

Acute Respiratory Infection among Children and Health Seeking Behaviour in India

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Abstract- The paper an attempt has been made to analysis the status of acute respiratory tract infection among children in india. The efforts has been also made to analyze the influence of socioeconomic status of parent where children suffereing from acute respiratory infection. Data has been extracted from National Family Health Survey (2005-06) and District Level Health Survey (2007-8). Cross tabulation and binary logistic regression techniques have been computed to fulfill the requirement of the objectives of the present paper with the help SPSS software. In addition, thematic mapping has been also done with the help of Arc GIS technique. The study reveals that wealth index is a significant factor and it has a positive impact on the treatment seeking behavior of parents. But less educated mother is not significant. In addition, religion, caste and tribes are also significant factors. Sex of child and age of the mother is also important factors to determine health treatment. A great variation found in health seeking behaviors among various sections of the society in the country. Therefore, intervention should focus on economically and socially backward section of the society, especially the rural area should be prioritized.

Index Terms- Acute respiratory infection, Treatment seeking behaviours, wealth index, education, and sex of child

I. INTRODUCTION

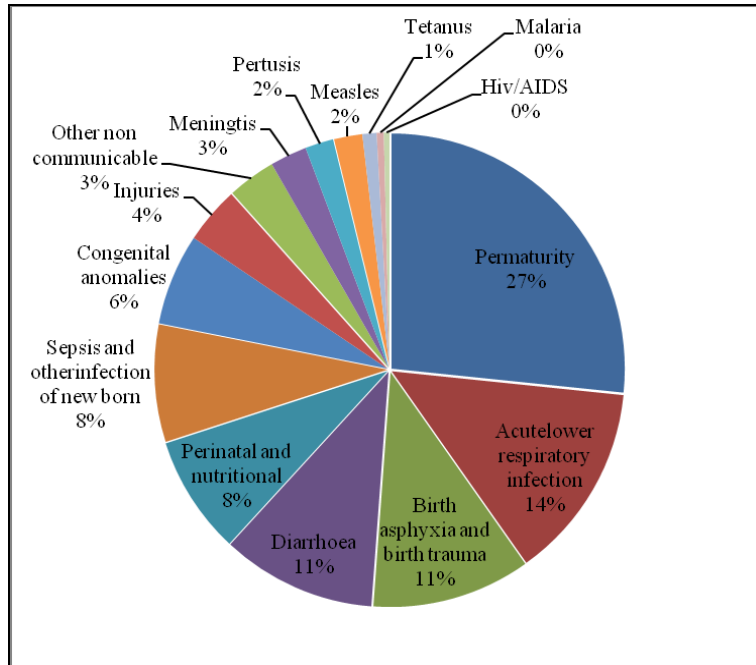
Acute Respiratory Infection (ARI) is identified as the most fatal disease among children throughout the world. There are two types of Acute Respiratory Infection, first one is Acute 'Lower Respiratory Infection' (ALRI) that comprise Bronchitis and Pneumonia, and second one is 'Acute Upper Respiratory Infection' (AURI) comprise Tonsillitis, Pharyngitis, Laryngitis, Sinusitis, Otitis media and 'common cold'. Pneumonia is most dangerous disease than other respiratory diseases in childhood. About 40 percent child mortality of the world occurs due to Acute Respiratory Infection, in only four Asian countries- (1) India, (2) Bangladesh, (3) Indonesia, and (4) Nepal (WHO 2008). Furthermore, as per 'Pneumonia Progress Report (2011)' 75 percent pneumonial deaths occur in only 15 countries of the world. All these countries belong to underdeveloped or

developing country of Asia or Africa. India countribut 69 percent, Pakistan (69 percent), Indonesia (66 percent), Bangladesh (37 percent), Uganda (73 percent), Tanzania (59 percent), Nigeria (45 percent), etc. Second largest disease among children is Diarrhea with (16 percent), followed by Malaria (7 percent), Measles (4 percent), Non communicable disease (4 percent), other infectious disease and parasitic disease (9 percent), injuries (4 percent), HIV/AIDS (2 percent), neonatal death (37 percent) (Global Burden Disease 2008). But disappointing sotry is that only 65.1 percent people take treatment for their respiratory infected children and rest of 34.9 percent does not take any treatment (Reports National Family Health Survey- 2005-06). The percentage of treatment seeking behaviours is not equally distributed among various sections of the society. The poorest section of the society, Illiterate, and rural people are far from proper and adequate modern treatment in the country

Actually, 'Health Seeking Behaviour' is a complex procedure. It is a decision making process to seek prefect treatment for health (J. Olenja, 2003). The health seeking behavior is not governed by a single factor rather than many factors. It is a result of individual or household thinking, activeness, sensitiveness, awareness and willingness. It is observed that socioeconomic, socio-cultural and demographic factors are often ignored while formulating health policies or any schemes for providing health care facilities to people. As a result, new schemes for providing health care services could not achieved its goal. It is also far from the community acceptance (Sing and Gupta, 1996). Thus, health seeking behaviour is directed by socioeconomic, socio-cultural, and demographic factors, influence the health behaviour (Babar T. Shaik and Jaunita Hatcher 2004).

Therefore, the aim of this study is to observe the status and regional variation of prevalence of acute respiratory infection among children in india. The efforsts also made to analyses how does socioeconomic status of family play an important role to take treatment while their children suffering from 'Acute Respiratory Infections' in India.

Causes of Death among Children in India (2012)



Source- WHO- 2012, Global Health Observerty Data Repository

II. DATABASE AND METHODOLOGIES

The data has been derived from India’s third round National Family Health Survey (NFHS-III 2005-06). National Family Health Survey, and District Level Health Survey (DLHS-III, 2007-8) under the ‘Ministry of Health and Family Welfare’ Government of India’. The ‘National Family Health Survey’ collected information from national representatively sample of 109041 households, 1294385 women aged 15-49 years and 74369 men aged 15-49 years. It covers 99 percent of India’s population living in 29 states.

Received any Treatment – No or Yes has been selected as dependen variable. Total 117508 women were asked whether they sought any treatment while their child suffered from Acute Respiratory Infection during the survey. 76509 women replied ‘Yes’ they had received treatment which accounted 65.1 percent, whereas, 40998 women said ‘No’ they did not took any treatment accounting 34.9 percent of the country. Field work has been conducted in two phases from November 2005 to August 2006.

The cross tabulation and Binary logistic regression model has been also performed to estimate the effect of predictor variables on received any treatment. In addition, thematic mapping has been also done with the help of Arc GIS technique.

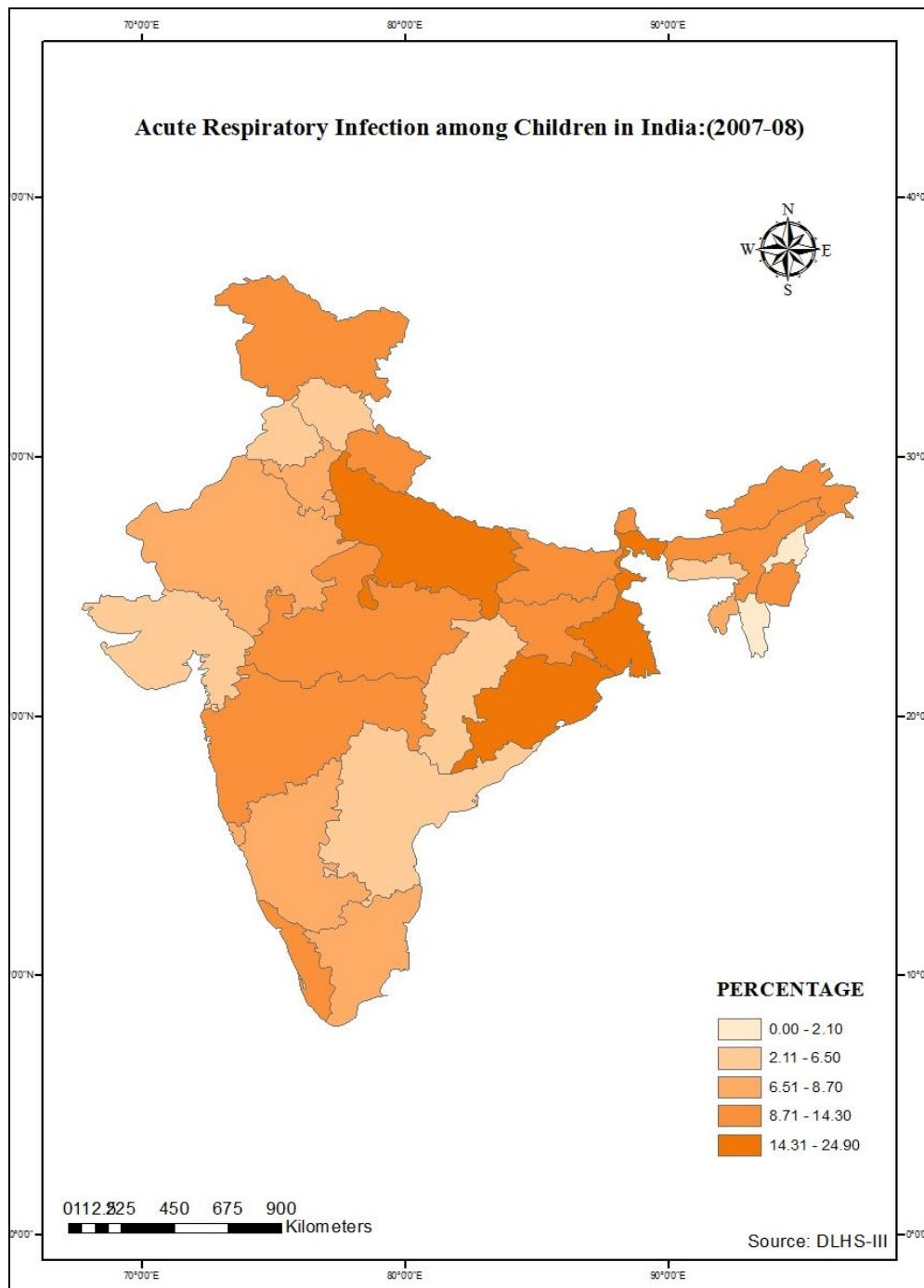
III. FINDING

About 11.4 percent children have been reported suffering from acute respiratory infection in India(District Level Health Survery –III, 2007-8). There is wide variation in prevalence of ARI across the state. The W. Bengal reported the highest percentage of ARI with 24.9 percent followed by Orissa(16.9 percent), Uttar Pradesh(16.9 percent), Bihar(14.3 percent), Madhya Pradesh(12.9 percent), Assam(12.0 percent), Maharashtra (12.0 percent), Jammu and Kashm(11.7 percent) on the other the hand, Mizoram (2.1 percent), Chandigrah (4.1 percent), Damman Diu (4.8 percent), Himachal Pradesh (5.1 percent), Chhattisgarh (5.2 percent), Gujrat (5.7 percent), Panjab(6.0 percent) (District Level Health Survery –III, 2007-8).

S.N	State	ARI	S.N	State	ARI	S.N	State	ARI
1	W.Bengal	24.9	13	Manipur	10.9	25	Dadarnagar haweli	6.5
2	Orissa	16.9	14	Jharkhand	10.7	26	Lakhatadeep	6.4
3	Uttar Pradesh	16.9	15	Uttaranchal	10.7	27	Meghalaya	6.4
4	Bihar	14.3	16	Karnataka	8.7	28	panjab	6
5	Madhya Pradesh	12.9	17	Tripura	8.6	29	Gujarat	5.7
6	Assam	12.0	18	Pandicheri	8.4	30	Chhattisgarh	5.2
7	Maharashtra	12.0	19	Haryana	8.3	31	Himachal Pradesh	5.1
8	Jammu and Kashmir	11.7	20	Goa	8.1	32	Damman Diu	4.8
9	Sikkim	11.7	21	Tamil Nadu	8.1	33	Chandigrah	4.1
10	Arunachal Pradesh	11.6	22	Delhi	7.8	34	Mizoram	2.1

11	Andaman Nicobar	11.6	23	Rajasthan	7.7		India	11.4
12	Kerala	11.5	24	Andhra Pradesh	6.5			

Sources-District Level Health Survey (DLHS-III, 2007-8)



Sources-District Level Health Survey (DLHS-III, 2007-8)

Table-2. Treatment Seeking Behaviours of Parent By Background Variables (2005-06)			
	Number of Cases	Received Treatment	(Exp)B
Wealth Index			
Poorest®	12393	55.7	
Poorer	10692	61.3	1.159***
Middle	8068	66.5	1.335***
Richer	6221	70.7	1.465***
Richest	3625	78.2	1.909***
Education level			
No education®	21332	60.6	
Incomplete primary	3708	62.0	-0.996
Complete primary	2951	64.1	-0.999
Incomplete secondary	10540	70.2	1.149***
Complete secondary	1150	73.5	1.081
Higher	1317	77.1	1.229***
Religious group			
Hindu®	31455	64.0	
Muslim	7816	68.3	1.295***
Christians	857	61.1	-.875*
Sikh	238	85.7	2.478***
All others	633	56.9	-.767***
Caste/ Tribes			
Scheduled Caste®	8471	64.1	
Scheduled Tribes	4416	53.4	-.769***
Other Backward Caste	15669	65.6	-0.957
All Other	12442	68.0	.8-97***
Sex of child			
Male ®	21119	66.6	
Female	19879	63.4	-.864***
Age of Mother			
15-19®	3417	64.3	
20-24	14657	65.8	-0.955
25-29	13339	65.6	-0.94
30-34	6287	64.4	-0.951
35-39	2498	61.5	-.874*
40-44	616	66.6	1.216*
45-49	185	47.1	-.576***

Sources-NFHS-III (2005-6), $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, ® Reference Category

IV. TREATMENT SEEKING BEHAVIOURS

Table 1.2 shows that the poorest people experience lowest health treatments by 55.7 percent, whereas, the richest people uses the highest treatment with 78.2 percent. There is a wide difference (of 22.5 percent) between poorest and richest section of the society. Secondly 61.3 percent of the poorer section followed, by middle (66.5 percent) and richer (70.7 percent) sections of the society.

Women with no education seek the lowest treatment with 60.6 percent, followed by Incomplete Primary (62.0 percent), Complete Primary (64.1 percent), Incomplete Secondary (70 percent) and Complete Secondary (73.5 percent). On the other hand, higher educated mother demonstrated highest treatment seeking with 77.1 percent.

Other religious groups demonstrated lowest treatment seeking behaviors while on the other hand, Sikhs take the highest health treatment. Secondly, Muslims seek treatment of 68.3

percent, followed by Hindus (64.0 percent) and Christians (61.1 percent).

Generally, higher caste receives maximum treatment with 68.0 percent as compared with SC/ST/OBC. This is accompanied by Other Backward Caste (65.6 percent) and Scheduled Caste (64.1 percent). The lowest one is recorded by Scheduled Tribes with 53.4 percent.

Male children provided more treatment, 66.6 percent as compared to female children by 63.4 percent.

The mothers belonging to 40-44 years age group seeks the highest treatment, whereas mothers of age-group 45-49 years, exhibit the lowest percentage of health seeking. The second highest age group is 20-24 years (65.9 percent), followed by 30-34 years (64.4 percent), 15-19 years (64.3percent), 35-39 years (61.5 percent).

Logistic Regression Analysis

Table-1 shows that wealth index is a significant factor and it has a positive impact on the treatment seeking behavior of parents. People with higher wealth index seek more treatment than people with lower wealth indexes. Poorer, middle, richer and richer classes, respectively 1.15, 1.33, and 1.46, 1.90 times more likely to take treatment than poor people. Education of mother appears to be an imperative factor in health treatment. This report shows mixed relationship with Acute Respiratory Infection in children. Incomplete Primary and Complete Primary education are not significant and it has a negative impact on the health seeking behavior of parents and both of them are 0.99 times less likely to seek treatment than uneducated people accordingly. On the other hand, Complete Primary, Incomplete Secondary, Complete Secondary and Higher education are significant determinants which have a positive impact on health seeking behavior and they are 1.14, 1.08 and 1.22 times more likely to seek treatment than uneducated mother.

The logistic regression result also reveals that religious group is also a significant determinant to health care treatment. It also showed a mixed relationship with Acute Respiratory Infection. Muslim and Sikh religious groups showed positive effect and they are 1.29 and 2.47 times, more likely to take treatment than Hindu population. Christians and all other religious groups reported negative effects on treatment seeking behaviour of parents. They demonstrated 0.87 and 0.76 times, respectively seeking less treatment than the Hindu population.

Moreover, caste and tribes are also noteworthy determinant and it negatively affects treatment seeking behavior. Scheduled Tribes, Other Backward Caste, and all other caste groups are 0.76, 0.95 and 0.89 times more likely to seek treatment in comparison to Scheduled Caste..

Female children are 0.86 times less likely to seek treatment when compared to male children. In addition, the age of the mother appears to be significant determinants except '20 to 24 years age group' which has a negative impact on treatment seeking behavior on the other hand, mothers of 40-49 years age-group has a positive effect and it is 1.21 times less likely to seek treatment than mothers of 15-19 years age group. Mothers of age-group 20-24, 25-29, 30-34, 35-39 and 45-49 years are 0.95, 0.94, and 0.95, 0.87 and 0.57 times respectively less likely to seek treatment than 15-19 years age-group old mothers

V. DISCUSSION

The finding of the present study clearly reveals that economic status (wealth index) of household affects positively on the treatment seeking behaviors of parent while their children are infected from acute respiratory infection. Jean Christopher Fotso and Barthelemy Kuae Defo (2005), Geissler P.W. et al. also observed same finding. In their studies he proved that the women belonging to a wealthier socioeconomic control group experienced higher health treatments than lower socioeconomic quintile group women. Since, the people having low wealth index face financial constraints, low educational attainment resulting in ignorance of sick children (Thelma E.Tupasi 1988). Poverty not only, excludes people from the benefits of health care systems, but also restricts them from participating in the decision.

Educated mother seeks more treatment in comparison to illiterate women. The study also shows that the highest treatment have been taken by higher educated women, whereas the lowest treatment have been by illiterate women for their ARI infected children. Mother education has a strong positive influence on child survival in most of the developing country (Irma T. Elo 1992) Bhanu E. Nirula (1994). There is direct relationship exists between education and health seeking behaviors. Educated of mothers have better knowledge of nutrition, illness of children and treatment (George Kosimbei, 2005). A higher educated woman supports to increase family income and also strengthens own position in the family. Education improves the mental ability of women to communicate with doctors or other health workers in a better way (Qystein Kradal, 2004). In addition, education changes the ideology, attitudes and behaviors of individuals. It enhances the awareness of good health practices. Educated women have a greater possibility of using modern health facilities and easily adopt modern medicines and health practices (Shireen J. Jejeebhoy, 1995)

The maximum treatment taken by the Sikh population group, whereas, the lowest treatment taken by the Christian population group. Since most of Christian people are tribes in india that lives in the forest covered area. The health infrastructures, transportation and communication and other things are not developed. Hindus and Muslims population groups demonstrate moderate pattern regarding treatment seeking behaviors. There is variation in various religious groups when health care utilization is taken into consideration Those people who belong to Hindu religion uses maximum health care services, whereas other Muslims religion groups uses fewer health care services (Niraula 1994). Furthermore, caste and tribes are significant factors that influence health seeking behaviors of parents. The scheduled tribes people less likely to seek treatment for their sick children, than other caste groups (Bhanu, B. Nirula, 1994).

There is sex differential also exist in health treatment behaviour of parent. Male children are more preferences brought to health services center for treatment than female children. Bhanu, B. Nirula (1994) noticed that higher caste groups seek higher health treatment than lower caste groups in the society. There is a negative association exist between age of the mother and treatment seeking behavior. Middle age group women are more likely to take treatment than older age group women in the country. Older age group mother more likely to seek treatment

for their sick children than younger one. Young mothers have less knowledge and experience of child health care practices (Ghosh, Saswata 2005)

VI. CONCLUSION

After the above discussion, it has proved that poverty and illiteracy is the main obstacle in the way of immediate treatment of children. Therefore, special attention should be given to poor section of the society. Educational level particular female education should be enhanced so that immediately and perfect treatment could use. Minority and deprived section of the society should be brought under the health programs. Female children and younger mother should be more emphasized in the health policy.

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