Cross Sectional Study on the Health Status of Infants in the field practice area of KBNIMS, Gulbarga

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Abstract
Background: A Nations health can be measured using important indicators such as infant morbidity and mortality. As the determinants of Infant morbidity and mortality are decreasing in developed countries; it still remains a problem in developing countries. **Objective:** To determine the morbidity pattern among the infants and to explore the causes and risk factors affecting infant morbidity and mortality. **Methods:** A community based cross sectional study was conducted amongst 100 infants residing in the field practice area of RHTC, KBNIMS, Kalaburgi, Karnataka. **Results:** 48% of the infants were found to be suffering from acute respiratory tract infections followed by fever (26%) and diarrhoea (19%). Majority of the unhealthy Infants (95.23%) belonged to overcrowded households. This study illustrates that Joint families had more un healthy Infants (69.04%) that nuclear families (30.95%). It was found that a majority (95%) of mothers had taken antenatal visits to the hospital. Education amongst mothers was seen lacking with only 1% of postgraduate degrees and majority with secondary education. A majority of 96.42% who had normal deliveries were healthy Infants. Among the 42 unhealthy Infants, 21.42% were from pre term deliveries, 9.52% were from post term deliveries and 16.66% of the unhealthy Infants Were Low Birth Weight babies. **Conclusion:** There is a need to educate the community about the effects of overcrowding. Mothers should be encouraged to take up timely vaccinations.
Key Word: Infant health, Overcrowding, LBW Babies.

INTRODUCTION

Countries wellbeing can be measured utilizing vital pointers such as newborn child health and mortality as there's an unparalleled consortium with a few variables such as quality of maternal care, socio financial conditions, maternal wellbeing, and open wellbeing practices[1]. Newborn child mortality rate in developed nations appeared a quick decrease amid the final 50 a long time, whereas it is still a issue in creating countries[2]. The diverse determinants of newborn child mortality and dreariness incorporate age, sex, birth weight, majority, mode of conveyance, gestational age, parity of mother, immunization, maternal instruction, birth dividing and socio financial conditions[3]. Breast bolstering is a critical determinant which brings down the rate of disease related to morbidities. Around the world sub ideal breast bolstering still accounts for passings of 1.4 million children[4]. Sub-standard and destitute complementary bolstering hones appear that numerous children stay helpless to results such as expanded hazard of diseases such as diarrhoea, respiratory infections, improper and weak cognitive development and stunting which are more often than not irreversible[5]. WHO extended program on vaccination has diminished newborn child mortality rate by controlling antibody preventable diseases6. India could be a creating nation with restricted assets, and the

expenditure on wellbeing is 4.2% of the full budget. The conveyance in case wellbeing care is complex with a major burden on tertiary care centres[7]. The statistic variety of illnesses among newborn children has never been taken into thought when national wellbeing arrangements are made hence tertiary care centres get more prominent extent of wellbeing budget8. Less than one 6th of patients use the government wellbeing offices, clearing out the burden on private clinics and hospitals[8]. Among the different horribleness patterns; acute diarrhoeal maladies is one of the major causes of mortality and dismalness within the creating nations among newborn children and children less than 5 a long time of age[9]. It may be prominent that dietary adequacy may be somewhat decided by bolstering strategy utilized, but it also interacts symbiotically with diarrhoeal episodes[10] So this collegial relation between nutrition and diarrhoeal infection may have protracted effects on the path of normal infant growth and development. Almost 90% of the worldwide births with less than 2500 grams' birth weight happen in creating countries[11]. This article will in this manner center on the affect of moo birth weight on dismalness. Moo birth weight runs a tall chance of mortality and dismalness. Not as it were are mortality and horribleness rates seen to diminish with ideal sustenance but there's moreover satisfactory weight pick up that's taken note. Ideal wholesome administration of these newborn children points at a rate of development break even with to the intrauterine rates[12]. The aim of this study was to study the causes and risk factors associated with Infant morbidity that eventually lead to Infant mortality.

METHODS

A community based cross sectional study was undertaken on the health status of the infants under the Rural Health training Centre of Khaja Bandanawaz Institute of Medical Sciences, Gulbarga, Karnataka from the 26th August 2014 to 22nd November 2014. No records or registers were found showing the prevalence of infants in the community. Therefore, all Infants in the age group of 0 to 12 months during the study period in the study area were included in the study. At the end of the study 100 Infants were enumerated by census enumeration method. The data was collected via a pre tested, pre designed interview schedule and it was followed by clinical examination of the children. A house to house visit of the area was done beginning from the randomly selected household and moving along the right hand side till all the infants were covered. Whenever houses with no infants were detected; that house was skipped and we went to the next house. In the absence of respondents during the first visit, 2 subsequent visits were made to contact them. Not willing to participate (3 families) in spite of 2-3 persuasion were dropped. Thus a total of 100 infants belonging to different house-holds were included in the study.

Statistical Methodology

Census enumeration method. The data was collected on age, sex, morbidities present, socio demographic parameters such as Overcrowding where the criteria was more than 2 people residing in 11 square metre or more and 1 person in 5 to 7 square metre, Kuppuswamy's Socio economic scale which was calculated using the per capita income (modified for 2015), education and occupation of the head of the family, type of family, antenatal history of the mother, educational status of the mother, type of delivery and birth weight of the infant as remembered by the mother. The data was analysed using Microsoft Excel 2016.

RESULTS

Table 1: Showing the age and sex wise distribution of the infants.

AGE	NUMBER	PERCENTAGE
0-6 Months	26	26
7-12 Months	74	74
TOTAL	100	100
SEX OF THE INFANT	NUMBER	PERCENTAGE
Male	48	48
Female	52	52
TOTAL	100	100

According to the study majority of the study infants were in the age group of 7-12 months i.e., 74 and 26 were in the age group of 0-6 months. 48% of the infants in the study were males and 52% were females.

Figure1: Showing distribution of Infants according to the morbidity pattern.
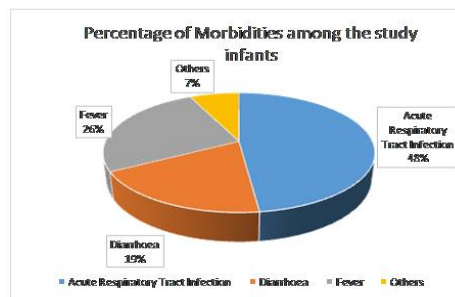
The study indicates that 42% of the total 100 infants included in the study had one or the other morbidity. 48% of the 42 that displayed morbidity suffered from Acute Respiratory Tract Infections, followed by Fever (26%) and Diarrhoea (19%).

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Table2: Showing distribution according to the health of the infants and the socio-demographic parameters.

SOCIO-DEMOGRAPHIC PARAMETERS	HEALTH STATUS			
	UNHEALTHY (n=42)	HEALTHY (n=58)	TOTAL	CHI-SQUARE
Overcrowding				
Overcrowding present	40 (95.23%)	17 (29.31%)	57	43.1987
Overcrowding absent	2(4.76%)	41 (70.68%)	43	(P<0.01)
Type of family				
Joint family	29 (69.04%)	21 (36.20%)	50	10.509
Nuclear family	13 (30.95)	37 (63.79%)	50	(P<0.01)
Kuppuswamy's socio-economic status				
Lower class according to kuppuswamy's sec	24 (57.14%)	19 (32.75%)	43	14.2432
Upper lower class according to kuppuswamy's sec	18 (42.85)	24 (41.37%)	42	(P<0.01)
Lower middle class according to kuppuswamy's sec	0 (0%)	15 (25.86%)	15	
Gender				
Male	25 (59.52%)	23 (39.65%)	48	3.8527
Female	17 (40.47%)	35 (60.34%)	52	(Not significant at P<0.01)

According to the study it was found that overcrowding has a statistically significant (P<0.10; Chi Square: 43.1987) impact on the health status of infants as majority of unhealthy infants i.e., 95.23% belong to houses where overcrowding is present where as a minimum 4.76% of unhealthy kids belong to the houses where overcrowding is absent. Indicating that infants were healthier where overcrowding was absent. This study illustrates that Joint families had more un healthy Infants (69.04%) that nuclear families (30.95%). This finding was statistically significant at P<0.01 (Chi Square: 10.509). Out of the total 42 Unhealthy Infants, 24 were in the lower class and 18 in the upper lower class according to Kuppuswamy's Socio-economic scale and none from the lower middle class and above. However, out of the 58 healthy families, only 19 were from Lower Class, 24 from Upper Lower and 15 from Lower Middle class, thereby suggesting that Socioeconomic status was a key factor in Infant Health. This finding was statistically significant at P<0.01 (Chi Square: 14.2432). Among the 100 study subjects, 48 were male and 52 were female. Out of the 48 male Infants, 25 were unhealthy and 23 were healthy. Out of the 52 female Infants, 17 were unhealthy and 35 were healthy. This finding was not statistically significant at P<0.01 (Chi Square: 3.8527) Table Number 02.

Table 3: Showing the relation between the antenatal visits taken by the mothers and their educational status.

ANTENATAL VISITS	TAKEN		NOT TAKEN		TOTAL	
EDUCATION	NO.	%	NO.	%	NO.	%
Illiterate	16	94.1	1	5.9	17	100
Primary	24	96	1	4	25	100
Secondary	31	93.9	2	6.06	33	100
Higher	17	100	0	0	17	100
Graduation	6	85.7	1	14.3	7	100
Post-Graduation	1	100	0	0	1	100
TOTAL	95	100	5	100	100	100

According to the study it was found that majority of mothers i.e., 95% took antenatal care. Among the 5% who had not taken antenatal care, a majority of 2% had only secondary level of education. It was also seen that education among the mothers was lacking with only 1% of postgraduates and a majority with secondary education (33%).

Table 4: Showing relation between Health of the Infants and Low Birth Weight, pre term and post term deliveries among the study group.

TYPE OF DELIVERY	HEALTHY		UNHEALTHY		TOTAL	
	NO.	%	NO.	%	NO.	%
Pre term	2	3.57	9	21.42	11	11
Post term	1	1.78	4	9.52	5	5
Low birth weight	1	1.78	7	16.66	8	8
Normal	54	96.42	22	52.38	76	76
TOTAL	58	100	42	100	100	100

According to the study, a majority of 96.42% who had normal deliveries were healthy Infants. However, among the 42 unhealthy Infants, 21.42% were from pre term deliveries, 9.52% were from post term deliveries and 16.66% of the unhealthy Infants Were Low Birth Weight babies. This comparison between the health of the infants and Preterm, Post term and Low Birth Weight at birth was found to be significant statistically at P<0.01 (Chi-Square: 22.2375).

DISCUSSION AND CONCLUSION

In this study about, 48% of the study subjects were males and 52% were females. This finding was not in understanding to the Male: Female sex proportion of Karnataka i.e., 973 females to 1000 males[13]. A study conducted in Goa, India on postnatal sadness and newborn child development and advancement in low income countries found the male newborn child proportion to be 51% and female proportion to be 49%[14]. This finding was too not in adjust to the finding in our study. In our study, out of the 100 study newborn children a stunning 42 had one or the other dismalness, out of which 42% had intense respiratory tract diseases. Agreeing to facts by John S. On Respiratory Viral Contaminations in Newborn children, Respiratory diseases account not as it were for expanded mortality but too for expanded horribleness: between 22% (Joined together Kingdom) and 26.7% (Belgium) of all hospitalizations and between 33.5% (Italy) and 59% (Joined together Kingdom) of common professional interviews are due to respiratory viral infection[15].These discoveries are or may be comparative and along the lines of the discoveries of our facts about. In our facts about 19% of the newborn children who had morbidities were enduring from the runs. The rate of persistent diarrheal was 6.3 per 100 child-years among those matured 0-71 months, and was most noteworthy (31 per 100 child-years) among those aged 0-11 months agreeing to a study in rural North India in descriptive epidemiology study of disease transmission of persistent diarrheal [16]. This finding was more than that of our facts about. Agreeing to our study, Overcrowding played a major part in Newborn child wellbeing.40 out of the 42 Newborn children who shown morbidities were living in overcrowding setups. A study conducted in Glasgow and Edinburg, Britain opined with proves that overcrowding may be a noteworthy cause of Newborn child mortality[17]. This finding was comparable to the finding of our facts about. In a study conducted by Tiffany field on Teenage parenting in different cultures, family constellations, and care giving environments: Effects on infant development; it was found that Infant performance decreased with time irrespective of family type or constellation[21] However in our facts about, we found a factual centrality on comparison of the sort of family and Newborn child Wellbeing hence recommending that our finding was not in understanding with the finding of the facts about conducted by Tiffany Field. In our study we found a factual importance of financial status and Newborn child Wellbeing. This finding of our own was at standard with the finding of the facts about on financial drawback and child advancement conducted by McLoyd and Vonnie C that opined that financial status does without a doubt play a part in child wellbeing and development[22]. Concurring to this study it was found that larger part of moms i.e., 95% took antenatal care. Among the 5% who had not taken antenatal care, a majority of 2% had only secondary level of education. It was also seen that education among the mothers was lacking with only 1% of postgraduates and a majority with secondary education (33%). Multivariate investigation on Maternal Instruction and the Utilization of Maternal and Child Wellbeing Administrations in India by Pavalavalli Govindasamy and B. M. Ramesh confirmed the positive and critical impact of mother's tutoring on maternal-care utilization. This facts about by Mr Ramesh was of the supposition that instruction rises as the single most critical marker of maternal wellbeing care usage when the impact of all the other catch components are restrained[18]. This finding is concordant to the finding of our study. A study in china on an outline of dreariness, mortality and long-term result of late preterm birth uncovered that on comparison with term newborn children the preterm newborn children had significantly more noteworthy chances of expanded dismalness, mortality additionally long enduring side impacts that expanded indeed past their earliest stages into grown-up life[19]. This was comparable to the finding of our facts about where among the 42 undesirable Newborn children, 21.42% were from preterm conveyances. Our study moreover uncovers that 16.66% of the unfortunate Newborn children Were Moo Birth Weight babies. A study on postnatal depression conducted in Goa, India uncovered that 18% were underweight at birth[14]. This finding was comparative to the finding of our facts about. Another study on the Burden of Morbidities and Unmet Need for Health Care in Rural Neonates conducted in Gadchiroli, India concluded that 42% of the facts about newborn children were underweight at birth[20]. This finding was that as it may much higher than the finding of our study. In our facts about the predominance of Newborn child morbidities was alarmingly high, overcrowding was matter of concern and instruction among moms was broadly overlooked. There's a got to educate the community almost the impacts of overcrowding. Mothers should be encouraged to take up timely vaccinations.

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