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EDITORIAL

BIRTH WEIGHT : A COMMUNITY PERSPECTIVE

India has a dubious distinction of belonging to the top bracket of countries with a very high under-5 Mortality Rate (U5MR) of above 96/1000 live births. The U5MR considered the single most significant basic indicator of health status of a community, is proportional to the Infant Mortality Rate (IMR) which in turn is contributed to directly and indirectly by the incidence of low Birth Weight (LBW). About 25 million LBW are born each year consisting 17% of all live births, nearly 95% of them in developing countries. About 26% of newborns are LBW in India, and indeed over 16% in those countries with very high U5MR. Both preterm and small-for-dates almost equally make up this category of vulnerable infants predisposed to asphyxia, feeding problems, anemia and growth failure.

Considering the close relationship of birth weight with perinatal and infant morbidity as well as mortality, it is crucial to identify the high risk groups of low birth weight babies as early as possible. Unfortunately, in a community where 80% of newborns never get to have their weight measured, this itself is a tall order. In our society, the cry of the newborn is greeted with anxious queries about the sex of the baby and not his well-being and potential for healthy survival. The basic concept of the importance of birth weight is missing even among educated families. Indeed, it is as if the weighing machine has no place in the requirements at childbirth. In the absence of this basic facility, field workers and TBAs must report to other means to identify babies at risk. Mid-arm circumference, thigh circumference, foot length, and skin-fold thickness etc. are measurements that have been correlated satisfactorily with the baby's weight. Simple tools like coloured strips have been developed and these show promise of applicability in field situation for identification of LBW by TBAs for early referral.

Prevention is always better than cure. How does one ensure that a baby is born with adequate weight. In the case of an individual pregnancy, the obstetrician can make efforts to improve the outcome as far as possible by using clinical and ultrasonographic methods to assess fetal weight for decision-making regarding intervention. However, a pregnant woman approaching an obstetrician or other birth attendant has, to a large extent, already been trapped in an interplay of factors that can effect the weight of the baby. It has been shown that maternal age below 20 years or above 40 years, primiparity or high parity, short

height and sex of the baby are all associated with lower birth weight.

Intervention before pregnancy actually occurs could help to an extent in that the optimum time of conception can be planned. Increasing the age of marriage such that the first baby is conceived beyond 20 years of maternal age, and interpregnancy interval of more than 24 months facilitates better maternal nutrition including anemia adversely affect growth of the fetus. Also evidence is abundant that poor maternal nutrition including anemia adversely affect fetal growth. Maternal weight, mid-arm circumference, hemoglobin level and serum proteins levels have been shown to closely correlate with baby's weight. Although dietary supplementation and correction of anemia from early pregnancy certainly promotes fetal well being. The optimum time of building a good nutritional state before pregnancy, indeed during adolescence and even childhood. A healthy and well nourished girl child is more likely to grow up better equipped for pregnancy and motherhood.

In a broader perspective, it is not just the individual mother health but the complex interplay of social, cultural, political, environmental and economic factors that influences birth weight patterns in a community. Maternal literacy, type of family i.e. nuclear or joint, and place of residence i.e. rural or urban have all been noted to indirectly have a role. Socio-economic factors are the most important in this regard. Indeed, the average birth weight is a reliable index of socio-economic development. Nonetheless, it will take a gigantic and concerted effort from all agencies to create a social revolution which alone can bring about a significant impact in improving the situation.

DR. J. P. SRIVASTAVA

(Chief Editor, IJCH)

A CLINICO-EPIDEMIOLOGICAL STUDY OF MALARIA IN URBAN SLUMS AND RURAL AREAS OF KANPUR

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Abstract:

Research Question:- What is the magnitude of malaria in the study area

Objectives:- 1. What is the prevalence of malaria in urban slums and rural areas

2. To assess the influence of environmental factors in occurrence of malaria

3. To observe different clinical presentation of malaria

Study Design:- Cross sectional study

Setting:- The study was performed in five urban slums and two rural areas of Kanpur.

Statistical Analysis:- Chi-square test

Result:- The overall malaria problem in study area was 8.57% cases in total fever cases. The maximum percentage of cases (54.71%) were in age group 15 yrs and above. Total 62.62% of malaria cases were residing in kachcha houses in study population. The prevalence of malaria was 88.68% where waste water drainage system was of open type. The different symptoms were chills (71.69%), rigor (60.37%), body ache (92.45%), nausea (33.96%), vomiting (18.86%).

Introduction :

Malaria is one of the oldest recorded diseases in the world. It was known to the ancients.

There are over hundred species of malaria parasite Plasmodium but only four species have man as their natural vertebrate host. They are *P. falciparum*, *P. vivax*, *P. malariae* and *P. ovale*. Of the four species, *Plasmodium falciparum* causes the severest form of malaria. It causes the highest case fatality with cerebral malaria accounting for 80 % of these deaths.

The World Health Organization had estimated that before the malaria control programmes were launched in the various countries in the last few years there were about 1150 million persons at risk from malaria out of total world population.

At present, 100 countries in the world are covered in malarious zone, almost half of which are in SUB - SAHARAN AFRICA with 90% of the case load each year, mostly due to *P. falciparum*. Worldwide incidence of

malaria is about 300-500 million clinical cases each year and 1.5 to 2.7 million deaths. Among all infectious diseases, malaria continues to be one of the biggest contributors to disease burden in terms of deaths & sufferings. Directly or in association with acute respiratory infections & anemia, malaria kills more than 1 million children each year under the age of five mainly. These childhood deaths are mainly from cerebral malaria and anemia. These rates are even higher in rural & remote areas where patients have restricted access to health services. Because of the combined effects of the nutritional deficiencies & malaria many women in malarious regions are anemic.

This led to the zeal to work out the study of magnitude of malaria problem in urban slums and rural areas of Kanpur.

Material & Methods.

The present study has been carried out by door to door visit in the community. Data have been collected from urban slums and rural area of Kanpur for a period of

* Resident, ** Professor, *** Associate Prof.

6 months from July 2001 to December 2001 covering approximately 10,000 population having 5000 each of urban slums and rural areas.

Unit of study was fever cases within 15 days of the visit to area. Cases were identified after house to house survey of all households in the study population with the help of local health worker in the area.

All informations were recorded in a predesigned and pretested proforma regarding all fever cases. Specific informations about fever were noted in detail like type of fever (whether continuous, intermittent etc.), periodicity, duration of fever, any associated symptoms present with

Observation:

the fever.

Other informations like their sleeping habits at night, dressing habits (whether body exposed above waist or not exposed) were noted. Inquiry about use of any anti-mosquito measures was done and noted down. Their medication history was also taken (whether taking any medication or type of medicines eg. Homoeopathic Ayurvedic etc. or not taking any medicines at all etc.).

Thin and thick blood smear slides were made from fever cases in the field, fixed and subsequently stained and examined the same day for the presence of malaria parasite and species.

Thorough clinical examination was done to detect

TABLE-I
OCCURRENCE OF CONFIRMED CASES OF MALARIA

Cases	Urban slums		Rural areas		Total	
	No.	%	No.	%	No.	%
Fever cases	348	6.94	270	5.34	618	6.14
Malaria cases	29	8.33	24	8.88	53	8.57

pallor, splenomegaly etc.

During the present study it was observed that

8.57% of malaria cases were present among all febrile cases. Further more the observations gave glimpse that this pattern is not different in urban slums (8.33%) & rural

TABLE-II
AGE AND SEX WISE DISTRIBUTION OF MALARIA CASES

Age group (years)	Urban								Rural								Grand Total			
	Male		Female		Total		Total		Male		Female		Total		Total		No.		No.	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
0-1	15	4.31	1	5.89	-	-	1	3.45	12	4.44	-	-	-	-	-	-	1	1.89		
1-4	51	14.66	2	11.76	1	8.33	3	10.35	37	13.70	2	12.50	1	12.50	3	12.50	6	11.33		
5-15	112	32.18	5	29.41	4	33.33	9	31.03	75	27.78	4	25.00	4	50.00	8	33.33	17	32.07		
>15 yrs	170	48.85	9	52.94	7	58.33	16	55.17	146	54.08	10	62.50	3	37.50	13	54.16	29	54.71		
Total	384	100	17	100	12	100	29	100	270	100	16	100	8	100	24	100	53	100		

areas (8.88%) (Table I)

Table II shows age and sex wise distribution of malaria cases. In total study population, maximum cases 54.71% were found in age group 15 years and above,

followed by 5 – 15 years (32.07%) and 1 – 4 years (11.33%). The minimum prevalence has been noted in 0 – 1 year

TABLE – III
DISTRIBUTION OF MALARIA CASES ACCORDING TO ENVIRONMENTAL VARIABLES

Environmental variables	Urban Slums				Rural areas				Total	
	Fevers cases		Malaria cases		Fever cases		Malaria cases			
	No.	%	No.	%	No.	%	No.	%	No.	%
Construction of house										
Kachcha	52	14.94	17	58.62	153	56.66	16	66.66	33	62.26
Semi pucca	208	59.77	8	25.59	60	22.22	5	20.84	13	24.53
Pucca	88	52.28	4	13.79	57	21.11	3	12.50	7	13.21
X ² = 9.23, df - 1, P < 0.05, H.S.					X ² = 4.16, df - 1, P < 0.05, Significant					
Overcrowding										
Present	231	66.38	19	62.52	195	72.22	17	70.83	36	67.92
Absent	117	33.62	10	34.48	75	27.78	7	29.17	17	32.08
X ² = 2.79, df - 1, P < 0.05, Not significant					X ² = 4.16, df - 1, P < 0.05, Significant					
Ventilation										
Adequate	108	31.03	8	27.59	98	36.30	5	20.83	13	24.53
Inadequate	240	68.97	21	72.41	172	63.70	19	79.17	40	75.47
X ² = 5.82, df - 1, P < 0.05, Significant					X ² = 8.16, df - 1, P < 0.05, Significant					
Natural lighting										
Adequate										
Inadequate	136	39.08	7	21.14	180	66.67	7	29.17	14	26.41
	212	60.92	22	75.86	90	33.33	17	70.83	39	73.59
X ² = 7.75, df - 1, P < 0.05, Significant					X ² = 4.16, df - 1, P < 0.05, Significant					
Water supply										
Wells	-	-	-	-	60	2.22	10	41.66	10	18.87
Hand pumps	219	62.93	14	48.38	232	85.93	9	37.50	23	43.39
Tap water	129	37.07	15	51.72	73	27.04	5	20.84	20	37.74
Waste water drainage										
Closed	46	13.22	4	13.79	27	10	2	8.33	6	11.32
Open	302	86.78	25	86.21	243	90	22	91.67	47	88.68
X ² = 15.2, df - 1, P < 0.05, H.S.					X ² = 16.60, df - 1, P < 0.05, H.S.					

age. The same pattern is found in urban slums and rural areas too.

Malaria transmission is intimately associated with the environmental variables of dwellings as table III shows that majority of malaria cases were residing in Kachcha houses, in both urban slums (58.62%) and rural areas (66.66%). The total study population (62.26%) of malaria cases were residing in Kachcha houses both in urban slums (58.62%) and rural areas (66.66%) [total 62.26%].

Overcrowding was present in both urban slums (65.52%) and rural areas (70.83%) as well as total population (67.92%).

Inadequate ventilation promotes various vectors

inside the dwellings due to favourable conditions as table III reveals that occurrence of disease was 72.41% in inadequately ventilated urban slums and 79.17% in rural areas.

Adequacy of natural lighting and ventilation of dwelling is parallel to each other. The inadequate ventilation results in inadequate lighting in the dwelling. Both variables give favourable shelter to vector of malaria. The table VIII shows an evidence that occurrence of malaria was 75.47% in ill ventilated houses which is approximately in conformity with the findings in dwellings with inadequate lighting (73.59%).

The prevalence of malaria was 88.68% where

TABLE-IV
OCCURRENCE OF TYPE OF FEVER IN MALARIA CASES

Type of fever	Urban Slums				Rural areas				Total	
	Fever cases		Malaria cases		Fever cases		Malaria cases		No.	%
	No.	%	No.	%	No.	%	No.	%		
Continuous	163	46.83	10	34.48	144	53.33	14	58.33	24	45.28
Intermittent	127	36.49	16	55.17	101	37.4	8	33.33	24	45.28
Remittent	58	16.66	3	10.35	25	9.27	2	8.34	5	9.44
Total	398	100	29	100	270	100	24	100	53	100

water drainage system was of open type.

The disease malaria is very specifically recognised

by specific characteristics of festigium. Different species of parasite present its festigium by different ways. It was

TABLE-V
PERIODICITY OF FEVER IN MALARIA CASES

Tpe of fever	Urban Slums				Rural areas				Total	
	Fever cases		Malaria cases		Fever cases		Malaria cases		No.	%
	No.	%	No.	%	No.	%	No.	%		
Daily	167	47.98	12	41.37	132	48.88	6	25.00	18	33.96
Alternate day	78	22.41	10	34.48	57	21.12	10	41.67	20	37.74
Irregular	103	29.61	7	24.15	81	30	8	33.33	15	28.30
Total	348	100	29	100	270	100	24	100	53	100

noted that continuous fever was present in 45.23% while intermittent and remittent fever were recorded 45.28% and

9.44% respectively (Table IV).

Table V shows that occurrence of fever daily, alternate day and irregular, was approximately similar i.e. 33.96%, 37.74% and 28.30% respectively in study

population.

While alternate day periodicity was maximum in rural areas (41.67%). The periodicity was daily in majority

TABLE - VI

DURATION OF FEVER IN MALARIA CASES

Duration of fever (days)	Urban Slums				Rural areas				Total	
	Fever cases		Malaria cases		Fever cases		Malaria cases			
	No.	%	No.	%	No.	%	No.	%	No.	%
1 - 5	293	89.19	17	58.62	215	79.62	13	54.16	30	56.60
6 - 10	40	11.40	11	37.93	41	15.18	11	4.58	22	41.50
11 - 15	9	2.58	1	3.45	6	2.22	-	-	1	1.88
> 15	6	1.72	-	-	28	10.37	-	-	-	-
Total	348	100	29	100	270	100	24	100	53	100

of cases in urban slums (41.37%). The irregular presentation in urban slums and rural areas was 24.15%

and 33.33% respectively.

The duration of fever depends on the type of

TABLE - VII

PRESENTATION OF ASSOCIATED SYMPTOMS IN MALARIA CASES (MULTIPLE RESPONSE)

Associated symptomatics	Urban Slums				Rural areas				Total	
	Fever cases		Malaria cases		Fever cases		Malaria cases			
	No.	%	No.	%	No.	%	No.	%	No.	%
Chills	234	67.24	20	68.96	165	61.11	18	75.0	38	71.69
Rigor	145	41.66	17	58.62	79	29.25	15	62.5	32	60.37
Headache	348	100	29	100	248	91.85	24	100	53	100
Bodyache	312	89.65	27	93.10	231	85.55	22	91.66	49	92.45
Nausea	102	29.31	12	41.37	109	40.37	6	25.00	18	33.96
Vomiting	70	20.11	7	24.13	40	14.81	3	12.50	10	18.86

species of Plasmodium involved as well as the type of medication taken. But it is clearly evident that 56.60% of patients had fever for 1 - 5 days. The mean duration of fever was approximately 6 days.

Malaria is easily recognised by its specific symptomatic presentation, due to its specific characteristics even general people also at times make the diagnosis of disease on clinical basis. The different

symptomatics as revealed in table VII are chills (71.69%) rigor (60.37%), headache (100.00%), body ache (92.45%), nausea (33.96%), vomiting (18.86%). No other symptoms like diarrhoea, respiratory insufficiency, convulsions etc. was found.

Discussions :

The prevalence of fever was 6.14% in the total study population. The blood smear could be collected was 94.20% in the study population and prevalence of

malaria cases after smear examination was 8.57% This finding correlates with the studies carried out by J. Sandell et al (1991) which showed 84.24% blood slide collection rate in Gorakhpur, Uttar Pradesh

Majority of malaria cases (54.71%) were found in adolescents and adults while 45.29% cases occurred in less than 15 yrs of age. Regarding sex wise distribution, overall prevalence of malaria in females was 37.74% in study population, 41.38% in urban slums and 33.33% in rural areas.

According to data from NMEP (National Malaria Eradication Programme, 1986) population distribution of malaria by age was 0 – 1 yr – 2.5%, 1-4 yrs – 10.1%, 5-15 yrs – 29.4%, 15 yrs and above – 58.0%.

The illventilated and illlighted house provide ideal indoor resting place for mosquitoes as it was evident from our study that ventilation was inadequate in both urban slums ($\chi^2 = 5.82$, $df = 1$, $P < 0.05$, Significant) (72.41%) and rural areas (79.17%) ($\chi^2 = 8.16$, $df = 1$, $P < 0.05$, Significant). The natural lighting was also inadequate in urban slums ($\chi^2 = 7.75$, $df = 1$, $P < 0.05$, significant) (75.86%).

The periodicity of fever in malaria cases depends upon the species of plasmodium as alternate day in *P. vivax* and *P. falciparum*, every 3rd day in *P. ovale* and every 72 hours in *P. malariae*. But this periodicity may

vary in various conditions like mixed infections, medication, immune status,. Associated with other infections etc.

Conclusions and Recommendations:-

Thus it can be concluded that the problem of malaria is equally prevalent in urban slums and rural areas because the eco-environmental variables are same in both the areas.

So both the areas need community based strategy to control vector of malaria so that malaria no longer remains public health problem.

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PRIMORDIAL PREVENTION

THE BEST WAY

TO KEEP ONESELF HEALTHY.

WORLD HEALTH DAY THEMES

Compiled by-Dr. S. C. Saxena (Professor)

Deptt. Of Community Medicine GSVM Medical College, Kanpur

- 1970 - Early Detection of Cancer Saves Life.
- 1971 - A Full Life Despite Diabetes.
- 1972 - Your Heart is Your Health.
- 1973 - Health Begins at Home.
- 1974 - Better Food for a Healthier World.
- 1975 - Small Pox - Point of no Return.
- 1976 - Foresight Prevents Blindness.
- 1977 - Immunise and Protect Your Child.
- 1978 - Down With High Blood Pressure.
- 1979 - A Health Child-A Sure Future.
- 1980 - Smoking or Health - The Choice is Yours.
- 1981 - Health for all for by the Year 2000.
- 1982 - Add Years to Life.
- 1983 - Health for all by 2000 - The Count Down has Begun
- 1984 - Children's Health : Tomorrows Wealth.
- 1985 - Health Youth : Our best Resource.
- 1986 - Health Living - Everyone a Winner.
- 1987 - Immunisation - A Chance for Every Child.
- 1988 - Health For All - All for Health.
- 1989 - Let's Talk Health.
- 1990 - Our Planet - Ourhealth ; Think Globally, Act Locally.
- 1991 - Should Disaster Strike - Be Prepared.
- 1992 - Health Beat - The Rhythm of Life.
- 1993 - Handle Life with Care - Prevent Violence and Negligence.
- 1994 - Our Health for a Healthy Life.
- 1995 - Target - 2000 - A World Without Polio.
- 1996 - Healthy Cities for Better Life.
- 1997 - Emerging Infectious Diseases.
- 1998 - Safe Motherhood.
- 1999 - Active Ageing Makes the Difference.
- 2000 - Be a Life Saver, Be a Blood Doner; Blood Saves Life.
- 2001 - Stop Exclusion, Dare to Care.
- 2002 - Move for Health.
- 2003 - Shape the Future of Life, Healthy Environments for Children.

PREVALENCE OF XEROPHTHALMIA AMONGST UNDER FIVES IN URBAN SLUMS AND RURAL AREAS OF KANPUR

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Abstract:

Research Question:- What is the prevalence of xerophthalmia & is there any difference in the occurrence in urban slums and rural area

Objectives:- 1.To assess overall prevalence of xerophthalmia in urban slums and rural area

2. To identify the association of breast feeding and weaning with the development of xerophthalmia

3. To identify association of xerophthalmia and immunization status of children.

Study Design:- Cross sectional study

Setting:- The study was performed in five urban slums and two rural areas of Kanpur.

Statistical Analysis:- Chi-square test, Relative risk

Results:- Overall prevalence of xerophthalmia was observed 6.66%, in urban slums it was found to be 7.28% and in rural area 6.08%. Maximum no.(50.60%) of xerophthalmic children belonged to age group 4-5 years. Higher prevalence was observed in children who were not breast fed (45.45%) and not immunized (38.7%).

Introduction :

Vitamin A deficiency in the words of 'Edward De Mayer' was once considered as the "Cindrela" of diseases. Nutritionist ignored it as a problem of blindness prevention while those involved with blindness prevention ignored it as problem of malnutrition. However, it has currently been recognised as one of the most important micronutrient deficiencies of public health significance leading to irreversible blindness in young children. The most vulnerable group is infants and pre school children.

This is one of the four most important types of malnutrition prevalent in developing countries; the other being protein energy malnutrition, iodine deficiency disorders and iron deficiency anaemias

According to an estimates 30,000 to 40,000 children may loose their eye sight due to Vitamin A deficiency in India every year. In India milder forms affecting conjunctiva like Bitot's spot are observed in about 1-5% of preschool children (1-5 years).

It is now estimated that Vitamin A deficiency, including subclinical and clinical forms of severe and moderate degrees of public health significance, exists in more than 60 countries. Worldwide, an estimated 2.8 million children 0-4 years of age are clinically affected by Vitamin

A deficiency, and 251 million more are severely or moderately subclinically deficient. Thus, at least 254 million preschool children are 'at risk' in terms of their health and survival.

In the view of above, the present study was carried out to find out the prevalence of xerophthalmia amongst under five children in urban slums and rural area of Kanpur and to identify association of xerophthalmia with breast feeding and timing of weaning and immunization status.

Material & Methods:- The present study was conducted amongst all the children of under 5 years age group. In order to determine prevalence of Vitamin A deficiency in less than 5 years children a total of about 10,000 population out of which 5000 from rural area, surrounding Kanpur and 5000 from urban slums has been considered for the study.

Unit of study were all children aged under 5 years. Vitamin A deficiency was identified after house to house survey of all house holds in the study population with the help of local health worker in the area.

Informations were recorded in a predesigned and pretested proforma regarding all children under 5 years of age. After taking family into confidence the purpose of study was explained to them. All the bio-social factors were studied. General information like type of the

* Resident, ** Prof & Head, *** Associate Prof,

area, name, age, sex of child, name of father, religion, type of family, total family numbers, parents' occupation and education, monthly income, type of house, ventilation, presence of overcrowding etc. were noted.

To determine the socio - economic class, modified B.G. Prasad's classification (1991) as suggested by P. Kumar was used. History of illness in preceding 3 months was also elicited from the parents and special emphasis was given to episodes of diarrhoea, respiratory illness, worm infestation and measles. For diarrhoea and respiratory illness, more emphasis was given if any episode in last 15 days has occurred.

A detailed dietic history was also taken with special reference to consumption of Vitamin A rich foods as green leafy vegetables, yellow fruits, milk etc. Also noted that whether these things were taken regularly or irregularly.

Immunization status of child at the time of survey was enquired, verification were made by checking immunization cards if available. Otherwise mother's statement was taken to be true. Immunization was considered complete, if child has received 3 doses of DPT, OPV, one dose of BCG and measles with an interval of not less than 4 weeks between 2 doses, and partial if either doses were missed or interval between 2 doses being less than 4 weeks. The child was considered not immunized who has not received any of vaccines.

History of breast-feeding and age at which weaning was started also taken.

Vitamin A deficiency was mainly assessed by clinical examination of eye following WHO criteria (1982).

OBSERVATIONS :

TABLE - I
AGE AND SEX WISE DISTRIBUTION OF CHILDREN SUFFERING FROM VITAMIN A DEFICIENCY

Age group (years)	Urban						Rural						Grand Total	
	Male		Female		Total		Male		Female		Total			
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
0 - 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1 - 2	1	4	-	-	1	2.27	1	4.55	-	-	1	2.56	2	2.40
2 - 3	3	12	2	10.53	5	11.35	5	22.73	3	11.65	8	20.51	13	15.66
3 - 4	9	36	7	38.04	16	36.36	4	18.18	6	35.24	10	25.64	26	31.34
4 - 5	12	48	10	52.63	22	50.00	12	54.55	8	47.06	20	51.29	42	50.60
Total	25	56.82	19	43.18	44	100.0	22	65.41	17	43.59	39	100.0	83	100.0
Mean	3.78	3.92			3.72 ± 0.97		4.02 ± 0.82							
± S.D.	± 0.83	± 0.68												

Vitamin A deficiency is a public health problem. The maximum no. of children suffering from xerophthalmia were in age group of 4-5 years both in u

rbanslums (50.0%) and in rural areas also (51.29%) while no child was seen with any symptomatic of Vitamin A deficiency amongst 0 - 1 year age group. (Table I)

TABLE - II
SEX WISE OCCURRENCE OF SIGNS AND SYMPTOMS OF XEROPHTHALMIA AMONGST UNDER FIVE CHILDREN (MULTIPLE RESPONSE)

Ocular signs and Symptoms	Urban slum			Rural area			Grand Total		
	Male (n= 316)	Female (n = 228)	Total (n = 604)	Male (n = 338)	Female (n = 303)	Total (641)	Male (n = 654)	Female (n = 591)	Total (1245)
Nightblindness	6 (1.90)	2 (0.69)	8 (1.32)	3 (0.89)	1 (0.33)	4 (0.62)	9 (1.38)	3 (0.51)	12 (0.96)
Conjunctival xerosis	13 (4.11)	9 (3.13)	22 (3.64)	8 (2.37)	9 (2.97)	17 (2.65)	21 (3.21)	18 (3.05)	29 (2.33)
Bitot's spot	12 (3.79)	9 (3.13)	21 (3.48)	10 (2.96)	12 (3.96)	22 (3.43)	22 (3.36)	21 (3.55)	43 (3.45)
Corneal	2 (0.63)	1 (0.35)	3 (0.51)	-	2 (0.66)	2 (0.31)	2 (0.31)	3 (0.51)	5 (0.41)

Problem of xerophthalmia is occurring amongst both sexes in under 5 children. Occurrence of xerophthalmia was observed equally amongst male and female children

of urban and rural communities (table II) . No case of corneal ulceration or sequelae was found.

TABLE - III
DISTRIBUTION OF CHILDREN ACCORDING TO HISTORY OF BREAST FEEDING

History of feeding	Urban slum			Rural area			Grand Total		
	Total No. (n = 604)	Xerophthalmic children (n = 44)		Total No. (n = 641)	Xerophthalmic children (n = 39)		Total No. (n = 1245)	Xerophthalmic children (n = 83)	
		No.	%		No.	%		No.	%
Breast fed	425	12	2.82	512	12	2.34	937	24	2.56
Top fed + Breast fed	169	27	15.91	110	22	20.0	279	49	17.56
Not breast fed	10	5	50	12	5	41.66	22	10	45.45
	$\chi^2 = 17.23$, d.f. = 2, H S p < 0.05			$\chi^2 = 11.23$, d.f. = 2, H S p < 0.05					

Breast milk is the main source of Vitamin A for 6 months of age.

Present study reveals that only 2.56% of children were suffering from xerophthalmia who were dependent

on breast feeding while 45.45% children were suffering from xerophthalmia who were not taking breast feeding. (Table III)

TABLE-IV
WEANING AGE WISE DISTRIBUTION OF UNDER 5 CHILDREN

Age of weaning	Urban slum			Rural area			Grand Total		
	Total No.	Xerophthalmic		Total No.	Xerophthalmic		Total No.	Xerophthalmic	
	(n = 604)	children (n = 44)		(n = 641)	children (n = 39)		(n = 1245)	children (n = 83)	
		No.	%		No.	%		No.	%
≤ 4 mths	153	9	5.88	114	7	6.14	267	16	5.99
> 4 mths	451	35	7.76	527	32	6.12	978	67	6.89

In this study too much variation has not been observed among the children who had weaning below

four months or after four months. (Table IV).

TABLE-V
IMMUNIZATION STATUS OF UNDER 5 CHILDREN IN STUDY AREA

Immunization status	Urban slum			Rural area			Grand Total		
	Total No.	Xerophthalmic		Total No.	Xerophthalmic		Total No.	Xerophthalmic	
	(n = 604)	children (n = 44)		(n = 641)	children (n = 39)		(n = 1245)	children (n = 83)	
		No.	%		No.	%		No.	%
Fully immunized	547	14	3.06	360	7	1.94	817	21	2.57
Partially immunized	128	22	17.18	251	21	8.36	379	43	11.35
Not immunized	19	8	42.10	30	11	36.67	49	19	38.78
Relative risk		2.14			4.57				

Table V shows only 2.57% fully immunized children were suffering from vitamin A deficiency in contrast to 38.78% non immunized children.

Discussions :

Vitamin A deficiency is one of the most serious public health problems in developing countries, more so in India (Reddy, 1978).

The problem is serious, not only because it leads to various eye signs and symptoms and resultant blindness, but also leads to increased incidence of diarrhoeal and respiratory diseases resulting in high mortality and morbidity in children (Sommer, 1983). Ocular manifestations of hypovitaminosis A are reasonably reliable indicators of Vitamin A status of Indian people as there is poor correlation between ocular signs and symptoms of Vitamin A deficiency and serum levels of Vitamin A (Mclaren, 1966).

A total of 797 households in urban slums and 619 households in rural area were taken for the study. 327 households in urban slums whereas 276 in rural area had children under 5 years of age. Out of 1258 children of under 5 of years, 610 were in urban slums and 648 in rural areas.

The prevalence of Vitamin A deficiency was found to be 7.28% in urban slums where as in rural area it was observed 6.08%. Overall prevalence observed was 6.66%. (Table XI)

Devendra W. Khandit (1996) has reported overall, prevalence of xerophthalmia was 8.7% in under five children.

Very low prevalence rate of 2.6% has been reported by Desai (1977) in a study conducted in Jodhpur. Variation of prevalence rates in different studies signifies the importance of variability of factors i.e. age, sex seasonal

trend, climate, clustering, diet, nutrition, socio-economic status, literacy, health facilities and precipitating conditions like diarrhoea, respiratory infections, exanthems like measles, chicken pox, worm infestations and a host of other infectious disease (Sommer 1984; Mathur, 1987; Sikder, 1988).

In the present study majority of xerophthalmic children (50% in urban slums and 51.29% were from rural area belonging to age group 4-5 years. In the present study, the prevalence of xerophthalmia was significantly higher in 3-5 years age group than children under three years of age. Prevalence of deficiency peaking in this age group is probably due to inadequate Vitamin A intake among these children because of Poverty, ignorance and unavailability of Vitamin A rich food. Moreover, around this age there is maximum incidence of diarrhoeal diseases and worm infestations which impair Vitamin A absorption, increase metabolism and cause PEM. All these factors interfering with storage, transport and utilization of Vitamin A, and hence higher prevalence in this age group.

In the present study occurrence of xerophthalmia was observed equally amongst male and female children or urban and rural communities. Prevalence of night blindness, Bitot's spot, Corneal xerosis was observed 1.32%, 3.48%, and 0.051% respectively in urban slum and 0.62%, 3.43%, and 0.31% respectively in rural area. This signify, it is public health problem according to criteria set by WHO (WHO 1982).

Smaller percentage of night blindness may be attributed to the fact that younger children having signs of Xerophthalmia might not be able to express this symptom conjunctival xerosis was observed in 3.64% in urban slums where as 2.65% in rural area.

In present study Bitot's spots were observed almost equal in urban (3.48%) and rural area (3.45%). Results reported by RCSB (Indira Bai, 1986) from Calcutta, Ranchi and Jodhpur appears to be in close agreement (3.12%, 2.98% and 3.8% respectively) with our observation. More recently a prevalence of 6.2% has been reported by Katiyar (1988).

Present study shows strong relation between xerophthalmia and pattern of breast feeding. Only 2.56%

breast fed children developed xerophthalmia where as 45.45% non breast fed children, ($\chi^2 = 17.23$ df 2 HS $P < 0.05$ urban slum and $\chi^2 = 11.23$ df 2 HS $P < 0.05$). This is probably due to the fact that breast milk is main source of Vitamin A in infants and breast fed children are protected from infections.

As Vitamin A is present in mother's breast milk and weaning food material. In this study much variation has not been observed among children who had weaning at or below 4 months (5.99%) or above 4 months (6.89%).

In present study it was observed that out of 49 non immunized children 19 (38.78%) developed xerophthalmia where as only 21 (2.57%) out of 817 fully immunized children developed xerophthalmia.

Relative risk of xerophthalmia in children who were non immunized was estimated 2.14% in urban slums and 4.57% in rural areas.

According to WHO 2001 (Indicator for assessing Vitamin A deficiency and their application in monitoring and evaluating intervention programmes), the risk of Vitamin A deficiency is increased when coverage rate for complete immunization, particularly measles fall below 50% for 12 - 23 months old children.

Recommendations: the present study has shown that the problem of xerophthalmia is equally prevalent in urban slums and rural areas, which shows that the causative factors for the problem are same in both areas. it is recommended that general environmental conditions to be improved which influence health status of children. IEC to strengthen the immunization acceptability, exclusive breast feeding in infants should be promoted. There should be low cost weaning food through community participation.

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DISEASES ARE BEST TO BE PREVENTED

IF NOT

SHOULD BE TACKLED PROPERLY.

KNOWLEDGE AND PRACTICE OF UNIVERSAL WORK PRECAUTIONS AMONG JUNIOR DOCTORS

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Abstract:

Research Problem : What is the knowledge and practice of Universal Work Precautions among Junior Doctors ?

Objectives : (1) To assess the knowledge about universal work precautions and source of information.

(2) To assess the practices of universal work precautions.

(3) To assess the knowledge of hospital waste management in the concerned hospital.

Study Design : Self administered oral questionnaire.

Setting and Participants : 138 Junior Doctors from Sardar Vallabh Bhai Patel Hospital associated with L.L.R.M. College, Meerut.

Study Variables : Universal work precautions.

Statistical Analysis : By proportions.

Result : In all 79.0% of Junior Doctors had knowledge about universal work precautions the major source of information being the books (69.0%). However the practice of these precautions was very low. Only 47.8% doctors were checking the integrity of thier skin with spirit/ alcohol, 45.7% were using water proof dressing if cut/abrasion was present, 68.2% were throwing the used gloves indiscriminately and 66.4% were leaving the spilled over blood/body fluids as such.

Conclusion and Recommendations : Poor bookish knowledge and lack of sensitisation are exposing junior doctors to the hazardous infections. So the need of the hour is to conduct aggressive teaching as well as training sessions to all of them including para- professionals also

Key Words : Universal work precautions, Barrier precautions, Hospital acquired infections.

Introduction :

Medical professionals are offered a unique opportunity to acquire certain illnesses beyond those opportunities available to all others who live and work in our society by virtue of their profession. They can acquire infections from a patient, fomite, contaminated environment and patient specimens either by direct contact (only if there is contact with blood/body fluids of patient), accidental inoculation of infected blood/body fluids, accidental cuts with contaminated sharps or indirect contact with contaminated equipment and any other inanimate infected objects. HIV is one of the infections associated with exposure to contaminated blood/body fluids, others being viral hepatitis (HBV, HCV, HGV), HTLV-I and HTLV-II, CMV, viral haemorrhagic fevers, E.B. viruses and many others. All infections acquired through contaminated blood can be effectively

prevented by the medical professionals by diligent practice of 'Universal work precautions'¹.

Application of "Universal work precautions" means that all patient's body fluid should be considered as infectious since it is not known who is infected with HIV unit! the blood is specially tested for it ?

Taking in to note the importance of these precautions, the present study was conducted.

- (a) To assess the knowledge about universal work precautions and source of information.
- (b) To assess the practices of "Universal work precautions".
- (c) To assess the knowledge of hospital waste management in the concerned hospital.

Material and Methods :

In all 138 Junior Doctors working in various clinical

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and paraclinical departments of Sardar Vallabh Patel Hospital associated with L.L.R.M. Medical College, Meerut were studied with the help of predesigned and pretested proforma during Sept.-Oct. 2002.

Results :

Table I shows that more than three fourth (79.0%) of Junior Doctors were having the knowledge of universal work precautions and in majority (69.0%) the source of knowledge was books and only 14.7% were taught about these precautions by teachers.

Table-I: Knowledge of universal work precautions

	Number	%
a. Knowledge present (n=138)	109	79.0
b. Source of knowledge (n=109)		
- teachers	16	14.7
- books	75	69.0
- seniors	10	9.0
- multiple response	22	20.0

It is evident from table II that less than half (47.8%) of the subjects were found checking the integrity of skin of their hands with spirit/alcohol while all of them were checking the integrity of the skin with naked eye only. Only 85.0% were washing hands before and after handling the patient and 80% of them washing their hands after removal of gloves.

Only 45.7% doctors were using waterproof dressing while 29.7% did nothing for cut/abrasion present on their skin. The use of mask during operations and vaginal deliveries was universally present and none of the subjects used masks during suction and attending wounds and accidental patients.

All the doctors were using gloves during examination of rectum, vagina, oral cavity and throat while only 39.0% did so during handling of blood/body fluids. All of them were using gowns & aprons during operation & vaginal deliveries while none of them was using it during attending bleeding as well as accidental patient. The use of mouth piece during resuscitation was found in less than one third (31.0%) of subjects and eye protectors were not used at all.

Table-II: Behavioural and protective measures.

	Number	%
I. Behavioural Measures		
a. Checking the integrity of skin with spirit/alcohol (n = 138)	66	47.8
b. Wash hands before and after handling patients (n = 133)	113	85
c. Wash hands after removing gloves (n = 114)	91	80.0
II. Protective Measures		
a. Visible cut/abrasions present (n=138)		
- use water proof dressing	63	45.7
- use plain dressing	34	24.6
- use nothing	41	29.7
b. Use of mask during		
- operations (n = 104)	104	100.0
- vaginal deliveries (n = 38)	38	100.0
- suction (n = 92)	0	0
- wounds/accidental cases (n = 72)	0	0
c. use of gloves while		
- rectal examination (n = 35)	35	100.0
- vaginal examination (n = 42)	42	100.0
- oral cavity/throat examination (n = 68)	68	100.0
- handling blood/body fluids (n = 115)	51	39.0
- nose examination (n = 68)	17	25.0
- giving injection (n = 132)	2	1.5
- collecting lab samples/blood transfusions (n = 115)	0	0
d. Using eye protectors during		
- vaginal deliveries (n = 38)	0	0
- suction (n = 92)	0	0
- surgical procedures (n = 104)	0	0
- accidental patients (n = 63)	0	0

e.	Using gowns & aprons during		
	-operation (n = 104)	104	100.0
	- vaginal deliveries (n = 38)	38	100.0
	- handling bleeding/accidental patients (n = 63)	0	0
j	Use mouth piece during resuscitation (n = 100)	31	31.0

n = as per response applicability

As shown in table-II about two third (68.2%) subjects used to throw the gloves at all. More than half (54.8%) of doctors used to place the sharps indiscriminately and 45.2% place the sharps in leak/puncture proof container including only 14.1% containers having the disinfectant. 66.4% of subjects were found leaving the spilled over blood and body fluids as such.

Table-III: Health of managing waste

	Number	%
a. Used gloves (n = 136)		
- thrown indiscriminately	93	68.2
- immerse in bleaching power / sod.	4	2.9
-washed with water	14	10.3
Do not use		
b. Used sharp instrument (n = 106)		
- thrown indiscriminately	58	54.8
- placed in leak/puncture proof container		
- with disinfectant	15	14.1
- without disinfectants	33	31.1
c. Treatment of spillage of blood/ body fluids (n = 131)		
- left as such	87	66.4
- covered with absorbent	42	32.1
- covered with bleaching powder	2	1.5

n = as per response applicability

As per the knowledge of Junior Doctors the

infected hospital waste was being dumped (60.0%) and 53.2% also opined that used disposable syringes and needles were also being dumped with this waste 17.7% junior doctors were unaware of waste management while 20.3% were unaware of the management of disposable syringes/needles in the hospital as shown in table IV.

Table-IV: Knowledge of waste management in hospital

	Number	%
a. Infected waste (n = 130)		
- dumped	78	60.0
- burnt	18	13.8
- buried deeply	11	8.5
- do not know	23	17.7
b. Used disposable syringes/needles (n = 138)		
- dumped with other waste	72	52.2
- destroyed after disinfection	9	6.5
- destroyed without disinfection	27	19.6
- buried deeply	2	1.4
- do not know	28	20.3

n = as per response applicability

Discussion :

The first case of AIDS was diagnosed in 1981 and since then in mere 20 years of its age the AIDS has become the greatest challenge to public system globally. The world is crying for its prevention and control. Besides other groups of population the medical and paramedical health workers are at high risk of exposure to HIV/AIDS infection. To prevent the exposure of Health Care Workers to various hospital acquired infections certain practices of Universal work precaution were advocated by Centre for Disease Control (CDC). The present study indicates an unsatisfactory level of awareness (79.0%) largely books (69.0%) among the junior doctors and in spite of this bookish knowledge of precautions majority of these doctors are least bothered for these practices. None of the doctor was found using masks during suction and handling wounds/accidental cases, using gloves during transfusing blood/collection of lab samples as well as eye

protectors were not used. The poor practices may be because of lack of sensitization or non-availability of protective devices like eye protectors in health care settings.

Conclusion :

Present study highlights the need to incorporate the teaching of Universal work precautions at undergraduate level specially in all relevant clinical subjects. The practice of Universal work precautions should be reinforced during internship period and last but not the least the post graduates should be resensitized after joining their respective courses only then they will

be able to set an example to other paraprofessionals as well as will be able to protect themselves lateron from the dreaded diseases like HIV and Hepatitis B.

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AIDS IS ONLY PREVENTABLE

HIGH RISK BEHAVIOR

SHOULD BE AVOIDED.

A STUDY OF STDs. AMONGST SLUM POPULATION OF LUCKNOW THROUGH SYNDROMIC APPROACH

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Abstract:

Objectives : (1) To find out the prevalence of STDs (in terms of symptomatics)

(2) To know the biosocial characteristics associated with STDs.

Study Design : Cross sectional

Period of study : 1 year (Sep1997-Aug1998)

Study universe : 750 males and 750 females in age group 14 to 49 yrs.

Study Variables : Age, Sex, Education, Marital status, Occupation and Social class

Statistical Analysis : χ^2 (Chi square) test

Result : Total prevalence of STDs 14.7% being 16.4% in males and 12.9% in females.

Introduction :

STDs are now recognised as an independent risk-factor for HIV infection and AIDS, facilitating both the acquisition and transmission of HIV. Although no comprehensive data on the prevalence of STDs in India exist, the available information indicates that STDs represent a very serious health problem particular in women being responsible for pelvic inflammatory diseases, infertility, pregnancy wastage, neonatal infections etc.

It is very difficult to estimate the prevalence of STDs in any population because of the ignorance and feelings of guilt associated with these diseases and it is the syndromic approach (NACO 1993) which can overcome these problems. The present study was undertaken with the following objectives :

- (i) To find out the prevalence of STDs (in terms of symptomatics).
- (ii) To know the biosocial characteristics associated with STDs.

Material and Methods

As per 1991 census, the district of Lucknow has got a population of 27,62,801 of which 17,31,224 is in the city of Lucknow. The slum population of district is also centred in and around the city of Lucknow. The slum

studied were selected from the list of slums as identified by the municipal corporation of Lucknow. There are 225 slums in the Lucknow city having a population of 3,16,756 which constitute 18.3% of the total city population. The males and females in the age group 15 to 49 years constituted the unit of the study. The sample size was taken out considering allowable sampling error of 2 which came as 865 and this was considered adequate (Vaghan & Morrow 1989). For the sake of convenience and in order to make the present study more accurate, a total of 750 males and 750 females were covered in the present study.

A 30 cluster technique as suggested by WHO was used in the present study. From each clusture 25 males and 25 females from different households irrespective of their marital status were interviewed. The informations were collected on a schedule developed for this purpose which included bio-social characters e.g. age, sex, education, marital status, occupation income and marital status, size of family etc. The pretesting of questionnaire was carried out and questionnaire was modified. In order to assess the prevalence of STDs amongst respondents the syndromic approach method was adopted (NACO 1993).

Interviewing was the main tool of data collection. The interview was done separately for males and females observing necessary privacy, while interviewing females the help of a Medical Social worker was taken. The

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information so collected were analysed and interpreted in details to know the magnitude of the problem and its relationship with the socio cultural milieu.

Results :

The parameters considered for identifying prevalence were specific symptoms viz. ulceration in genital organs (leucorrhoea, gonorrhoea), swelling in genital organs (urinary tract infections, gonorrhoea,

genital scabies) and lower abdominal pain (pelvic inflammatory diseases). The overall prevalence rate of STDs amongst males and females was 14.7%. The difference in the prevalence between male and female cases was not statistically significant.

The prevalence of STDs was higher in males (16.4%) as compared to females (12.9%), however it was different statistically ($Z = 1.94, p > 0.5$). Table 1.

Table - 1 Symptoms among Symptomatics

Symptoms	Males		Females		Total	
	No.	%	No.	%	No.	%
Without symptoms	627	83.6	653	87.1	1280	85.3
With Symptoms	123	16.4	97	12.9	220	14.7
Swelling in genital organs	53	43.1	20	20.6	73	33.2
Pus/ discharge from genital organs	40	32.5	15	15.5	55	25.0
Ulceration in genital organs	30	24.4	22	22.7	52	23.6
Lower abdominal pain	0	0.0	40	41.2	40	18.2
Total	750	100.0	750	100.0	1500	100.0

In both males and females, the prevalence was maximum (32.0%) in the age group 20-24 years followed by 35-39 yrs. (18.5%), 30-34 years (18.1%) and almost nil in the age group 45-49 yrs. A statistically significant

association was found between prevalence of STDs amongst males and females in different age groups. ($X^2 = 99.03, d.f. 5, p < 0.001$) Table 2.

Table - 2 Prevalence of STDs by Age

Age (yrs)	Males			Female			Total		
	No. of Resp. interviewed	No. of Respd. with symp.	%	No. of Respd. interviewed	No. of Respd. with symp.	%	No. of Respd. interviewed	No. of Respd. with symp.	%
15-19	100	6	6.0	78	2	2.6	178	8	4.5
20-24	90	18	20.0	79	12	15.2	169	54	32.0
25-29	200	34	17.0	226	21	9.3	426	45	10.6
30-34	140	39	27.8	170	26	15.3	310	56	18.5
35-39	150	25	16.7	121	30	24.8	271	50	18.5
40-44	50	1	2.0	57	6	10.5	107	7	6.5
45-49	20	0	0.0	19	0	0.0	39	0	0.0
Total	750	123	16.4	750	97	12.9	1500	220	14.7

The prevalence was maximum (26.2%) among illiterates whereas it was almost nil amongst those who were graduate and above. The prevalence was higher (83.3%) among illiterate males whereas it was only 19.2%

among illiterate females. A statistically significant association was found between prevalence of STDs among male and female cases and their educational levels. ($X^2 = 44.16$ d.f. = 4, $p < 0.001$) Table 3.

Table - 3 Prevalence of STDs by Education

Education	Males			Female			Total		
	No. of Resp. interview wed	No. of Resp. with symp.	%	No. of Respd. interview wed	No. of Resp. with symp.	%	No. of Respd. interview wed	No. of Resp. with symp.	%
Illiterates	36	30	83.3	296	57	19.3	332	87	26.2
Upto primary	83	58	69.9	312	30	9.6	395	88	22.3
Upto junior high school	300	15	5.0	105	8	7.6	405	23	5.7
Upto High school	217	8	3.7	37	2	5.4	254	10	3.9
Upto Intermediate	78	12	15.4	0	0	0	78	12	15.4
Graduate and above	36	0	0	0	0	0	36	0	0
Total	750	123	16.4	750	97	12.9	1500	220	14.7

The prevalence of STDs was maximum (16.7%) among separated followed by widows/widowed (16.0%) and minimum (8.5%) in unmarried. A statistically significant

association was found between marital status and prevalence of STDs ($x^2 = 1.59$, d.f. = 3, $p < 0.02$) Table 4.

Table - 4 Prevalence of STDs by Marital Status

Marital Status	Males			Female			Total		
	No. of Respd. interview wed	No. of Resp. with symp.	%	No. of Respd. interview wed	No. of Resp. with symp.	%	No. of Respd. interview wed	No. of Resp. with symp.	%
Separated	40	8	20.0	20	2	12.9	60	10	16.7
Widowed/Widow	60	10	16.6	40	6	15.0	100	16	16.0
Married	450	87	19.3	630	85	13.5	1080	172	15.5
Unmarried	200	18	9.0	60	4	6.7	260	22	8.5
Total	750	123	16.4	750	97	12.9	1500	220	14.7

The prevalence was maximum (28.8%) in rikshawpullers followed by streethawkers (23.8%), labourers (20.5%), peon/watchman (15.5%), shopkeepers (8.7%) and minimum (4.0%) in students. Among females the prevalence was maximum among housewives (13.9%)

and minimum (3.1%) among students. No statistically significant association was found between the prevalence of STDs in various occupations in both male and females ($X^2 = 1.86$) Table 5.

Table - 5 Prevalence of STDs by Occupation

occupation	Males			Female			Total		
	No. of Respd. intervie wed	No. of Resp. with symp.	%	No. of Respd. intervie wed	No. of Resp. with symp.	%	No. of Respd. intervie wed	No. of Resp. with symp.	%
Rikshawpullers	212	61	28.8	0	0	0.0	212	61	28.8
Street Hawkers	21	5	23.8	0	0	0.0	21	5	23.8
Labourers	560	15	25	28	3	10.7	88	18	20.5
Peon/Watchman	58	9	15.5	0	0	0.0	58	9	15.5
House Wives	0	0	0	618	86	13.9	618	86	13.9
Skilled Workers	127	19	15	80	5	6.3	207	24	11.6
Clerks	48	5	10.4	0	0	0.0	48	5	10.4
Shopkeepers	46	4	8.7	0	0	0.0	46	4	8.7
Studentsd	178	5	28	24	3	3.1	202	8	4.0
Total	750	123	16.4	750	97	12.9	1500	220	14.7

The males belonging to social class V showed a prevalence (19.2%) of STDs compared to those belonging to social class III (12.5%). Among females the prevalence was maximum (17.6%) in those belonging to social class

IV and minimum (10.0%) among those of social class III. A statistically significant association was found between social class and prevalence of STDs ($\chi^2 = 53.31$, d.f. = 2, $p < 0.001$) Table 6.

Table - 6 Prevalence of STDs by Social Class

Social Class	Males			Female			Total		
	No. of Respd. intervie wed	No. of Resp. with symp.	%	No. of Respd. intervie wed	No. of Resp. with symp.	%	No. of Respd. intervie wed	No. of Resp. with symp.	%
I	0	0	0.0	0	0	0.0	0	0	0.0
II	0	0	0.0	0	0	0.0	0	0	0.0
III	240	30	12.5	250	25	10.0	490	55	11.2
IV	250	43	17.2	272	48	17.6	532	91	17.1
V	260	50	19.2	228	24	10.5	488	74	15.2
Total	750	123	16.4	750	97	12.9	1500	220	14.7

Discussion :

Sex being a closed subject in Indian society, the task of studying diseases related with it, is very difficult. Those suffering with such diseases, either do not disclose it to anyone or seek the help of private practitioners to

maintain secrecy. Considering these, the suspected cases, of STDs were identified through syndromic approach and efforts were made to find out the factors associated with these cases in a slum population.

Prevalence :

Out of total respondents 220 (14.7%) were identified as suspected cases suffering from STDs, based on through syndromic approach, the prevalence of STDs was thus identified as 14.7%. The problem of STD's has been assessed in other population groups of Lucknow by Kapoor et al (1964) Chatterjee et al (1964) found a prevalence of STD's as 3.5% and 0.85% in railway employees and armed forces population respectively.

The prevalence of STDs among males was identified as 16.4%. Nair et al (1973) reported a seropositivity for syphilis in 9.1% of urban community in Kerala. Kishnamurthy (1997-98) founds STDs to the extent of 15.8% in an urban community of Tamil Nadu which is very much similar to that of present study.

The prevalence of STDs among females was identified as 12.9% Urmil et al (1989) in study at Pune found 81.5 percent prostitutes suffering from STDs. Das et al (1994) in a study at Calcutta found 48.32 percent of sex workers having vaginal discharge, which goes very well with type of profession they are involved.

Out of total suspected cases of STDs, majority (33.2%) reported 'swelling' in the genital organs and 25.0%, reported 'pus/discharge' from genital organs. Das et al (1994) reported 'vaginal discharge' in 48.32% of sex workers, whereas Krihnmurthy (1997-98) reported genital discharge upto 38.0% of the study population. The findings of above studies are closely related with the present study.

The majority (70%) of the suspected cases were found in the age group 30-39 years which is in line with Banerjee and Narayan (1954) who reported maximum cases of venereal diseases in the age group 23-27 years, Prasad et al (1962) reported 64.4% percent of male cases of venereal diseases in the age group 20-29 years. Siddhu et al in a study at Kanpur (1969) reported maximum number of venereal disease patients in the age group of 16-30 years. Bijkerk (1970) studied the incidence of venereal diseases in Netherland and found maximum number of patients in the age group 20-29 years, followed by 30-39 years.

A significant association was found between education and prevalence of STDs. The maximum (26.2%) number of suspected cases of STDs were found in respondents who were 'illiterate' followed by respondents who were educated upto primary. A number of other researches have also reported highest number of cases among the illiterates Niyogi et al (1959), Kapoor & Prasad (1964), Chateerjee et al (1964), Bhargava et al (1975), which supports the findings of present study. Siddhu et al (1969), Dutt (1971) and Nair et al (1973) however found a higher prevalence among 'literate' and 'highly' educated.

There was significant association between marital status and prevalence of STDs. The prevalence of suspected cases of STDs amongst separated (16.7) was highest followed by 'widowed' and 'widow' (16.0%) and married (15.5%) ones. Kapoor & Prasad (1964) found highest seropositivity of syphilis among widow. A number of other workers have also reported similar findings in their studies (Chatterjee, 1964, Ranatunga, 1968, Subhash Babu et al, 1976, Sinha and Nath 1973). These findings support the observations of the present study.

Among males majority of the cases of STDs were riksha pullers (28.8%) by occupation, while among the females majority was of housewives (13.9%). Chatterjee et al (1964) reported a high prevalence of syphilis amongst 'sweepers'. Mukherjee et al (1964) reported venereal diseases highest amongst housewives. Siddhu et al (1969) found maximum cases amongst 'unskilled' labourers or those engaged in petty business. Gokhale et al (1972) observed that the majority of clients to prostitute was of 'skilled workers'. Nair et al (1973) (85.3%) of venereal disease patients as unskilled workers. These finding support the observation of the present study.

A significant difference was found between social class and prevalence of positive cases of STDs. The maximum prevalence of suspected cases was found in respondent belonging to social class 'IV' (17.1%). A higher number of cases have also been reported in 'low' income group by Niyogi et al (1959), Parasad et al (1962), Kapoor and Prasad (1964), Platts (1969), Seth (1970) and Dutt, which is in conformity with the present study.

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LOW BIRTH WEIGHT AND MATERNAL RISK FACTORS

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Abstract:

Objectives : To study the socio-economic and maternal risk factors associated with low birth weight babies and to measure the strength of association.

Study Design : Hospital based case-control study.

Setting : Shri Sayajirao General Hospital, Vadodara.

Sample size : 312 cases and 312 controls.

Participants : Cases :- Mothers who delivered single, live baby less than 2500 gms i.e. low birth weight.

Controls:- Mothers who delivered single live baby more than 2500 gms.

Study Variable : Maternal age, literacy, anaemia, outcome of last pregnancy.

Statistical Analysis : Chi-square test and odd's ratio.

Result : Among cases, 14.5% mothers had age less than 20 yrs as compared to 7.3% mothers in control group. 68.6% mothers amongst cases were illiterate against 46.5% mothers in control group. 53.8% mothers had haemoglobin level 10gm% or less amongst cases and no statistically significant difference was found between low birth weight and outcome of last pregnancy.

Conclusion : The maternal risk factors associated with low birth weight in mothers attending S.S.G. hospital age maternal anaemia (OR 2.66), illiteracy (OR 2.51), maternal age less than 20 yrs. (OR 2.08). No association was found between low birth rate and outcome of last pregnancy.

Introduction :

Birth weight is considered to be one of the important and reliable parameter in evaluation of foetal and neonatal well being. It is the most decisive factor in the chances of infant survival.

The World Health Organization (1993) has defined low birth weight, as new born weighing less than 2500-gm. within first hour of life. Low birth weight babies are five to six times more likely to die during perinatal period and three times more likely to die during infancy as compared to normal birth weight babies⁶.

Prevalance of low birth weight in India is 30%, which is very high when compared to 4-5% in developed countries⁵.

The etiology of this problem is not well understood. Many etiological factor have been held responsible. Studies correlating low birth weight to maternal & bio social factors are available, however not many studies have measured the strength of association between maternal factor & low birth weight.

The present case-control study was therefore designed with an objective to study the association between some maternal factors and low birth weight and to quantify the association.

Material and Methods :

The present case-control study was carried out in department of obstetric & Gynaecology, Shri Sayaji rao General hospital, Vadodara by interviewing and examining the postnatal mothers for a period of 6 months i.e. from Dec 98 to May 99.

For the purpose of study World Health Organisation (W.H.O.) Criteria of low birth weight was taken. Case were the mothers who delivered single, live baby less than 2500 gm. i.e. low birth weight baby and control were the mothers who delivered single, live baby weighing 2500 gms or more i.e. normal birth weight baby.

Following mothers were excluded from the study mothers (1) Multiple births (2) Major congenital malformed baby, (3) Still births. Information obtained was filled up in pretested proforma. Data collected was entered and analysed with the help of computer package.

Result :

Table I : Distribution of low birth weight babies according to birth weight

Birth weight (in gms.)	Number	Percentage
Less than 1500	13	4.17
1500-1999	57	18.27
2000-2499	242	77.56
Total	312	100

Amongst low birthweight babies, 77.56% babies had birth weight between 2000-2499 gms. 18.27% had birth weight between 1500-1999 gms and 4.17% below 1500gms.

Table II : Low birth weight and maternal age

Maternal Age (in years)	Case		Control		Total	
	No.	%	No.	%	No.	%
Less than 20	45	14.5	23	7.3	68	10.9
20 to 34	265	83.9	279	89.4	541	89.9
35 or more	05	1.6	10	3.3	15	2.4
Total	312	100	312	100	624	100

The table II shows that among cases 14.5% mothers had age less than 20 yrs as compared to 7.3% mothers in control group. The difference was found to be statistically significant ($p < 0.01$). The odd's ratio for low birth weight with maternal age as risk factor was 2.0 with 95% confidence interval being 1.19 to 3.66.

Table III : Low birth weight and maternal education

Maternal Education	Case		Control		Total	
	No.	%	No.	%	No.	%
Illiterate	214	68.6	145	46.5	359	57.5
Literate	98	31.4	167	53.5	265	42.5
Total	312	100	312	100	624	100

The above table shows that among cases 68.8% mothers were illiterate whereas among controls 46.5% mothers were illiterate. The difference was found to be statistically significant ($p < 0.001$) and odd's ratio was found to be 2.5 with 95% C.I. being 1.81 to 3.49.

Table IV : Low birth weight and maternal anaemia

Maternal haemoglobin (in gm. %)	Case		Control		Total	
	No.	%	No.	%	No.	%
10 or less	236	75.6	168	53.8	404	64.7
More than 10	76	24.4	144	46.2	220	35.3
Total	312	100	312	100	624	100

The above table shows that among cases 75.6% mothers had haemoglobin level 10gm% or less as compared to 53.8% mothers in control group. The

difference was found to be statistically significant ($p < 0.001$). The odd's ratio with maternal anaemia ($Hb \leq 10gm\%$) as risk factor was 2.66 (C.I. 87 to 3.80).

Table V : Low birth weight and outcome of last pregnancy

Outcome of last Pregnancy	Case		Control		Total	
	No.	%	No.	%	No.	%
Unfavourable	37	20.7	31	15.1	68	17.7
Favourable	142	79.3	174	84.9	316	82.3
Total	312	100	312	100	624	100

Table V shows that among cases 20.7% mothers had unfavourable outcome in last pregnancy as compared to 15.1% among control group. The difference was not found to be statistically significant ($p > 0.05$).

Discussion :

The study reveals maternal age less than 20 yrs and maternal illiteracy as risk factor for low birth weight which was also observed in many other studies^{1,3,5}. Young adolescent who have not completed growing are likely to have weight for height less than older women and may consume fewer calories & other nutrients. Maternal education, an indicator of socio- economic status is an indirect causal risk factor. No association was found between literacy levels of mothers and low birth weight in some studies³.

In the present study maternal anaemia (haemoglobin $< 10gm\%$) is found to be risk factor for low birth weight which is also documented in many other studies^{2,4}. Anaemia, especially if severe, impairs oxygen delivery to the foetus and interferes with normal intra uterine growth or pregnancy duration.

The present study did not reveal any association between unfavourable outcome of last pregnancy & low birth weight. This could be because of small sample size.

Conclusions :

The present study suggest that the the maternal risk factors associated with low birth weight for mother's attending S.S.G. hospital are maternal anaemia (OR-2.66), illiteracy (OR-2.51), age less than 20 yrs (OR-2.08).

No association was found between low birth weight and unfavourable outcome of last pregnancy.

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MORBIDITY PATTERN OF SCHOOL GOING CHILDREN (1-15 YEARS OF AGE) IN POOR URBAN AREAS OF ALIGARH

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ABSTRACT :

Cross-sectional study of 802 school children were carried out in poor urban areas of Aligarh with the objective to find out the morbidity pattern and to make recommendation. Out of 802 school children 82.04% were suffering from one or more than one disease. Most common morbidity they had, dental caries (25%), Anaemia (24.8%), Refractive error (9.9%), worm infestation (9.2%), skin disease (5.4%), and ear discharge (4.2%). The prevalence of anaemia was higher in females (30.6%) compared to males (20.7%). This difference was statistically significant ($\chi^2=4.8$, d.f.=1 $p<0.05$). 36.53% children were malnourished and 65.9% normal. 34.09% male and 40.07% female were malnourished. Difference in prevalence of malnutrition in male and female was statistically significant ($\chi^2=4.21$, d.f.=1 $p<0.05$). The prevalence of disease in school going children were found to be high.

Key Words: School children morbidity pattern, Malnutrition, Aneamia

Introduction :

The 2001 census shows that 25% of the population of India comprises of children aged 5-15 years. School children constitute a large pool of children of this age group. It is expected that morbidity pattern of the children who are going to the school represents approximately whole children of that area. The usual spectrum of morbidity in them are malnutrition, infectious diseases, intestinal parasite, disease of skin, eye & ear and dental caries. There are many other diseases which directly or indirectly affect the academic performance of school children. They are anemia (causes weakness and early fatigue), refractive error (causes visual disturbance) and ear problem (leading to communication barrier). These all are preventable problems. The 5-15 years old children are on the threshold of adulthood. If they are to reach adulthood in healthy state, then it is necessary to provide targeted and concerted services to improve their health status.

So the present study was carried out to find out the morbidity pattern of school children in Aligarh and to make recommendation.

Materials and methods :

This cross sectional study was a part of routine school health services provided by department of Community medicine. 802 school children were randomly selected from different schools which were visited by

school health team after prior informed consent from the school in-charge and parents of the students. Proper clinical examination (i.e. Anthropometrics measurements, vision test etc) was done using standard procedures. Data were filled in pre-tested questionnaire. Statistical analysis were done by simple proportions and Chi square test applied wherever applicable. Period of data collection was one year (i.e. June 2000-May 2001)

Results :

Out of 802 school children 82.04% were suffering from one or more than one disease. The morbidity pattern is reflected in Table-1. Most common morbidity they had, Dental caries (25%), Anaemia (24.8%), refractive error (9.9%), skin disease (5.4%) and ear discharge (4.2%). The prevalence of anaemia was higher in females (30.6%) compared to males (20.7%). This difference was statistically significant ($\chi^2=4.8$, d.f. = 1 $p<0.05$). 36.53% children were malnourished and 65.9% normal. 34.09% male and 40.07% female were malnourished (weight for age, according to Indian Academy of Pediatrics classification), Table-II. Difference in prevalence of malnutrition in male and female was statistically significant ($\chi^2=4.21$, d.f. = 1, $p<0.05$). Some of them also had conjunctivitis (1.8%) and nasal discharge (1.3%).

Discussion :

In the present study prevalence of dental caries were 25% in school children, which is comparable to other

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studies 23.1% in Ludhiana,² 38.6% in Madras³ and 20.9% in Tirupati⁶ school children. Anaemia was detected clinically in 24.8% of school children in the study, comparable to the other studies 22.5% in Punjab⁴. Prevalence of malnutrition in the present study was 36.53% comparable to 34.2% in Keraia⁶, 37.6% in Punjab⁴ and 32.6% in Madras³. Refractive error was in 9.9% which can be compared with the study of Ludhiana² school children (5.6%).

Conclusion :

The prevalence of disease in the school going children under study were found to be high, more so in females than males. Malnutrition and anemia make the children more susceptible to infection and causes early fatigue. Refractive errors and hearing defects reduces attention span. This directly affects the academic performance of the children. Following recommendations have been made:

Table-I : Morbidity pattern of school children under study

S.No.	Sickness	Children					
		Male		Female		Total	
		No.	%	No.	%	No.	%
1.	Dental caries*	112	23.6	89	27.0	201	25.0
2.	Anaemia**	98	20.7	101	30.6	199	24.81
3.	Refractive error*	31	6.5	49	14.8	80	10.01
4.	Worm infestation	46	9.7	28	8.5	74	9.22
5.	Skin disease	39	8.2	5	1.5	44	5.5
6.	Ear discharge	26	5.4	8	2.4	34	4.2
7.	Conjunctivitis	14	2.9	1	0.3	15	1.9
8.	Nasal discharge	5	1.0	6	1.8	11	1.4
9.	Total	371	46.26	287	35.78	658	82.04

Gender differences in the prevalence of the three most common diseases suffered by the students.

* $\chi^2 = 0.043$, d.f. = 1, $p > 0.05$, ** $\chi^2 = 4.87$, d.f. = 1, $p > 0.05$, *** $\chi^2 = 9.46$, d.f. = 1, $p < 0.05$.

**Table-II : Distribution of school children by Nutritional Grading
(According to Indian Academy of Paediatrics)**

S.No.		School Children					
		Male		Female		Total	
		No.	%	No.	%	No.	%
A	Normal	313	65.9	196	59.93	509	63.47
B	Grade-I	128	26.9	116	35.47	244	30.42
C	Grade-II	28	5.9	15	4.60	43	5.36
D	Grade-III	6	1.27	-	-	6	0.75
E	Grade-IV	-	-	-	-	-	-
F	Total	475	100	327	100	802	100

$\chi^2 = 4.21$ d.f. = 1, $p < 0.05$ (To know the gender difference, Grade I, II, III & IV were grouped together)

- (i) Medical check-up at the time of admission.
- (ii) Periodic medical check-up.
- (iii) Establishment of well-knit school health services.
- (iv) School health survey.

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COMMUNITY PARTICIPATION
IS THE ONLY WAY FOR
SUSTAINABILITY
OF THE ALL HEALTH PROGRAMMES.

GOITROGENS AND GOITRE--- A CLINICOSOCIAL STUDY OF ASSOCIATION

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Abstract:

Research Problem : Is there any role of goitrogens in the causation of goitre?

Objectives : (1) To describe the intake of goitrogenic substances in goitrous and non-goitrous patients.

(2) To find out the types and frequency of goitrogenic substances in these patients.

Study Design : Hospital-based Study by Questionnaire Method.

Setting : Endocrinology Out Patients Department, J.N.Medical college Hospital, A.M.U., Aligarh.

Participants : Cases were patients having clinical features of iodine deficiency disorders (IDD) and controls were not having goiter but they had other endocrinological disorders in the Endocrinology O.P.D. at J.N. Medical College Hospital, A.M.U., Aligarh.

Study variables : Intake, type and frequency of goitrogenic substances.

Outcome variables : Percentage of goitrous and nongoitrous patients consuming goitrogenic substances.

Statistical Analysis : Chi-Square Test.

Result : In goitrous patients, a dietary history of goitrogen intake was found in 93.85% patients while in nongoitrous patients, it was 76.92%. Commonly consumed vegetables having goitrogenic properties were Cabbage, Cauliflower and Lady's finger. Intake was frequent (once a week) in most of the goitrous patients while it was taken occasional (once fortnightly) in most of the nongoitrous patients.

Conclusion : Majority of the goitrous patients were consuming goitrogenic substances. Their role in the causation of goiter is clearly understood. However, for this further research activities should be carried out to find out the strength of association.

KEY WORDS : IDD, Goitre, Goitrogens

Introduction :

Goitrogens are chemical substances leading to the development of goiter. They interfere with the iodine utilization by the thyroid gland.

The brassic group of vegetables e.g. Cabbage and Cauliflower may contain goitrogens¹. Goitrogenic potency of some of the common vegetables namely Cabbage, Turnip, Lady's finger, Sweet Potato, Cassava has been studied in experimental rats².

Excessive intake of goitrogens e.g. through eating Cassava interferes with the normal intake and metabolism of iodine and may amplify the effect of iodine deficiency.³

Experimental goiters were produced by Chesney in rabbits by feeding them with Cabbage and by Purves in rats by feeding them with brassica seeds.⁴ Reports from other countries indicated that endemecity of goiter could result from the presence of goitrogenic principles in foods.

Materials & Methods :

This study was conducted among the patients attending Endocrinology Clinic, Jawahar Lal Nehru Medical College, Aligarh Muslim University, Aligarh (U.P.) for a period of one year for a comprehensive knowledge and better understanding regarding iodine deficiency disorders.

All patients attending the Endocrinology Clinic constituted the study population. Total Number of Patients in one year duration was 936, out of which 407 were having thyroid disorders.

It was not possible to inquire in detail, examine and to collect the samples in all the patients, therefore it was decided that for purposive selection, every third patient was taken into consideration. 315 patients were interrogated. Out of these, patients of thyroid disorders were 135. These 135 patients were further inquired to give 103 cases of iodine deficiency. Out of these 103 cases, 65

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patients were having goiter. 65 controls were taken from the same endocrinology clinic but they had endocrinological disorders other than goiter. Like to like matching was done between cases and controls. Data were collected and recorded on a proforma and later tabulated and analysed.

Observations & discussion :

A dietary history of goitrogenic substances was found in 61 patients (93.85%) having goiter (cases). In nongoitrous patients (controls) a dietary history of goitrogenic substances was found in 50 patients (76.92%). The difference of dietary history regarding goitrogenic substances between cases and controls was found statistically significant ($\chi^2 = 7.45$ d.f. = 1 $p < 0.01$).

The type of vegetables containing goitrogenic substances, consumed was mostly cabbage, cauliflower and lady's fingers in both the groups. In cases, cabbage was consumed by 86.89% patients followed by cauliflower and lady's fingers (85.25%). Turnip was taken by 52.46% cases and 50.0% controls. There was no clear difference in consumption of different types of foods between cases and controls.

Majority of the goitrous patients (45.90%) were taking these substances frequently (once weekly) followed by occasionally (once fortnightly (50.89%) while only 13.11% patients were consuming these substances regularly (2-3 times a week).

Most of the nongoitrous patients (controls) were consuming these foods occasionally (74.0%). Only a small number of patients were taking these substance regularly (6.0%) and frequently (20.0%). There was a definite variation in frequency of intake of these substances between cases and controls. This difference was found statistically highly significant ($\chi^2 = 12.14$, d.f. = 1 $p < 0.001$).

Conclusion :

On the basis of all these results, it was found that majority of goitrous patients were giving history of goitrogenic substances intake in their diet. Most common foods containing goitrogenic substances, consumed, were cabbage, cauliflower and lady's fingers followed by turnip and maize. As far as frequency of intake was concerned, majority of the goitrous patients took these substances frequently (once weekly) while most of the non goitrous patients took these substance occasionally (once fortnightly). On the basis of the results we can assume that there is definite role of goitrogenic substances in the causation of goiter. However other dietary actors like consumption of type of salt may be taken into account for better and precise results. Mechanisms of goitrogen's action in relation to iodine utilization and thyroid hormone synthesis have to be studied further. The practical significance of experimental studies in animals needs to be evaluated in human situations.

Table-I Distribution of patients according to intake of goitrogenic substances

S.No.	Goitrogen	Goitrous Patients (Cases)		Non-goitrous (Controls)	
		No.	%	No.	%
1.	Present	61	93.85	50	76.93
2.	Absent	04	06.15	15	23.07
	Total	65	100.00	65	100.00

($\chi^2 = 7.5$, d.f. = 1, $p < 0.01$)

Table-II Distribution of patients according to types of goitrogen intake

S.No.	Type of Goitrogens	Cases	%	Controls	%
1.	Cabbage	53	86.89	40	80.00
2.	Cauliflower	52	58.25	41	82.00
3.	Turnip	32	52.46	25	50.00
4.	Maize	17	27.87	10	20.00
5.	Lady's finger	52	85.25	38	76.00
6.	Others	03	04.92	01	02.00
		n = 61		n = 50	

Table-III Distribution of patients according to frequency of goitrogen intake

S.No.	Frequency	Cases	Percent	Controls	Percent
1.	Regularly	08	13.11	03	06.00
2.	Frequently	28	45.90	10	20.00
3.	Occasionally	25	40.98	37	74.00
Total		61	100.00	50	100.00

($X^2 = 12.14$, d.f. = 1, $p < 0.001$)

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EXCLUSIVE BREAST FEEDING-KNOWLEDGE IN DIFFERENT GROUPS OF WOMEN IN RURAL AND URBAN AREAS OF LUCKNOW DISTRICT.

Ahmed Naim, Singh J.V., Srivastava A.K., Jain S.

ABSTRACT

A cross-sectional study on 86 females was conducted in the rural and urban areas of Lucknow district of Uttar Pradesh to assess the knowledge of females about exclusive breast-feeding. Knowledge from adolescent girls, married and lactating women was assessed by a pre-tested questionnaire for biosocial correlates (such as marital status, educational status, medium of education, working status, socio-economics status and family size), sources of information, time of initiation of breast-feeding and the best method of feeding a baby <4 months of age. Only 9.8% in urban and 13.3% in rural areas had complete knowledge of Exclusive breast-feeding. Educated females had more knowledge in both urban and rural areas of initiating breast-feeding within 1hr of delivery as compared to un-educated females.

The study highlights the needs for continuing medical education and for including knowledge about Exclusive breast-feeding in school curriculum of adolescent girls.

KEY WORDS : Exclusive breast-feeding, Factors affecting breast feeding, Colostrum feeding, Adolescent Girls.

Introduction :

In the recent years there has been a world-wide campaign for promotion of breast-feeding. The reasons for declining trend of breast-feeding are many fold-mainly due to nuclear pattern of families, working mothers, commercial pressure, inadequate knowledge among health personnel about breast-feeding, false beliefs and traditions. While women in developed countries have reverted back to this age old practice, their counterparts in third world countries are drifting away. To study the knowledge in different groups of women about exclusive breast-feeding a study was conducted in the rural and urban areas of Lucknow district.

Material and Methods :

A cross-sectional study was conducted on 786 cases (420 in rural area and 366 in urban area) in the rural and areas of Lucknow from January, 1997 to December, 1997. A detailed pretested proforma was prepared to collect relevant information. Unmarried (mostly adolescent) girls, married women with or without pregnancy and lactating were interviewed from girl's schools, households, primary health centres, subcentres in rural area and from colleges, households, women attending Lucknow. Women were interviewed about the source of knowledge of Exclusive Breast Feeding, use of

first-feed, time of initiation of breast feeding, whether anything other than breast-milk was given to the baby upto the age of 4 months, about various beliefs about breast-feeding and breast-feeding during maternal and infant illness.

Results :

Out of a total of 786 females there were 366 urban and 420 rural females. In the urban there were 21.3% married and 78.7% unmarried females while in rural area 55.2% were married and 44.7% were unmarried. In the urban area there were 2.7% and in the rural area there were 29.5% illiterates, while in the urban area there were 82.5% literate above 10th class while in the rural area 36.6% were literate above 10th class. 74.7% females in urban area and 97.3% females in rural area were educated in Hindi medium. Only 25.3% in urban and 2.7% and in the rural area were educated in English medium. In the urban area there were 97.3% and in the rural area 92.0% non-working. In the urban area there were 18.6% in upper class and 42.0% in lower class and in the rural area there were only 1.4% in upper class and 79.5% in lower class. In the urban area 63.1% and in rural area 50.5% females had family size of 4 to 6 members. (Table-1)

In the rural area more women (13.3% had knowledge of Exclusive Breast-Feeding while in the urban

area it was 9.8% but the difference was statistically not significant. (table-II)

In the urban area maximum source of information was from doctor and paramedical which was only 5.1% while in rural area it was 7.1%. Least source of information was 0.5% in urban and none in rural area, from newspapers and magazines. (Table-III)

In the urban area 33.3% unmarried females while in rural area 74.0% unmarried females had knowledge of initiation of breast-feeding in less than 1hr of birth. More educated females had knowledge of initiation of breast-feeding in less than 1hr, in both rural (52.4%) and urban (24.7%) areas. In urban area more women (35.7%) of upper class while in rural area more women of middle class (66.6%) had knowledge of initiation of breast-feeding in less than 1hr of birth. In the working group none in urban area and 53.0% in rural area had knowledge of initiation of breast-feeding in less than 4hr. (Table-IV)

In the urban area (51.9%) and in rural area 48.6% females had knowledge of 1st feed (Colostrum). (Table-V)

70.0% females in urban area and 42.8% females in rural area considered breast-feeding as the best method of feeding a baby less than 4 months of age. (Table-VI)

Discussion :

Knowledge of breast-feeding amongst adolescent girls reflect the attitude, beliefs and practices prevalent amongst the women in a community.

In the present study it was seen that breast-feeding was considered to be the best method of feeding a baby less than 4 months of age in 70% females in urban and 42.8% females in rural area while in a study conducted by Kapil et al (1990)¹ found that 91% females were aware that breast milk is the best for a child upto 4-5 months of age.

The studies conducted by Agarwal et al (1986)² Isenlumbe et al (1987)³, Karnawat et al (1987)⁴, Kumar et al (1984)⁵ and Subhalaxmi et al (1990)⁶ were consistent with the findings found in the rural area for knowledge of 1st feed (colostrum) while it was inconsistent with the finding of Banic (1975)⁷.

In our study 51.9% females in urban and 48.6% females in rural urban had knowledge that similar to that of Karnawat et al (1985)⁴, Sharma et al (1977)⁸, and Kapil et al (1970)¹.

In this study number of females having knowledge about time of initiation of breast feeding in 1hr was 20% in urban and 15.5% in rural area. This finding was similar to the findings of Kumar et al (1984)⁵.

In our study number of females having knowledge of feeding colostrum was 51.9% in urban and 48.6% in rural area while 36.0% in urban and 20.5% in rural area had no idea of colostrum as 1st feed (Table-V). These findings are in contrast to the study of Khan et al (1985)⁹ Subulaxmi et al (1990)⁶.

In this study 70% females in urban and 42.8% females in rural area considered breast-feeding as the best method of feeding an infant <4 months of age while 30% in urban and 57.2% in rural area considered other methods or mixture of methods as the best method of feeding. These findings were similar to that of Sharma et al (1977)⁸ Satpati et al (1984)¹⁰ Dattal et al (1984)¹¹ and Isenalumbe et al (1987)³.

5.1% females in urban and 7.1% females in rural area attained knowledge of exclusive breast-feeding from doctors and paramedical staff (Table-III) while in a study of Indira Bai et al (1981)¹² only 0.4% doctors and 1.2% paramedical staff in rural area and 3.8% doctors and 0.2% paramedical staff in urban area advised breast-feeding.

Table I Bio-social co-relates of respondents

Bio-social co-relates	Urban		Rural		Total	
	No.	%	No.	%	No.	%
(A) Marital status						
Married	78	21.30	232	55.20	310	39.40
Unmarried	288	78.70	188	44.70	476	60.60
Total	366	100.00	420	100.00	786	100.00
(B) Educational status						
Illiterate	10	2.7	124	29.5	134	17.0
5 Class	0	0.0	32	7.6	32	4.0
5-8 Class	8	2.2	26	6.2	34	4.3
8-10 Class	46	12.6	84	20.0	130	16.5
10-12 Class	216	59.0	146	34.8	362	46.0
Graduate	86	23.5	8	1.2	94	12.0
Total	366	100.00	420	100.00	786	100.00
(C) Medium of education						
Hindi	266	74.7	288	97.3	554	85.0
English	90	25.3	8	2.7	98	15.0
Total	356	100.00	296	100.00	652	82.9
(D) Working status						
Working	10	2.7	34	8.0	44	5.6
Non-working	356	97.3	386	92.0	742	94.4
Total	366	100	420	100	786	100
(E) Socio-economic strata						
Upper	68	18.6	6	1.4	74	9.4
Middle	144	39.3	80	19.0	224	28.5
Lower	154	42.0	334	79.5	488	62.1
Total	366	100.00	420	100.00	786	100.00
(F) Family Size						
≤3	26	7.2	24	5.7	50	6.5
4 to 6	332	63.2	212	50.5	444	56.5
7 to 9	100	27.3	152	36.2	252	32.0
>9	8	2.3	32	7.6	40	5.0
Total	366	100.00	420	100.00	786	100.00

Table II- Distribution of females according to knowledge of Exclusive Breast-feeding

knowledge of Exclusive Breast-feeding	Urban		Rural		Test of significance
	No.	%	No.	%	
Yes	36	9.8	56	13.3	Z = 0.21
No	330	90.2	364	86.7	P > 0.05
Total	366	100.00	420	100.00	Z = 1.44, P > 0.05

Table III- Various sources of information of Exclusive Breast-feeding

Source of information	Urban (N = 36)		Rural (N = 56)		Total (N = 92)	
	No.	%	No.	%	No.	%
Family	8	2.10	17	4.0	25	27.0
Doctor / Paramedical	19	5.1	30	7.1	49	53.2
TV / Radio	7	1.9	9	2.1	16	17.3
Newspaper / Magazines	2	0.5	0	0.0	2	2.1

Table IV-Factors affecting knowledge of initiation of breast-feeding (in hrs.)

Biosocial co-relates	Urban %			Rural %		
	1 hour	1-6hour	≥ 6 hour	< 1 hour	1-6 hour	≥ 6 hour
(A) Marital Status						
Unmarried	33.3	18.3	48.4	74.0	16.0	10.0
Married & lactating	11.8	58.8	29.4	26.0	14.0	60.0
(B) Educational Status						
Uneducated	20.0	66.0	20.0	15.5	5.1	79.4
Educated	24.7	31.2	44.1	52.4	14.5	33.1
(C) Socio-economic status						
Upper	35.5	25.0	39.3	60.0	0.0	40.0
Middle	17.8	32.2	50.0	66.6	11.1	22.3
Lower	25.0	0.0	75.0	29.2	17.2	53.6
(D) Working status						
Working	0.0	50.0	50.0	53.0	5.8	41.7
Non-working	25.8	32.2	42.0	37.5	11.8	50.7

Table V - Knowledge of Ist - feed (colostrum) in rural and urban females.

Use of Ist feed	Urban (N = 366)		Rural (N = 420)		Test of significance
	No.	%	No.	%	
No idea	132	36.1	86	20.5	Z = 6.00 P < 0.05
Discard	24	6.5	112	26.7	Z = 1.07 P > 0.05
Give	190	51.9	204	48.6	Z = 1.07 P > 0.05
Supplement with top-feed	20	5.5	18	4.2	Z = 0.16 P > 0.05

Table VI - Knowledge of best method of feeding a baby upto 4 months of age in urban and rural females.

Method of feeding	Urban		Rural		Total		Test of Significance
	No.	%	No.	%	No.	%	
Breast - feeding	256	70.0	180	42.8	436	55.5	Z = 6.00 P < 0.05
Bottle - feeding	20	5.5	54	12.8	74	9.5	Z = 1.07 P > 0.05
Spoon - feeding	8	2.2	6	1.4	14	1.7	Z = 0.11 P > 0.05
breast+Bottle-feeding	66	18.0	146	34.8	212	27.0	Z = 0.53 P < 0.05
All	16	4.4	34	8.1	50	6.3	Z = 0.53 P > 0.05
Total	366	100	420	100	786	100	

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