
Religion	a. Hindu	54	30	13	11	6.27	4	0.18	NS
	b. Muslims	18	10	8	-				
	c. Christian	3	2	1	-				
Habitat	a. Urban	44	26	12	6	0.41	2	0.81	NS
	b. Rural	31	16	10	5				
Type of family	a. Nuclear family	36	19	13	4	4.23	4	0.38	NS
	b. Joint family	29	15	8	6				
	c. Extended family	10	8	1	1				
Educational status	a. No formal education	17	10	5	2	2.71	6	0.85	NS
	b. Primary education	30	14	11	5				
	c. Secondary education	27	17	6	4				
	d. Collegiate education and above	1	1	-	-				
Occupation	a. Agriculture	22	12	4	6	7.48	6	0.28	NS
	b. Housewife	43	23	16	4				
	c. Employee	6	5	1	-				
	d. Business	4	2	1	1				
Income	a. Below 3000/-	18	6	8	4	6.53	4	0.16	NS
	b. 3000 – 5000	30	20	8	2				
	c. 5000 and above	27	16	6	5				
Type of delivery	a. Normal	59	33	17	9	0.09	2	0.96	NS
	b. Caesarean section	16	9	5	2				
Parity	a. One	64	34	20	10	1.70	4	0.77	NS
	b. Two	10	7	2	1				
	c. More than two	1	1	-	-				
Gender	a. Male	33	17	11	5	0.54	2	0.76	NS
	b. Female	42	25	11	6				
Source	a. Through (news paper) mass media	2	2	-	-	3.82	6	0.70	NS
	b. Through self reading	6	2	3	1				
	c. Through health care professionals	66	37	19	10				
	d. Any other	1	1	-	-				
Living status	a. Less than 9 years	12	8	3	1	3.49	4	0.48	NS
	b. 10-19 years	30	14	9	7				
	c. More than 20 years	33	20	10	3				

Note: Chi-square test $P \leq 0.05$, significant, $P \geq 0.05$ not significant.

DISCUSSION

The knowledge regarding newborn care among mothers needs to be enhanced in order to reduce infant and under-five mortality and morbidity. The present study was conducted among 150 postnatal women attending rural & urban postnatal wards in Davangere depicts the existence of wide knowledge gap.

Socio-demographic characteristics: The present study majority of the primipara mothers 58% belongs to the age group of below 20 years, 75% were Hindus, 46% belong to nuclear family, 46% completed primary education, and 58% were house wives whereas study done by Dixit P et al,^[1] among 60 postnatal mothers admitted to AIIMS, Jodhpur the majority 73.33% were in the age group of 20-27 years, 51.67% belonged to urban areas, 95% were

Hindus religion, 75% belonged to a joint family, 28.33% of women had Higher secondary education and 58.33% were house wives. The study revealed that majority 76.7% had normal vaginal delivery and 23.3% had caesarean section compared to study done by Pathak, et al,^[2] in which majority 87.5% of mothers in rural area of Lucknow, Uttar Pradesh had normal vaginal delivery and 12.5% had caesarean section.

Knowledge regarding routine newborn care and its association between socio-demographic factors: The present study shows that 48.6% mothers had adequate knowledge, 28% had moderately adequate knowledge and 23.4% had inadequate knowledge the findings supported by study done by Priyanka Baganavar et. Al,^[3] among primigravida mothers in selected rural areas of Byahatti PHC, Hubballi in which 33% had good knowledge, 33%

had average knowledge and 34% subjects had poor knowledge and in a study conducted by Hansa Kumari,^[4] 53.3% of mothers had moderately satisfactory knowledge, 33.3% mothers had satisfactory knowledge and 13.3% of mothers had unsatisfactory knowledge regarding newborn care. The present study depicts that demographic variables such as age, religion, habitat, educational status, occupation, income, type of delivery, parity, gender of child, source of information and living status are not significantly associated with knowledge level of rural and urban mothers but the knowledge level of the rural mothers have positive significant association with type of family which was similar to study done by M. Hemamalini et al,^[5] in which age, educational, occupation, and religion are not significantly associated with knowledge level of mothers and the knowledge level of the mothers is significantly associated with family income and type of family. The study was conducted in the hospital among the 150 volunteers using convenient sampling are the limitation of the study.^[6,7]

CONCLUSION

Mother's knowledge and practice about routine newborn care play an important role in the prevention of neonatal and infant mortality and morbidity. The present study concluded that there is existing knowledge gap among mothers in routine newborn care. To fill this knowledge gap it is essential to conduct the awareness and education programs regarding newborn care especially during the

antenatal period combined with effective health care delivery system will greatly improve the Infant Health. Longitudinal studies are recommended to assess the impact of knowledge of mothers about routine newborn care on Infants health.

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