ASTUDY OF CO-RELATES OF INFANT DEATHS IN KANPUR

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Abstract :

Research Question :- What are co-relates of infant deaths in Kanpur

Objective :- To assess infant mortality rate in rural & urban areas of Kanpur and various factors responsible for it.

Study Design :- Cross sectional study.

Study unit :- Each of household having live birth and infant death within one year of study.

Study area :- Rural & Urban area of Kanpur.

Study variable :- Live birth, infant death, co-relates.

Statistical analysis :- By Chi-square test of significance.

Results :

The overall infant mortality rate was 79.54 per thousand live births. The IMR of rural and urban areas were 74.24 and 76.92 per 1000 live birth respectively 90.30% infant deaths were associated with home delivery conducted by untrained Dais and family members. Different co-relates of infant deaths were found as malnutrition (52.2%), low birth weight (35.8%), prematurity (26.8%), ARI (23.88%), Birth injurious (23.13%) diarhoeal diseases (17.9%) and Tetanus (10.44%).

Conclusions :

The present study highlights that most of infant deaths in the community are from preventable causes e.g. malnutrition, LBW, Tetanus, prematurity, infection etc. For seduction of infant mortality rate, the pregnant mothers should be motivated for better antenatal, intranatal and post natal care and especially good diet & nutritional, supplementation, institutional deliveries conducted by trained personnel.

Introduction :

Mortality of children before their fifth birthday accounts for almost half of (47%) of all deaths while one third of all deaths are contributed by infants. The problem of improving health status of children and infants not only lie in inadequacy of scientific knowledge and technology but also its non-utilization, where effective preventive, promotive and other control measures are well known, then research is needed to know the cause of non improvement in their health status.

Although since independence, the infant mortality rate in India is declining considerably but this decline is not uniform through out the country. It varies from one state to another and within also variations between different districts and there also variations between rural and urban area of same district. There is need for assessment of infant mortality rate in various parts of the country to analyse the factors which are responsible for better understanding the problem of health in formulating a meaningful strategy to further reduce infant mortality rate.

Material & Methods :

A cross sectional study was conducted in rural and urban area of Kanpur. Total sixty thousand population was taken into account of which thirty thousand from rural area surrounding Kalyanpur P.H.C. and thirty thousand population from urban area near by family planning centre Nawabganj. Kanpur. All infant deaths along with live births which occurred from July 1997 to June 1998 were identified and registered through house to house visit. A pre-designed and pre-tested questionnaire was used to collect information regarding infant deaths. Enquiry was made from any co-operative and responsible adult member of household. Help and support from local health workers and Anganwadi workers was also taken.

Observation & Discussion :

TABLE - I : Infant mortality status in study population.

Parameters	Rural	Urban	Total
No. of live births	880	862	1742
No. of infant deaths	70	64	134
IMR (per 1000 live births)	79.54	74.24	76.92

The table-I reveals that the total number of live births in a period of one year (July 1997 to June 1998) were 1742. 880 (50.51%) and 862 (49.48%) in rural and urban areas respectively. Total infant deaths recorded during study were 134. Out of which 70 deaths occurred in rural and 64 in urban area. The overall infant mortality rate observed was 76.92 per 1000 live births.

Similar observation were made by Singh et al[1], Khalique et a1[2]and Biswas et al[3] Higher infant mortality rates were observed by singh et al[4] , Sandel et al[5] , Gupta et al[6] , Bhandari et al[7] and Pandey et al[8] This was due to non availability of health services, lower level of awareness and social beliefs.

In rural area, infant mortality rate was 79.45 while Bah al[9] and Krishna et al[10] . found higher rates in previous studies in rural areas of Kanpur. This indicates decline in infant mortality rate since two decades. Lower infant mortality rate were observed by Nandan et al[11] and Kulkrni et al[12] . Lower rates in former study was due to better availability of mother and child healths services whereas in later study, was due to under reporting of infant deaths.

TABLE - II : INFANT MORTALITY IN RELATION TO INTRA PARTUM CARE.

Intra Partum Care	No. of infant deaths					
	Rural		Urban		Total	
Delivery at :-	No	%	No	%	No	%
Institution	8	11.42	5	7.81	13	9.70
Home	62	88.58	59	92.19	121	90.30
Total	**70**	**100**	**64**	**100**	**134**	**100**
Person conducted delivery doctor	8	11.42	5	7.83	13	9.70
Trained dais	32	45.72	15	23.43	47	35.07
Untrained dais	22	31.42	30	46.87	52	38.81
House members & neighbors	8	11.43	14	21.87	22	16.42
Total	**70**	**100**	**64**	**100**	**134**	**100**
Mode of delivery normal	62	88.57	59	92.18	121	90.30
Cesarean section	6	8.57	4	6.26	10	7.47
Instrumental	2	2.86	1	1.56	3	2.23
Total	**70**	**100**	**64**	**100**	**134**	**100**

Place of delivery v/s residential area
$X^2 = 0.003$, d.f. = 1, $p > 0.05$ not significant

Person conducted v / s residential area
$X^2 = 7.02$, d.f. = 3, $p > 0.05$ not significant

Table-II shows that in majority of infant deaths (90.30%) it was home delivery while in negligible proportion i.e. (9.7%) it was institutional delivery, relationship between place of delivery and residential area was not significant ($x2 = 0.003$, d.f. = 1, $p > 0.05$). Maximum infants deaths (38.81%) occurred in the deliveries conducted by untrained dais. In 90.30% infant deaths mode of delivery was normal. Deliveries conducted by doctors were complicated and their mode of delivery was either caesarean section or instrumental. No statistically significant relationship was found between person conducting delivery and residential area ($x2 = 7.02$, d.f. = 3, $p > 0.05$). Bhandari et al[7], Pandey et al[8], Prakash et al[13], and Bah al[9], also found higher infants deaths due to deliveries conducted by untrained persons.

In present study, different probable causes of infants deaths observed are malnutrition (52.2%), low birth weight (35.8%), prematurity (26.8%), ARI (23.88%), birth injuries (23.13%), diarrhoeal diseases (17.9%), tetanus (10.44%), congenital animalies (5.2%) and haemolytic disease of new born (1.74%)

TABLE - III : DISTRIBUTION OF INFANT DEATHS ACCORDING TO THEIR PROBABLE CAUSES

A etiological factors*	Rural		Urban		Total	
	No	%	No	%	No	%
Birth injury	15	21.4	16	25	31	23.13
Congenital anomalies	4	5.7	3	4.6	7	5.2
Haemolytic disease of New born	0	0	1	1.56	1	1.74
Tetanus	7	10	7	10.9	14	10.44
ARI	15	21.4	17	26.5	32	23.88
Diarrhoeal Disease	10	14.28	14	21.87	24	17.9
Prematurity	21	30	15	23.4	36	26.8
LBW	31	44	17	26.56	48	35.8
Malnutrition	40	57.14	30	46.87	70	52.2
Other communicable disease	2	2.85	4	6.25	6	4.47
Others	2	2.86	1	1.56	3	2.23
*Multiple response	n=70		n=64		n=134	

(Table-III). Malnutrition is noticed as primary cause of infant deaths. similar observations were made by Nandan et al[10], and Gupta et al[6]. The relatively higher percentage of malnutrition in present study may be attributed to the fact that it is present as a co-factor in combination with other causes of infant deaths.

Other impottant causes are low birth weight and prematurity. Finding are comparable with others Nandan et al[10], and Prakash et al[13], ARI is also one of the major factor of infant deaths as also reported by others Bahal9, Biswas et al[3], Bhandari et al[7], Sandel et al[7], Gupta et al[6], and Singh et al[4].

The present study highlights that most of the infant deaths in the community are from preventable causes. To achieve reduction in infant mortality rates, thought must be given not only to the final disease but also to the various socio-economic determenants. There should be provision for better antenatal, intranatal and post natal care which should be

effetively implemented. Mothers should be motivated of continous monitoring of health of infant and children.

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