



# “A STUDY TO ASSESS THE KNOWLEDGE REGARDING PREMATURE BABIE’S CARE AMONG ANTENATAL (PRIMI) MOTHERS, AT SELECTED HEALTH CENTRES, TIRUPATI”

Miss.G.Sai Geetha<sup>1</sup>, Mrs.P.Christina Bharathi<sup>2</sup> Mr.CH.Gunnaiah<sup>3</sup>

<sup>1,3</sup> Msc Nursing, Department of Child Health Nursing (paediatrics), College of Nursing, SVIMS, Tirupati, Andhra Pradesh, India

<sup>2</sup>Senior Nursing Tutor , Grade-I , Department of Child Health Nursing (paediatrics), College of Nursing, SVIMS, Tirupati, Andhra Pradesh, India

## ABSTRACT

**INTRODUCTION :** Premature babies are best nursed in a special nursery. Babies born after a difficult or abnormal delivery, or resuscitated with difficulty need to be watched and nursed in a separate, specially equipped and staffed nursery. All the preterm infants need intensive care from the moment of birth to give them their best chance of survival without neurologic effects. A lack of lung surfactant makes them extremely vulnerable to respiratory distress. The study was carried to improve the mothers knowledge. **AIM:** To assess the knowledge regarding premature babies care among antenatal (primi) mothers at selected health centers, tirupati.

**Materials And Methods:** The research approach used for the study is non- experimental descriptive research design. The sample of the study is taken by non probability purposive sampling technique with 100 selected antenatal (primi) mothers at selected health centers, tirupati. The data collection done in the period of 27-06-2022 to 26-07-2022. A self structured questionnaire was used to collect the data consist of 15 multiple choice questions. The data analyzed statistically. Mainly chi-square was used for data analysis. **Results:** The major findings of the study was out of 100 selected antenatal (primi) mothers at selected health centers, Tirupati, were 61(61%) had Inadequate knowledge On Premature Babies Care, 20 (20%) had moderate knowledge on Premature Babies Care , 19 (19% ) had Adequate Knowledge On Premature Babies Care. The associations of socio-demographic variables with the level of knowledge on premature babies care determined by using chi-square test which revealed that there was a significant association with educational status of mother , family

income significant at  $p < 0.01$ . Age, religion, occupation of mother, number of visits, and source of knowledge, significant at  $p < 0.05$  regarding premature babies care. paired sample statistics regarding Premature Babies Care Mean SD of Knowledge Scores were  $8.04 \pm 2.659$  And SE were 0.26

**Conclusion:** The present study concludes that mothers have inadequate knowledge regarding premature babies care. Hence there is need to improve the knowledge regarding premature babies care. So Informational booklet has been provided for improving the knowledge of mothers.

**KEY WORDS:** Mother Knowledge, Care of Baby, Premature Baby

## INTRODUCTION:

A mother is not a person to learn on but a person to make learning unnecessary.(Dorothy)

Encouragement of mother infant bonding is a major consideration Continuous access by the mother towards her premature infants facilitates the bonding process. Continuous psycho social support is important. The best environment for these infants is a special care unit where there is sufficient equipment and facilities to give adequate care.( V.Indra,2015)

Premature babies are best nursed in a special nursery. Babies born after a difficult or abnormal delivery, or resuscitated with difficulty need to be watched and nursed in a separate, specially equipped and staffed nursery. Cradles should preferably be transparent and made of acrylic so that they can be washed easily, apart from allowing easy visibility. It should be by the mother's side unless she has a communicable disease. Baby's clothing should be of cotton, loose, and soft to the skin. (Nicki L.Potts et.al, 2007)

All the preterm infants need intensive care from the moment of birth to give them their best chance of survival without neurologic effects. A lack of lung surfactant makes them extremely vulnerable to respiratory distress syndrome (Thilo& Rosenberg, 2008;AdelePillitteri, 2010)

The current World Health Organization definition of Prematurity is a baby born before 37 weeks of gestation, counting from the first day of the Last Menstrual Period (the LMP). Premature birth carries greater risks the earlier it occurs before that 37-week goal(WHO,2019)

Premature neonates and those having low birth weights account for the highest mortality rate among infants during the first year of life. Because weight is often indicative of prematurity and physiologic immaturity, a premature or a low birth weight infant is considered to be one who weighs 2500grams or less at birth.(A Parthasarathy,2006)

The premature infant's chances of survival are much smaller than those of the full-term infant. The smaller the infant, the lower are the chances of survival. Although preterm infants may be born with the same hereditary and congenital conditions and abnormalities as full-term infants, they may have additional problems because of the immaturity of their body systems protective mechanisms (Marilyn J.Hockenberry, David Wilson)

**OBJECTIVES:**

- ✓ To assess the knowledge on Premature Babies Care among Antenatal (Primi) mothers.
- ✓ To determine the Association between levels of knowledge regarding Premature Babies Care among Antenatal (Primi) mothers with selected socio-demographic variables.
- ✓ To provide an Information Booklet on Premature Babies Care.

**MATERIALS AND METHODS:****RESEARCH APPROACH:**

Non experimental approach was adopted to achieve the objectives of the study

**RESEARCH DESIGN:**

The research design selected for the present study was Descriptive design to achieve the objectives of the study.

**VARIABLES OF THE STUDY**

**DEPENDENT VARIABLE:** The dependent variables are in this study Are Age, Religion, Place Of Residence, Educational Status Of Mother, Occupation Of The Mother, Type Of Family, Family Income Per Month, Maternal Illness During Pregnancy, Number Of Antenatal Visits, . Source of Knowledge.

**INDEPENDENT VARIABLES:** The independent Variable are in this study Knowledge

**SETTING OF THE STUDY**

The study was conducted at Health Centers , which is located at Tirupati.

**POPULATION**

Target population : The population of the study comprised of Antenatal (Primi) mothers, Tirupati

Accessible population : 100 Antenatal (Primi) mothers, Tirupati

**SAMPLING TECHNIQUE:** Non Probability Purposive Sampling Technique was adopted

**SAMPLE CRITERIA:****INCLUSIVE CRITERIA**

- ✓ Antenatal (Primi)Mother who understand and read the English &Telugu
- ✓ Antenatal (Primi)Mother who are willing to participate in the study at Health Centers.

**EXCLUSIVE CRITERIA**

- ✓ Mothers who don't understand & read the English &Telugu
- ✓ Mothers who are taking psychiatric treatment

**DEVELOPMENT AND DESCRIPTION TOOL**

Structured interviewed questionnaire was developed regarding Care of Premature Babies under the guidance of experts. The tool was organized under the following headings. The structured interview schedule consists of

**Section I:**

This consists of socio-demographic data of mothers such as Age Of The Mothers, Religion, Educational Status, Occupation Of The Mother, Marital Status, Type Of Family, Income Per Month, Place Of Residence, Number Of Antenatal Visits, Maternal Illness During Pregnancy, Source Of Knowledge Regarding Premature Babies Care.

**Section II:**Consists of 15 multiple choice questions related to knowledge assessment care on premature babies such as meaning of premature baby, causes, characteristics, and complications, prevention of premature baby.

**SCORE INTERPRETATION:**

**Section I :** Scoring key was prepared by coding Socio-demographic data

**Section-II :** Knowledge questionnaire consists of 15 questions , each one carry one mark . wrong one considered as zero mark. The maximum score was 15. The total score reflects the knowledge on Antenatal (Primi) mothers. The score was organized as follows:

**Table:2**

<b>Level of knowledge</b>	<b>Score</b>
< 50% inadequate	1-5
51-75% moderate	6-10
>76% adequate	11-15

**PILOT STUDY:**

The Pilot study conducted on 06-06-2022 to 10-06-2022 with 10 sample size among Antenatal (Primi) mothers at selected Health Centers, Tirupati. Reliability of the tool on knowledge was 0.76 . After pilot study the relevant changes were made with guidance of experts.

**DATA COLLECTION PROCEDURE:**

- Data was collected at Health Centers, Tirupati. A 100 Antenatal (Primi) mothers were selected by Non Probability Purposive Sampling Technique.
- Investigator introduced herself to the Antenatal (Primi) mothers and explained the significance of study. Written consent was obtained from them after explaining the purpose of study.
- An attempt was made to build rapport with mothers and her attendants, in order to win confidence and cooperation of the respondents to get correct answers, per day 5 Antenatal mothers (Primi) were interviewed.

**STATISTICAL ANALYSIS****Descriptive statistics**

- Frequency, Percentage and Mean, Standard Deviation were used for analyzing the demographic variables and knowledge scores

**Inferential statistics**

- Chi-Square Test, Paired t-Test, Standard Error were analyzing the association Between Knowledge On Care Of Premature Babies With Demographic Variables.

**ETHICAL CONSIDERATION:** A Formal written permission was obtained from the Medical Officer of Health Centers at Tirupati, to conduct the study and written consent was taken from the Antenatal (Primi) mothers.

## RESULTS

**Table:1** Frequency and percentage distribution of demographic variables among Antenatal (Primi)Mothers regarding premature babies care

(N= 100)

S.NO	SOCIO-DEMOGRAPHIC VARIABLES	FREQUENCY	PERCENTAGE DISTRIBUTION
1.	<b>AGE</b>		
	A) Less than 20 years	12	12.0%
	B) 21-25 years	71	71.0%
	C) 26-30years	11	11.0%
	D) 30 years & Above	6	6.0%
	<b>TOTAL</b>	<b>100</b>	<b>100</b>
2.	<b>RELIGION</b>		
	A) Hindu	84	84%
	B) Muslim	9	9%
	C) Christian	7	7%
	D) Any other	0	0%
	<b>TOTAL</b>	<b>100</b>	<b>100</b>
3.	<b>PLACE</b>		
	A) Urban	49	49%
	B) Rural	49	49%
	C) Semi-urban	2	2%
	<b>TOTAL</b>	<b>100</b>	<b>100</b>
4.	<b>EDUCATIONAL STATUS OF MOTHER</b>		
	A) Illiterate	10	10%
	B) Primary school	10	10%
	C) Secondary education	40	40%
	D) Graduation	40	40%
	<b>TOTAL</b>	<b>100</b>	<b>100</b>
5.	<b>OCCUPATION OF MOTHER</b>		
	A) Home maker	75	75%
	B) Laborer	6	6%
	C) Employee	17	17%
	D) Business	2	2%
	<b>TOTAL</b>	<b>100</b>	<b>100</b>
6.	<b>TYPE OF FAMILY</b>		
	A) Joint	30	30%
	B) Nuclear	60	60%
	C) Extended	6	6%
	D) Single parent family	4	4%
	<b>TOTAL</b>	<b>100</b>	<b>100</b>
7.	<b>FAMILY INCOME PER MONTH IN RUPEES</b>		
	A) Less than Rs.5000??	15	15%
	B) Rs.5001??-Rs.8,000??	37	37%
	C) Rs.8001??-Rs.15000??	31	31%
	D) Above Rs.15,000??	17	17%
	<b>TOTAL</b>	<b>100</b>	<b>100</b>
8.	<b>MATERNAL ILLNESS DURING PREGNANCY</b>		
	A) Previous illness of epilepsy/DM/HTN	13	13%

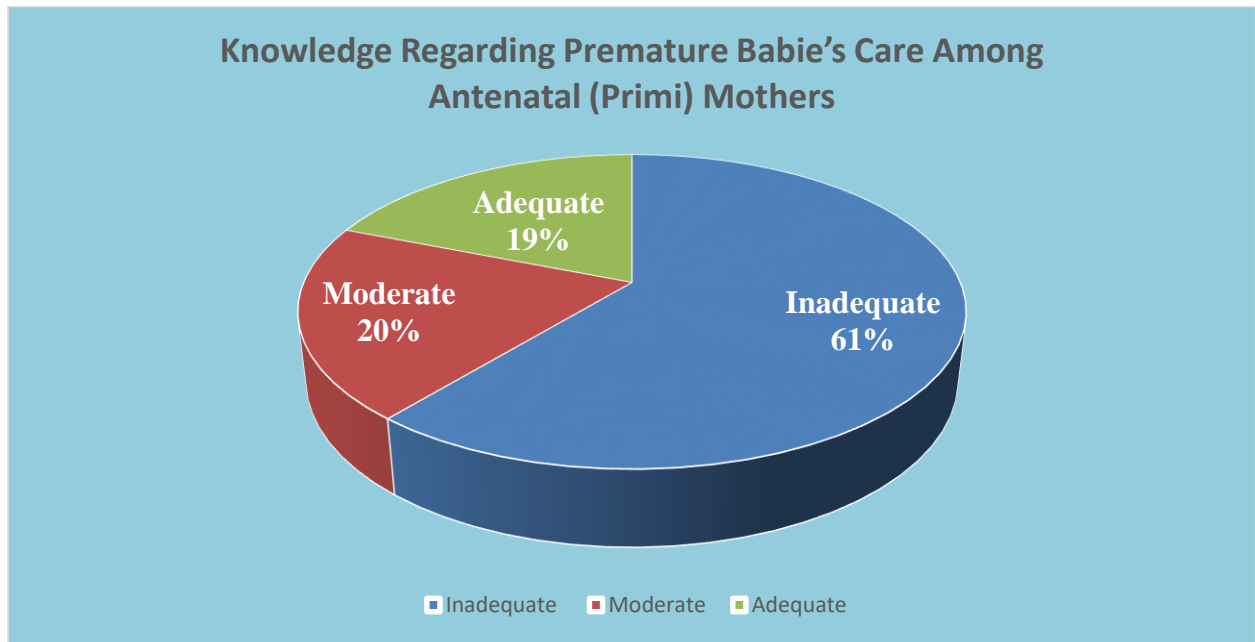
	B) Surgical illness	6	6%
	C) Obstetrical illness	15	15%
	D) None	66	66%
	<b>TOTAL</b>	<b>100</b>	<b>100</b>
<b>9.</b>	<b>NUMBER OF ANTENATAL VISITS</b>		
	A) One time & two times	22	22%
	B) Three & four times	36	36%
	C) Not visited still	6	6%
	D) Four and above	36	36%
	<b>TOTAL</b>	<b>100</b>	<b>100</b>
<b>10.</b>	<b>SOURCE OF KNOWLEDGE FROM</b>	41	41%
	A) Family members		
	B) Books	50	50%
	C) Neighbors	2	2%
	D) Internet	7	7%
	E) Television	0	0
	<b>TOTAL</b>	<b>100</b>	<b>100</b>

### DISTRIBUTION OF LEVEL OF KNOWLEDGE SCORES REGARDING PREMATURE BABIES CARE AMONG ANTENATAL (PRIMI) MOTHERS

**Table:2** Knowledge scores of 100 Antenatal (Primi) mothers participated in the study divided into three categories that is inadequate, moderate, adequate knowledge based on antenatal (primi) mothers were had 61 (61%) had Inadequate knowledge on Premature Babies Care, 20 (20%) had Moderate Knowledge on Premature Babies Care, 19 (19%) had Adequate knowledge on Premature Babies Care.

(N=100)

KNOWLEDGE REGARDING PREMATURE BABIE'S CARE AMONG ANTENATAL (PRIMI) MOTHERS	FREQUENCY	PERCENTAGE %
Inadequate	61	61.0%
Moderate	20	20.0%
Adequate	19	19.0%
<b>Total</b>	<b>100</b>	<b>100</b>



**MEAN AND STANDARD DEVIATION FOR KNOWLEDGE ON PREMATURE BABIES CARE REGARDING PREMATURE BABIES CARE AMONG ANTENATAL (PRIMI) MOTHERS.**

**Table: 3**

CATEGORY	MEAN	STANDARD DEVIATION
Knowledge on premature babies care	8.04	2.659

Mean And Standard Deviation Scores on Knowledge regarding Premature Babies Care Among Antenatal (Primi) Mothers were 8.04 And 2.659

**PAIRED SAMPLES STATISTICS**

**Table : 4**

Paired Samples Statistics					t-value (p-value)	Sig.
	N	Mean ± S.D	S.E			
Pair 1	Knowledge Score	100	8.04± 2.659	0.266	3.116** (0.002)	P<0.01 Significant

**INTERPRETATION**

Out Of 100 Antenatal (Primi) Mothers regarding Premature Babies Care Mean SD of Knowledge Scores were 8.04± 2.659 And SE were 0.26



## Association between socio-demographic data with the level of knowledge of Premature Babies Care among Antenatal (Primi) mothers

**Table: 5** Association between socio-demographic data with the level of knowledge of Premature Babies Care among Antenatal (Primi) mothers

		Level of Knowledge						Chi-square
		Inadequate		Moderate		adequate		
		F	%	F	%	F	%	
Women Age	< 20 Years	8	13.1	0	0.0	4	21.1	$\chi^2 = 13.727^*$ ; (p = 0.033) ; df= 6;
	21 - 25 Years	44	72.1	14	70.0	13	68.4	
	26 - 30 Years	4	6.6	6	30.0	1	5.3	
	30 Years & Above	5	8.2	0	0.0	1	5.3	
Religion	Hindu	54	88.5	18	90.0	12	63.2	$\chi^2 = 9.755^*$ ; (p = 0.045) ; df= 4;
	Muslim	4	6.6	2	10.0	3	15.8	
	Christian	3	4.9	0	0.0	4	21.1	
Residence	Urban	25	41.0	14	70.0	10	52.6	$\chi^2 = 5.979$ ; (p = 0.201) ; df= 4;
	Rural	34	55.7	6	30.0	9	47.4	
	Semi-Urban	2	3.3	0	0.0	0	0.0	
Education Mother	Illiterate	6	9.8	0	0.0	4	21.1	$\chi^2 = 15.112^{**}$ ; (p = 0.019) ; df= 6;
	Primary School	5	8.2	4	20.0	1	5.3	
	Secondary Education	28	45.9	3	15.0	9	47.4	
	Graduation	22	36.1	13	65.0	5	26.3	
Occupation Mother	Home Maker	52	85.2	9	45.0	14	73.7	$\chi^2 = 20.141^{**}$ ; (p = 0.003) ; df= 6;
	Laborer	3	4.9	1	5.0	2	10.5	
	Employee	6	9.8	8	40.0	3	15.8	
	Business	0	0.0	2	10.0	0	0.0	
Type of Family	Joint	16	26.2	6	30.0	8	42.1	$\chi^2 = 6.019$ ; (p = 0.421) ; df= 6;
	Nuclear	39	63.9	11	55.0	10	52.6	
	Extended	5	8.2	1	5.0	0	0.0	
	Single Parent Family	1	1.6	2	10.0	1	5.3	
Family Income	<Rs. 5000	10	16.4	1	5.0	4	21.1	$\chi^2 = 37.259^{**}$ ; (p = 0.000) ; df= 6;
	Rs. 5001 - Rs 8000	32	52.5	0	0.0	5	26.3	
	Rs. 8001 - Rs 15000	15	24.6	8	40.0	8	42.1	
	>Rs. 15000	4	6.6	11	55.0	2	10.5	
Maternal Illness	Previous Illness of Epilepsy	7	11.5	5	25.0	1	5.3	$\chi^2 = 6.888$ ; (p = 0.331) ; df= 6;
	Surgical Illness	5	8.2	0	0.0	1	5.3	
	Obstetrical Illness	10	16.4	1	5.0	4	21.1	
	None	39	63.9	14	70.0	13	68.4	
Antenatal Visits	One time & Two times	16	26.2	5	25.0	1	5.3	$\chi^2 = 13.232^*$ ; (p = 0.039) ; df= 6;
	Three & four times	22	36.1	5	25.0	9	47.4	
	Not visited Still	1	1.6	4	20.0	1	5.3	
	Four & Above	22	36.1	6	30.0	8	42.1	
Source of Knowledge	Family Members	26	42.6	7	35.0	8	42.1	$\chi^2 = 14.146^*$ ; (p = 0.028) ; df= 6;
	Books	33	54.1	8	40.0	9	47.4	
	Neighbors	1	1.6	0	0.0	1	5.3	
	Internet	1	1.6	5	25.0	1	5.3	
	Television	0	0.0	0	0.0	0	0.0	

**Table :10 INTERPRETATION**

Significant -\*\* at &lt; 0.01

Significant -\* at &lt; 0.05

NS- Not significant

There is statistically significant association with socio-demographic variables and knowledge among Antenatal (Primi) mothers Of Educational Status Of Mother , Family Income significant at  $p < 0.01$

There is statistically significant association with socio-demographic variables and knowledge among Antenatal (Primi) mothers Age, Religion, Occupation Of Mother, Number Of Visits, And Source Of Knowledge significant at  $p < 0.05$

There is no statistically significant association with socio-demographic variables and knowledge among Antenatal (Primi) mothers of Place Of Residence, Type Of Family, Maternal Illness.

**DISCUSSION**

Premature neonates and those having low birth weights account for the highest mortality rate among infants during the first year of life. In present study, first aim was to evaluate basic knowledge of mothers about their premature baby care More than half 61 (61%) mothers had inadequate knowledge score, 20 (20%) had Moderate Knowledge on Premature Babies Care, 19 (19 %) had Adequate knowledge on Premature Babies Care. This study finding was supported by the following studies **T.Priyadharsini et al (2021)** conducted a ‘‘non –experimental descriptive study on assess the knowledge of mothers regarding the home care management of preterm babies in selected hospitals perinthalmanna’’ with 30 mothers by using purposive sampling technique The results revealed that 56% of mothers had average knowledge in infection control, 63.3% of them had average knowledge in general knowledge in skin care, only 42.7% of mothers had poor knowledge in thermoregulation and 48.8% of mothers had poor knowledge in nutritional needs **C. Jasmine SenthamilSelvi(2018)** conducted a pre- experimental Study to assess the Effectiveness of Video Assisted Teaching Programme on Knowledge and Practice Regarding Care of Preterm Babies Among Post Natal Mothers in Postnatal Wards at Mgmcri, Puducherry. 50 post natal mothers were selected through purposive sampling technique The study results showed that the level of knowledge ( $17.18 \pm 1.79$ ) and practice ( $73.12 \pm 1.31$ ) which found to be statistically significant at ( $p < 0.0001$ ) level. This study concluded that video assisted teaching is effective in enhancing the knowledge of post natal mothers about care of preterm babies.

## CONCLUSION

Mothers have inadequate knowledge about premature baby care. The Significant relationship between mother's knowledge with her socio-demographic data were age, Religion, Educational status, family income, occupation of mother, Number of antenatal visits, Source of knowledge.

## NURSING IMPLICATIONS

### *1. Nursing Services:*

- Nurses need to identify the mothers who are in need and help them to take care of their premature babies by providing comprehensive nursing care.
- Charts, posters and videotapes related to care of premature baby can be pasted in the wards, OPD, and Neonatal Intensive Care Units (NICU)

### *2. Nursing Education:*

- In Nursing Schools and Colleges students are trained to plan and implement preventive, promotive, curative, rehabilitative and restorative care to mothers of premature babies.
- Health education programmes can be planned and imparted through projector, skits, puppet shows and role-play.

### *3. Nursing Administration:*

- The nurse administrator should provide posters, charts and videos regarding care of premature baby in the neonatal intensive care unit.

### *4. Nursing Research:*

These can be implemented at primary care level and at home to promote the health of the tiny premature newborns and prevent morbidity and mortality.

## RECOMMENDATIONS

This study recommended to community health education through health promotion programs about the premature baby care as well as that play an essential role in avoiding diseases and complication of premature baby.

- Studies related to care of premature baby with different research designs can be conducted.
- The study can be replicated with a larger population.
- To make wider generalization similar studies could be conducted on a larger scale.
- A study can be done involving the fathers or other family members of premature babies
- A study can be conducted to find out the parents stress related to care of premature babies
- A study can be conducted to assess the knowledge, practice and attitude of nurses towards care of premature babies.
- A comparative study can be carried out in the mothers of premature babies residing in rural and urban areas, including both educated mothers and illiterate mothers.
- A follow up study can be conducted to assess the effectiveness of video teaching programme on care of premature baby among mothers of premature babies.
- A study can be conducted to assess the cultural practices of mothers of premature babies in rural areas.

## REFERENCES

1. Dorothy marlow , a text book of pediatric nursing 4<sup>th</sup> edition, published by elseiver publications Pgno: 156-161
2. **V.Indra (2015)** conducted a descriptive study on “assess the knowledge of mothers regarding care of premature infants in selected hospitals at kerala”. *Int. J. Nur. Edu. and Research* 3(2): April-June, 2015; Page 167-171
3. Nicki L.Potts And Barbara L. Mandleca, Pediatric Nursing Caring For Child And Their Families, 3<sup>rd</sup> Edition, Published By Sanat Printers, 2007 Pgno:193-195
4. Adele pillitteri, A text book of maternal & child health nursing , 6<sup>th</sup> edition, 2010, published by lippincottwilliams&wilkins publications. Pgno:711-712
5. <https://www.who.int/news-room/fact-sheets/detail/preterm-birth>
6. A Parthasarathy, IAP Textbook Of Pediatrics, 6<sup>th</sup> Edition Published By Jaypee Brothers Publications, Newdelhi. 2006 Pgno:32

7. Marilyn J.Hockenberry,David Wilson, Wong's, Nursing Care Of Infants & Children ,8<sup>th</sup> Edition, Published By Elsevier Publications.Pgno:376-378.
8. <https://www.healthynewbornnetwork.org/hnn-content/uploads/India-1.pdf>
9. <https://www.tommys.org/pregnancy-information/premature-birth/premature-birth-statistics>
10. A.Padmaja , A Text Book Of Child Health Nursing ,2015 Edition, Published By Jaypee Brothers Publications,Newdelhi. Pgno:556-559
11. Parul Data, A Text Book Of Pediatric Nursing ,2007, Published By Jaypee Brothers Publications,Newdelhi. Pgno:105
12. Rimplesharma, a text book of essentials of pediatric nursing , published by jaypee brothers. Pgno :86-90
13. Patricia Jackson Allen, A.Vessey Naomi A.Schapiro, Primary Care Of The Child With A Chronic Condition, 5<sup>th</sup> Edition Published By MOSBY ELSEVIER Publications. Pgno: 762-765
14. Meharbansingh , Care Of The Newborn , Revised 8<sup>th</sup>Edition,Published By CBS Publishers& Distributors.Pgno:301-312,218-219.
15. Blencowe H, Cousens S, Oestergaard M, Chou D, Moller AB, Narwal R, Adler A, Garcia CV, Rohde S, Say L, Lawn JE. National, regional and worldwide estimates of preterm birth. The Lancet, June 2012. 9;379(9832):2162-72. Estimates from 2010.
16. WHO -2011
17. AbhishekGurung et.al, (2020) <https://link.springer.com/article/10.1186/s13690-020-00446-7>
18. .P.Balazs,et.al (2013)*European Journal of Public Health*, Volume 23, Issue 3, June 2013, Pages 480–485, <https://doi.org/10.1093/eurpub/cks089>
19. . NIMA BHASKAR , A text book of midwifery and obstetrical nursing ,2010, published by EMMESS publications. Pgno:473,582-583
20. Polit and Hungler
21. J.Viswanathan, Achar's Text Book Of Pediatrics, 3<sup>rd</sup>Edition,Published By Orient Longman Madras.Pgno:219-225
22. Park, Preventive And Social Medicine, 8<sup>th</sup> Edition, BaharsidasBhanot Publishers Pgno:364-367