



ASSESSMENT OF COMMON CHILDHOOD DISEASES IN 1-5 YR AGE GROUP CHILDREN AND DETERMINATION OF KNOWLEDGE, HEALTH CARE PRACTICES & HEALTH SEEKING BEHAVIOR OF PARENTS IN JAMNAGAR DISTRICT

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ABSTRACT

Introduction: If any country has progress, it should give utmost thrust on health of children because they are tomorrow's citizens. **Aims & Objectives:** (1) Assessment of prevalence of common childhood diseases in 1-5 yr age group (2) Determining knowledge, health care practices for common childhood diseases (3) Assessment of health seeking behavior among parents of children having studied disease (4) Testing association of various demographic variables with studied diseases **Methodology:** A cross-sectional study of 400 children (12 to 59 months) was done using multistage sampling technique in Jamnagar district. 120 children were selected from urban and 280 from rural areas as urban: rural ratio is 3:7 in India. **Results:** 17.25%, 2.5% and 0.5% of participants were suffering from Acute respiratory infections (ARI), diarrhea and vit A deficiency respectively. Treatment seeking behavior of parents was quite good (93.67%). As socioeconomic class goes higher, chance of ARI comes down.

KEYWORDS : prevalence of childhood diseases, health care practice, health seeking behavior

INTRODUCTION:

The total child population (0-6 yrs) in census 2011 was estimated to be 164515253 which are 7.36 % of total population ⁽¹⁾.

Out of 27 million children taking birth yearly in India, around 10 % of them don't survive to 5 yrs of age. In absolute figure, India contributes to 25% of the over 6.9 million under-five deaths occurring worldwide every year. Nearly half of under-five deaths occur in neonatal period (2) Among children who died before their 5th birthday, causes are like this: Prematurity (27%), Acute respiratory disease (14%), birth asphyxia (11%), Diarrhea (11%), Neonatal Sepsis (8%), congenital anomalies (6%), injuries (4%), Measles (2%), other diseases (16%) ⁽³⁾

There are several determinants of level of child mortality in India. This includes: socio-economic status, place of residence, mother's education, etc. Some of these determinants reflect differential access to quality health services and living environment ⁽⁴⁾.

U5MR is appropriate indicator of cumulative exposure to risk of death during the first five years of life and an accepted global indicator of the health and socioeconomic status of a given population. It is also useful for assessing the impact of various intervention programmes aimed at improving child survival ⁽⁵⁾.

Millennium development goal 4 is to reduce the under 5 mortality rate by two thirds, between 1990 and 2015 (i.e. 38 per 1000 live births) ⁽⁶⁾. The under 5 mortality rate for year 2012 was 55 per 1000 live births in India ⁽⁷⁾.

Currently RMNCH+A implement many initiatives to achieve these goals like (1) control of death due to ARI (2) Control of death due to diarrheal diseases (3) Provision of essential newborn care (4) Vitamin-A supplementation to children between the ages of 6 months to 5 years (5) Iron Folic Acid supplementation to children under five years of age. (6) Implementation of Exclusive breast feeding up to the age of 6 months and appropriate practices related to complementary feeding. (7) Integrated Management of Neonatal and Childhood Illnesses (IMNCI): It offers a comprehensive package for the management of the most common causes of childhood illnesses i.e. sepsis, measles, malaria, diarrhea, pneumonia and malnutrition ⁽⁸⁾.

If any country has progress, it should give utmost thrust on health of children because they are tomorrow's citizens. So I want to study the utilization of these child health services in the study district.

AIMS AND OBJECTIVES:

1. Assessment of prevalence of common childhood diseases in 1-5 yr age group
2. Determining knowledge, health care practices for common childhood diseases
3. Assessment of health seeking behavior among parents of children having studied disease
4. Testing association of various demographic variables with studied diseases

MATERIALS AND METHODOLOGY:

Study type: A cross sectional study.

Study period: Study was conducted in July 2013 to June 2014.

Sample size: According to DLHS-3 (2007-2008) prevalence of fully immunized children in study district was 55.1% and so, on applying sampling formula

Sample size $n = (1.96)^2 pq / L^2$

Where p = prevalence of fully immunized children

$q = 100 - p = 44.9\%$

L = allowable error = 10% of $p = 5.51$

Sample size came to $n = 313$. Taking the non-response rate of 10% of $n = 313$, sample size came to $n = 345$. For feasibility reasons $n = 400$ was taken. This study is a part of research project which also included immunization related data collection. So sample size calculated on the basis of prevalence of full immunized children in study population.

Data collection: Total 10 areas (each having 40 study participants) were selected from whole district (total 400 participants). Out of 10 areas, 3 areas were selected from urban and 7 from rural region (as urban:rural population ratio is 3:7 in India). From each area, 40 children between 1-5 years were selected by house-to-house survey. For selection of urban areas, we had selected 3 wards by simple random sampling out of total 19 urban wards. 7 rural areas were selected in the following way. There were 7 blocks in whole district. From each block, one PHC was selected by simple random sampling. From each PHC, one subcentre was selected by simple random sampling. These 7 subcentre areas were considered as rural areas. Pretested semi-structured proforma was used. First of all,

information was given orally about study to respondent of each participant (child of 1-5yr) and if she/he would give consent, questions were asked to him/her as mentioned in proforma. Proforma includes basic demographic profile and questions related to childhood diseases, knowledge, health care practices and health seeking behavior of parents of participants.

The study protocol was reviewed and approved by the institutional ethical committee of Shri M P Shah Govt Medical College, Jamnagar. Data entry was done in MS excel 2007 and analysis was done using medcalc version 9.2.0.1.

RESULTS & DISCUSSION:

Table 1: Demographic Profile of participants and prevalence of childhood diseases

Demographic Profile	Age Group	No. (n=400)	%	
	1-2 yr	154	38.5	
	2-3 yr	106	26.5	
	3-4 yr	73	18.25	
	4-5 yr	67	16.75	
	Socio-economic Class*	No. (n=400)	%	
	1		2	
	2	59	14.75	
	3	78	19.5	
	4	186	46.5	
	5	69	17.25	
Prevalance of childhood diseases	Common Childhood Diseases(n=400)	Present(%)	Absent(%)	
		VitA deficiency symptoms	2(0.5%)	398(99.5%)
		ARI(in last 15 days)	69(17.25%)	331(82.75%)
		Diarrhea(in last 15 days)	10(2.5%)	390(97.5%)
*Modified Prasad Classification (Avg 2012 AICPI=969)				

Table 1 shows that out of total 400 children, 38.5%, 26.5%, 18.25% & 16.75% children were in age group 1-2 years, 2-3 years, 3-4 years & 4-5 years respectively. Damor et al⁽⁹⁾ (2013) in their study found that 26.89% of children were in the age group of 1-2 yr, 25.11% were in 2-3 yr, 26.67% were in 3-4 yr and 21.33 were in 4-5 yr age group & Satishchandra D M⁽¹⁰⁾ (2008) in their study found that 31.2% of children were in age group of 1-2 yr, 23.3% were in 2-3 yr, 33.4% were in 3-4 yr and 12.1% were in 4-5 yr age group.

Table 1 shows that out of total 400 children, Almost half (46.5%) of children were belonging to socio economic class 4 followed by 19.5% in SE class 3, 17.25% in SE class 5 & 14.75% in SE class 2. Only 2% children were belong to SE class 1

Almost similar finding were found in Damor et al⁽⁹⁾ (2013) that 0.89% of all children were from class1, 10.45% were from class2, 28.44% were from class3, 42.89% were from class4 and 17.33% were from class5 & Jain A⁽¹¹⁾ (2006) that 5.4% of all children belonged to class 1, 14.6% to class 2, 28% to class 3, 37.25 to class 4 and 14.8% to class 5 in his study.

Shah V⁽¹²⁾ (2005) found more number of children upper class in their study that 29.11% were belonging to class1, 17.33% to class2, 33.11% to class3, 11.56% to class4 and 8.89% to class 5.

Table 1 shows that out of total 400 children, only 2 children (0.5%) were suffering from vitamin A deficiency. Swami et al⁽¹³⁾ (2000) found prevalence of vitamin A deficiency of 24.6% in his study. Jain A⁽¹¹⁾ (2006) found in his study that 4% children had vitamin A deficiency manifestation.

Table 1 shows that out of total 400 children, about 1/5th (17.25%) of children were suffering from acute respiratory infection within last 15 days.

Sharma D et al⁽¹⁴⁾ (2013) in their study found prevalence of ARI to be

27%.Bipin Prajapati et al⁽¹⁵⁾ (2011) in their study on prevalence of acute respiratory tract infections in under five children found it to be 22%.Very high prevalence of ARI was found in CES⁽¹⁶⁾ (2009) under 2 yrs of age was 57.4% . Satishchandra D M⁽¹⁰⁾ (2008) found the prevalence of ARI as 28.8% in his study.

Singh R⁽¹⁷⁾ (2005) found the prevalence of ARI as 21.70% in his study

Table 1 shows that out of total 400 children, only 2.5% children were suffering from acute diarrhea in last 15 days

CES⁽¹⁶⁾ (2009) found that in Gujarat diarrhea under 2 yrs of age was 24.4%

Satishchandra D M⁽¹⁰⁾ (2008) found the prevalence of ADD as 20.9% in his study.

Singh R⁽¹⁷⁾ (2005) found the prevalence of Diarrhea as 14.6% in his study

Grover⁽¹⁸⁾ (2004) in their study observed that 10.20% had diarrhea

Modi et al⁽¹⁹⁾ (2005) in their study found that 9% children had diarrhea

Table 2: Assessment of knowledge, health care practice and treatment seeking behavior for studied diseases

Knowledge assessment about ARI(n=69)	Symotoms of ARI	Present(%)	Absent(%)
	Fast Breathing	19(27.54%)	50(72.46%)
Knowledge of mother about symptoms of pneumonia		15(21.74%)	54(78.26%)
Health care practice in diarrhea(n=10)	choice of fluid	No.(%)	
	ORS given	5(50%)	
	Homemade fluid given	1(10%)	
	No fluid given	4(40%)	
	Feeding pattern	No.(%)	
	Fed more	1(10%)	
	Fed same as when no diarrhea	6(60%)	
Fed less/stopped	3(30%)		
Treatment seeking behavior[n=79(69+10)]	Treatment	No.	%
	Not taken	5	6.33
	Taken	74	93.67
	Total	79	100

Table 2 shows that out of total 69 children who were suffering from ARI in last 15 days, Only 19 (27.54%) had fast breathing. Bipin Prajapati et al⁽¹⁵⁾ (2011) in their study on showed that 20% had faster breathing.

Out of total 69 children who were suffering from ARI in last 15 days, only 15 (21.74%) children's mother had knowledge about various symptoms of Pneumonia. Simiyu DE et al⁽²⁰⁾ (2003) in their study on Mothers' knowledge, attitudes and practices regarding acute respiratory infections in children in Baringo District, Kenya found that 18% of mothers described pneumonia satisfactorily.

Table 2 shows that out of total 10 children, who were suffering from ADD in last 15 days, only 5 children had taken ORS and 1 child had taken homemade fluid.

Out of total 10 children who were suffering from ADD in last 15 days, feeding was kept same or more in 7 children. Only 1 child had stopped feeding during diarrhea.

Shah V⁽¹²⁾ (2005) in his epidemiological study on diarrheal diseases in under 5 children found that 48% had continued feeding at same

rate, 51.11% had decreased while 0.89% had stopped feeding during diarrhea

Table2 shows that out of total 79 episodes of ARI/Diarrhea in total 400 children in last 15 days, treatment seeking behavior of children's parents were seen in 93.67% episodes of ARI/Diarrhea.

CES ⁽¹⁶⁾ (2009) found that 84.4% of total children with ARI sought treatment for ARI and 65.6% of all children with diarrhea sought treatment for diarrhea in Gujarat State. Angela Lloyd ⁽²¹⁾ (2009) in his study found that while 39% of the children who suffered from diarrhea received some sort of oral rehydration therapy (ORT), 25% received no treatment, 16% were given antibiotics.

Table 3: Testing association of socioeconomic class with ARI

Class	ARI		NO ARI		Total	
	No	%	No	%	No	%
1	0	0	8	100	8	100
2	6	10.17	53	89.83	59	100
3	13	16.67	65	83.33	78	100
4	29	15.59	157	84.41	186	100
5	21	30.43	48	69.57	69	100
Total	69	17.25	331	82.75	400	100

(chi square=12.52, df=4, p=0.014)

This table 3 shows correlation between social class of children with their complaint of ARI, Not a single child in social class 1 had complain of ARI in last 15 days. Prevalence of ARI was 30.43% in children of social class 5 followed by 16.67% in children of social class 3, 15.59 % in children of social class 4 & 10.17% in children social class 2. Prevalence of ARI increases from social class 1 to 5. This difference was statistically significant. Similar findings were seen in Bipin Prajapati et al ⁽¹⁵⁾ (2011) in their study that there is association between social class and ARI which showed prevalence of ARI was increasing from class 1 to class5. This difference was statistically significant & Sharma D et al ⁽¹⁴⁾ (2013) in their study found that Occurrence of ARI was higher in the lower social class (79.3%) than the upper class (20.7%) and was found to be statistically significant.

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