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Socio-Demographic and Health Profile of Indoor Pediatric Patients Admitted in VS General Hospital, Ahmedabad

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ABSTRACT

Introduction: Children under 15yr. of age comprise about 35.3% of India's population. The study was conducted to assess socio-demographic profile of pediatric patients and to assess the health status and probable etiology for hospitalization among them.

Methodology: A cross sectional study was conducted among indoor pediatric patients under 15 yr age group admitted in V.S. general hospital, Ahmedabad during February to June 2015. Pretested Performa was used for study after informed consent of their parents.

Results: Out of 193 children, majority (31.1%) were belongs to 0 to 2 yr age group. Major cause for hospitalization was gastrointestinal diseases (24.9%) followed by respiratory diseases (22.8%). 81(42%) children were malnourished. Gender wise significant difference was found among children for malnutrition status (P= 0.006). Majority children (upto 5yr) were partially immunized (56.5%). An average hand hygienic practice was noted of parents.

Conclusion: Significant gender wise age distribution was noted. Almost half of admitted children (42%) were malnourished. Higher number of infectious diseases (gastrointestinal and respiratory) might be due to improper hygienic measures, average literacy and low socio-economic condition of family. Higher dropout rate was noted in immunization.

Key Words: Malnutrition, Immunization, Socio-economical status, indoor, pediatric

INTRODUCTION

In any community, mothers and children constitute a priority group. In sheer numbers, they comprise approximately 71.14 percent of the population of the developing countries.[1] In India, 22.2 per centof the total population is women of the childbearing age (15 to 44 years) and about 35.3 per cent is children under 15 years of age.[2]By virtue of their numbers, mothers and children are the major consumers of health services, of whatever form.Aroundhalf of deaths are occurring among children under five years of age in the developing world;So it is crucial period of childhood.[3,4]

The problems affecting the health of children are multifactorial.Malnutrition is like an iceberg and is a major public health problem in India.[5] It affects particularly the preschool children (<5 years) with its dire consequences ranging from physical to cognitive growth and susceptibility to infection/diseases.[6,7] Maternal infections may cause a variety of adverse effects such as foetal growth retardation, low birth weight, and many congenital diseases.[8] As far as the baby is concerned, infection may begin with labour and delivery and increase as the child grows older. Children may be ill with debilitating diarrhoeal, respiratory and skin infec-

tions for as much as a third of their first year of life.[9]In some regions, the situation is further aggravated by such chronic infections as malaria and tuberculosis. Theoccurrence of multiple and frequent infections may precipitate in the children a severe protein-energy malnutrition and anaemia.[10, 11]

Prevention and treatment of infections in mother and children is a major and important part of normal MCH care activity.[12] Education of mothers regardingimmunization and medical measures suchas oral rehydration in diarrhoea, febrile diseases is essential.[13] In addition, a good knowledge and practice of personal hygiene and appropriate sanitation measures, particularly in and around the home, are essential pre-requisites for the control of the most common infections and parasitic diseases.[10,14] Socio-demographic and health profile as well as probable etiology for hospitalization provide us necessary information for health management of hospital. As per our knowledge, no such study was carried out in our setup in recent years. So study was conducted among children of under 15 years with objectives of assessing socio-demographic profile, health status and probable etiology for hospitalization.

MATERIALS AND METHODS

A cross sectional study was conducted among indoor pediatric patients under 15 year age group admitted in V.S. general hospital, Ahmedabad. The study was conducted during February 2015 to June 2015. Details regarding study were discussed among parents of indoor children. Informed consent of parents was taken for study purpose. Those who denied for the same were excluded from study. Total 193 indoor children (male-115, female-78) were selected in study duration period of five months. The sampling technique was purposive. Fully structured performa, which was specially designed and pre-tested, was used for data collection purpose. The performa was divided into two aspects. One contains socio-demographic variables e.g. Age of children, gender, socio-economical status of their family, literacy level of parents, tobacco habits (oral / smoking) and hygienic practices of their family etc. Second contains health profile of pediatric patients e.g. nutritional status, immunization status, reasons for hospitalization, Birth weight history etc.After the data collection, appropriate advices related to personal hygiene, nutrition, immunization, sanitation measures etc.were given to parents of indoor children for improving the health of their family.Data entry was carried out and data analysis was done by using appropriate statistical software and applying suitable statistical tests e.g. Chi-square test, proportion etc.

RESULTS

Out of 193 indoor pediatric patients, 115 (59.6%) were male and 78 (40.4%) were female. Majority (60, 31.1%) of children were belonged to 0 to 2 yr age group followed by 5 to 10 yr age (51, 26.4%) (Table-1).

Study reveals, as per table-2, major cause for indoor among pediatric patients was gastrointestinal tract (GIT) infections/diseases (48, 24.9%). Other causes were respiratory related (44, 22.8%), central nervous system (CNS) related (23, 11.9%), accidental related (20, 10.4%) etc. Table 3 shows the comparison between different socio-demographic variables and birth weight of children. Out of 193 children, 62 (32.1%) children had history of Low Birth weight (LBW). Significant difference was noted for literacy status of parents and history of LBW (P: 0.002) (Table-3).

Table-1: Age and sex wise distribution of indoor pediatric patients. (N=193)

Age group	Male (%)	Female (%)	Total (%)
0 to 2 year	39 (33.9)	21 (26.9)	60 (31.1)
2 to 5 year	30 (26.1)	18 (23.1)	48 (24.9)
5 to 10 year	22 (19.1)	29 (37.2)	51 (26.4)
10 to 15 year	24 (20.9)	10 (12.8)	34 (17.6)
Total	115 (100.0)	78(100.0)	193(100.0)

Table-2: Etiology for hospitalization among indoor pediatric patients. (N=193)

System related infections/diseases	Age group involved				Total (%)
	0 to 2 yr. (%)	2 to 5 yr.(%)	5 to 10 yr.(%)	10 to 15 yr.(%)	
Respiratory	17(28.3)	10(20.8)	13(25.5)	4(11.8)	44(22.8)
CVS	8(13.3)	5(10.4)	4(7.8)	2(5.9)	19(9.8)
CNS	6(10.0)	4(8.3)	7(13.7)	6(17.7)	23(11.9)
GIT	13(21.7)	16(33.4)	10(19.6)	9(26.4)	48(24.9)
GUT	1(1.7)	2(4.2)	6(11.8)	3(8.8)	12(6.2)
Skin (Rashes)	7(11.7)	5(10.4)	4(7.8)	2(5.9)	18(9.3)
Blood (Thalassemia)	5(8.3)	2(4.2)	2(3.9)	0(0.0)	9(4.7)
Accidental	3(5.0)	4(8.3)	5(9.9)	8(23.5)	20(10.4)
Total	60	48	51	34	193
Total (%)	31.1	24.9	26.4	17.6	100.0

Table-3: Comparison of birth weight with different socio-demographic variables (N=193)

Variable	LBW* (N=62)	Normal (N=131)	P value
Gender			
Male	37 (59.7)	78 (59.5)	0.9
Female	25 (40.3)	53 (40.5)	
Age group			
0 to 2 month	22 (35.5)	38 (29)	0.6
2 to 5 month	16 (25.8)	32 (24.4)	
5 to 10 month	13 (21)	38 (29)	
10 to 15 month	11 (17.7)	23 (17.6)	
Literacy status of parents			
Illiterate (Both)	13 (21)	8 (6.1)	0.0002
Literate	49 (79)	123 (93.9)	
Socio-Economical classification (Modified Prasad)			
Class-I	0 (0)	2 (1.5)	0.2
Class-II	2 (3.2)	5 (3.8)	
Class-III	14 (22.6)	40 (30.5)	
Class-IV	30 (48.4)	66 (50.4)	
Class-V	16 (25.8)	18 (13.7)	

*Birth weight<2.5 kg considered as LBW= Low Birth Weight

Table-4: Gender wise nutritional and immunization status of indoor pediatric patients

Variable	Male (N=115)	Female (N=78)	P value
Nutritional status (N=193)			
Normal	76 (66.1)	36 (46.2)	0.006
Malnourished	39 (33.9)	42 (53.8)	
Malnourished children (Gomez classification*) (N=81)			
Grade-I	19 (16.5)	24 (30.8)	0.3
Grade-II	16 (13.9)	11 (14.1)	
Grade-III	4 (3.5)	7 (9)	
Immunization status of <5 yr. Children (N=108)			
Fully immunized	27 (23.5)	11 (14.1)	0.3
Partially immunized	38 (33)	23 (29.5)	
Unimmunized	4 (3.5)	5 (6.4)	

*Based on weight/age(%);Grade-I = 75-89%,Grade-II=60-74%,Grade-III=<60%

Table- 5: Different variables of parents of indoor pediatric patients

Variables	Parents	
	Male (N=190) (%)	Female (N=189) (%)
Illiterate	39 (20.5)	47 (24.9)
Literate	151 (79.5)	142 (75.1)
Literate (Up to primary level)	96 (63.6)	103 (72.5)
Hand washing (with soap) before meal	67 (35.3)	58 (30.7)
Hand washing (with soap) after using toilet	88 (46.3)	73 (38.6)
Oral tobacco habits	158 (83.2)	96 (50.8)
Tobacco smoking habits	103 (54.2)	29 (15.3)

As per the modified Prasad's socio-economic classification[15], majority of children belongs to class-IV family (96, 49.7%) followed by class-III family (54, 27.9%). Gomez' classification (weight for age criteria) of PEM (Protein Energy Malnutrition) was used for grading of malnutrition. Study reveals, out of 193 indoor children, 112 (58%) children (Male-76, female-36) were found in normal nutritional stage, where as 81(42%) children (Male-39, female-42) were found malnourished. Significant gender difference for nutritional status was found (P: 0.006) (Table-4).

Among 81 malnourished children, majority (43, 22.3%) were found in grade-I followed by grade-II (27, 14%). Out of 108 children (Male-69, Female-39) of < 5 yr age, majority (61, 56.5%) was found partially immunized followed by 38 (35.2%) were noted fully immunized. No gender wise significant difference for immunization status was noted (P: 0.3). Table-5 shows different variables of parents of indoor children. Majority of parents were literate (Male-79.5%, Female-75.1%). Among literate, majority had studied only up to primary level (Male-63.6%, Female-72.5%). Hand washing practice (with soap) of parents was noted.The result shows average to poor hand washing practices. Majority (Male-83.2%, Female-50.8%) of parents had oral tobacco chewing habits in different forms e.g. Gutkha, Khaini, pan-masala etc. Tobacco smoking habits were also quiet common in male parents as compare to female (Male-54.2%, Female-15.3%).

DISCUSSION

First five year of life is very crucial period of childhood[1]. In current study, majority (56%) children were under 5 yr. age. Susceptibility in this age might be due to several reasons. In developing countries major etiology was infectious diseases rather than congenital anomalies.[1]the problems affecting the health of children are multifactorial. In current study majority of children were admitted due to gastro intestinal tract (GIT) infections/diseases (24.9%) followed by respiratory diseases (22.8%). A study from Rajasthan[16] also reported major etiology for admission as respiratory (37.2%) andGIT infection (22.4%).

Poor maternal hygiene, vicious cycle of malnutrition & infection, incomplete immunization etc. might be the major culprit for this. WHO estimates that globally about 25 million LBW babies are born each year, consisting 15% of all live births, nearly 93% of them in developing countries[7]. In India 22% of all live birth babies are born low birth weight (LBW)[17]; our study had little higher history of LBW (29.7%).For socio-demograhic variables, in present study significant association of LBW was only found with literacy status of parents, while age, gender and socioeconomic status wise no significance was noted. Though in other studies[18-21], in addition to maternal education, significant associa-

tion was also found with gender and socioeconomic status. Malnutrition is like an iceberg and is a major public health problem in India.[11]

In India, the prevalence of stunting among under five is 48% and wasting is 19.8% and with an underweight prevalence of 42.5%, it is the highest in the world.[3] Study reveals that 42% children were suffering from Protein Energy Malnutrition (PEM) which is nearer to above data on underweight. Gender wise significant difference for nutritional status among indoor children may show poor female child rearing practices in developing countries. Same finding is observed in many studies, as meta-analysis in a study[22] for south asian countries showed significant association of malnutrition with gender.By sustainable and complete immunization coverage, we can decrease the number of vaccine preventable diseases[4] (VPDs).

The NFHS-3 (2005-06) data for Gujarat shows, 45.2% children were fully immunized[8]. In current study, majority (56.5%) of children were partially immunized as compare to fully immunized children (38, 35.2%), which is lesser than NFHS-3 data of Gujarat. Less number of children was unimmunized (9, 8.3%),which indicates dropout rate is higher as compared to left out. Child tracking system should be strengthened and there is also a need to increase awareness among community regarding immunization and associated VPDs. Majority of malnourished children in this study were from low socio-economic family. Higher number of infectious diseases and malnutrition were associated with low Socio-economical class and overcrowding.[1,5] According to census 2011, literacy rate (India) for male was 82.1% and for female was 65.5%[3]. Compared to census data, in current study literacy rate was lower for male (79.5%) and higher for female (75.1%). The study shows different health related variable of parents of indoor children. The findings indicate poor hygienic measures, average literacy (up to primary level) and higher numbers of tobacco addiction among parents. A good knowledge and practice of personal hygiene and appropriate sanitation measures, particularly in and around the home, are essential pre-requisites and should be improved by various community based IEC (Information Education & Communication) and BCC (Behavior Change Communication) activities for the control of the many infections and parasitic diseases.[1-2]

CONCLUSION

Major etiology for hospitalization among indoor children was gastrointestinal and respiratory diseases.Literacy status of parents was significantly associated with low birth weight. More than two fifth of children were malnourished and malnourished female children were significantly more compared to male. More than half children were partially immunized, which shows dropout rate was higher.VariousIEC activities for improving community awareness on personal hygienic practices and appropriate sanitation measures and complete immunization should be emphasized.

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