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Preterm Births And Common Health Problems In A Selected Medical College And Hospital At Cuddalore District-Research Report

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ABSTRACT

Background: An estimated 15 million babies are born pre term every year. Approximately 1 million children die each year due to complications of preterm birth. **Nearly 3.5 million babies in India are born too early, 1.7 million babies born with birth defects,** 40% of neonatal deaths happen during labour or within 24 hours due to the Pre-maturity (35%), neonatal infections (33%), birth asphyxia (20%) and congenital malformations (9%)**. Results: I**t was identified that total newborn admissions in Neonatal Intensive Care Unit (Intramural) and Referral Newborn Unit (Extramural) were 1128 from January 2022 to December 2022 at Rajah Muthiah Medical College and Hospital, Chidambaram, Cuddalore District, Tamilnadu. The prevalence of preterm birth was 456 (40.42%). In which, 271(59.42%) of them were moderate to late preterm (32-37 weeks), 144 (31.57%) were early preterm (28-32 weeks) and 41 (8.99%) were extreme preterm birth (<28 weeks), totally, 353 were inborn and 103 were outborn. The common Health Problems of Preterm Neonates was assessed among 100 preterm neonates and it was found to be feeding problems **(100%),** hypothermia **(92%),** breathing problems **(62%),** Congenital Anomalies **(7%),** Neural Tube Defects **(2%),** skin infection **(2%)**, Meningitis **(1%),** Birth injury- **(1%)** and Down syndrome **(1%).**

Key words: Prevalence of preterm birth, common health problems of preterm neonates, neonatal health issues.

Introduction

"A newborn baby has only three demands, warmth in the arms of its mother, food from her breasts, and security in the knowledge of her presence. Breastfeeding satisfies all three." **Grandly Dick.**

Pregnancy and childbirth are major life events with a potential to impact substantially on women's health and well-being. Preterm birth, with the complex associated events and experiences, contrasts markedly with birth at term and presents a challenge to parents in terms of immediate response and the longer term. An estimated 15 million babies are born too early every year. That is more than 1 in 10 babies. Approximately 1 million children die each year due to complications of preterm birth *(1)*. Many survivors face a lifetime of disability, including learning disabilities and visual and hearing problems **(World Health Organization).**

The preterm birth rate increased by an average annual rate of 2% from 2014 through 2019 (from 7.74% to 8.47%). The late preterm rate rose at 2% (from 5.67% to 6.32%) and the early preterm rate increased by less than 1% (2.07% to 2.14%). **NCHS (National Center for Health Statistics) Data Brief (No.430-January 2022/2)**

Globally, prematurity is the leading cause of death in children under the age of 5 years. Inequalities in survival rates around the world are stark. In low-income settings, half of the babies born at or below 32 weeks die due to a lack of feasible, cost-effective care such as warmth, breastfeeding support and basic care for infections and breathing difficulties. In high-income countries, almost all these babies survive. Suboptimal use of technology in middle-income settings is causing an increased burden of disability among preterm babies who survive the neonatal period.

Preterm birth (PTB) is an important health concern and a leading cause of infant mortality and morbidity worldwide. Across 184 countries, it ranges from 5% to 18% of the babies born. It is more frequent in developing countries like India compared to developed countries. The highest in Tamil Nadu was 15 (28.25%) and the lowest in Maharashtra was 6 (6.1%). **(Chitralekhadevi and Suraj Singh, 2021).**

Addressing the burden of preterm birth is crucial to achieve Sustainable Development Goal 3 and for reducing preterm-related neonatal and child mortality.[28] An active and integrated involvement of primary as well as tertiary health sectors can help in achieving the goal of preventing or modifying the risk factors of preterm births. (**Reddy et al, 2022**).

Materials and methodology

A True experimental study was conducted from November 2021 to October 2022 with the aim to identify the prevalence of pre-term neonates among the hospitalized newborns in a selected Medical College and Hospital at Chidambram, Cuddalore District, TamilNadu.

Sample, sample size and sampling technique

Preterm newborns between the gestational weeks of 32-36 weeks were recruited for this study

using the convenience sampling technique with the size consisted of 100 babies.

Data collection tools and method

Survey method used to identify the prevalence of preterm births and standardized tools were used for addressing the common and specific health problems of preterm neonates. Majority of the data were gathered from the babies and some of them from the hospital records along with mothers of preterm neonates. The mothers were assured for the confidentiality and the freedom for their rights to withdraw from the study at any point of time.The data were collected for one year from January to December 2022 in Neonatal Intensive care Unit and Referral Newborn Unit at RMMCH at Chidambaram.

Statistical analysis used

Data were collected and tabulated as shown in the results. Statistical analysis was done using Microsoft Excel. Both the descriptive and inferential statistical methods were utilized for extracting the results. The results were tabulated and represented wit graphical methods.

Results

Table – 1

Percentage of Preterm Births among the Neonates Admitted in NICU

(N = 1128)

Month from January to December 2022	Inborn Admission	Outborn Admission	Total Admission	Inborn Preterm Admission	Outborn Preterm Admission	Total Preterm Admission				Percentage of Preterm Admission among Total Admission
						Moderate to Late Preterm(32-37 Weeks	Early Preterm(28-32 Weeks)	Extreme Preterm Birth(<28 Weeks)	Total	
January	31	28	59	23	6	15	9	5	29	49.15
February	29	19	48	15	6	14	6	1	21	43.75
March	62	36	98	42	5	35	10	2	47	47.96
April	49	29	78	26	7	19	10	4	33	42.31
May	67	26	93	33	7	25	14	1	40	43.01
June	68	48	116	29	8	22	13	2	37	31.90
July	51	36	87	25	8	23	9	1	33	37.93
August	43	35	78	29	7	23	11	2	36	49.31
September	51	45	96	24	8	17	9	6	32	33.33
October	68	65	133	28	13	24	13	4	41	30.83
November	62	43	105	31	18	22	14	3	49	46.67
December	98	39	137	48	10	27	26	5	58	42.33
Total	**679**	**449**	**1128**	**353**	**103**	**271**	**144**	**41**	**456**	**40.42**

It was identified that total newborn admissions from January 2022 to December 2022 in Neonatal Intensive Care Unit (Intramural) and Referral Newborn Unit (Extramural) were **1128**. The prevalence of preterm birth was **456** (40.42%). In which, **271**(59.42%) of them were moderate to late preterm (32-37 weeks), **144** (31.57%) were early preterm (28-32 weeks) and **41** (8.99%) were extreme preterm birth (<28 weeks), totally, **353** were inborn and **103** were outborn. It was found with study findings of **Fajola (2019)** that

there were 11,607 live births with 1,685 (14.5%) preterm deliveries. There were 4,523 admissions to the neonatal unit; overall, 736 (16.3%) cases were preterm neonates out of which 152 (3.4%) subjects were extremely preterm.

The Common Health Problems among 100 preterm neonates was found to be the feeding problems **(100%),** hypothermia **(92%),** breathing problems **(62%),** Congenital Anomalies **(7%),** Neural Tube Defects **(2%),** skin infection **(2%)**, Meningitis **(1%),** Birth injury (Bracheal Plexus) **(1%)** and Down syndrome **(1%).** The findings were similar in a study done by **Armanian, et al (2019)** that out of 1000 infants, 79.69% had Respiratory Distress Syndrome (RDS), 8.01% had Chronic Lung Diseases (CLD), (20.6%) had sepsis (early and late), 14.10% had Patent Ductus Arteriosus (PDA), 12.60% had IVH, and 8.58% had NEC.

Conclusion:

The earlier in a pregnancy that babies are born, the less prepared their bodies are for the outside world. They need special care to overcome the challenges like Hypothermia, **Breathing problems, Feeding problems, Infections, Brain damage, problems of the Eyes and the** later consequences in life as developing disabilities.

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