Section: Community Medicine

Original Research Article

SOCIO-DEMOGRAPHIC PROFILE OF THE FAMILIES AND HEALTH STATUS OF UNDER FIVE CHILDREN IN THE URBAN HEALTH CENTRE AREA IN GUNTUR CITY, ANDHRA PRADESH

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Abstract

Background: Early childhood, constitutes the most crucial period in life. This is when the foundations are laid for cognitive, social and emotional language, physical / motor development and lifelong learning. The objective is to describe the socio-demographic profile of the families of the under five children and to assess the health status of the under five children in the UHC area. **Materials and Methods:** This cross sectional study was carried out in the field practice area of the UHC Israilpet, Guntur which is run by the Dept. of Community Medicine of NRI Medical College. This study was conducted from 10th October 2015 to 31st July 2016.**Result:** The maximum number of families have only 1 underfive child, followed by 2. Three fourths of the families belong to Hindu religion. The mean household size is 4.23. Most of the mothers (96.6%) are between 20 to 30 years. Women with more than 10 years of education are 28.9%. Most of the women (78.0%) are housewives. The overall prevalence of congenital defects seen among these children is 1.6% and is equal in both genders. The rate of congenital deformities when parents were consanguineous is 3.0%. The common congenital defects are club foot, deaf and dumb and polydactyly. Among the boys, the chronic disease burden is 5.2% and among the girls it is 4.8% (overall 5%). **Conclusion:** This study revealed the importance of certain socio- demographic factors like mothers' education, religion, caste and SES in the health status. Child health status showed the role of congenital defects and chronic illnesses, especially airway disorders.

INTRODUCTION

Children of today are citizens of tomorrow and therefore it is extremely important to ensure for them proper health care facilities as well as adequate nutritional intake. Early childhood constitutes the most crucial period in life, when the foundations are laid for cognitive, social and emotional language, physical/motor development and cumulative lifelong learning. The young child is most vulnerable to the vicious cycles of malnutrition, disease/ infection and resultant disability all of which influence the present condition of a child at micro level and the future human resource development of the nation at the macro level.[1]

The National Policy for Children 1974 is the first policy document concerning the needs and rights of children. It recognises children to be a supremely important asset to the country. It outlines the services the state should provide for the complete development of a child, before and after birth and throughout a child's period of growth.[2] The National Charter for children 2003, states that the State and community shall undertake all possible measures to ensure and protect the survival, life and liberty of all children. The State shall take measures to ensure that all children enjoy the highest attainable standards of health, and provide for preventive and curative facilities at all levels especially immunisation and prevention of micronutrient deficiencies for all children.[3]

The health of an under five child is greatly dependant on the socio-economic status of, the environment and the cultural aspects of the family he/she belongs to. The literacy of both parents especially that of the mother plays an important role. The socio demographic characteristics of the families do reveal the support system of a child within the family.

Hence this study was conducted to describe the socio-demographic profile of the families of the under five children and to assess the health status of the under five children in the UHC area.

MATERIALS AND METHODS

This cross sectional study was carried out in the field practice area of the UHC Israilpet, Guntur which is run by the Dept. of Community Medicine of NRI Medical College Chinakakani, Guntur District, Andhra Pradesh, India. This study was conducted from 10th October 2015 to 31st July 2016. The study protocol was presented to the IEC of the NRI Medical College and clearance was obtained before the start of the study.

Sample Size

The optimal sample size of 712 study subjects was calculated on the basis of prevalence of undernourished children found in pilot survey and also the NFHS 4 and DLHS 4 reports for Guntur District which worked out to 36%, using the formula,

$n = 4pq / L2$

where p = positive character, q = 100-p, L= allowable error 10% of 'p'

Sample Selection

The UHC Israilpet serves a population of approximately 16500. This population is also served by 12 Anganwadi centers under the ICDS programme. For this study purpose 6 of the above Anganwadi service areas were selected by simple random sampling for assessment of under five health status. Anganwadi service areas selected are Raghava Nagar, Manipuram, Venkataraopeta, Rajakula Colony, Vasavi Nagar and LB Nagar.

Survey: A house to house survey was done and all children under 5 years of age were included in the study. Families having underfive children were identified with the help of the UHC health worker. After obtaining the consent of the mother, data were collected in a friendly atmosphere through a pre-designed and pre-tested questionnaire. Information on socio economic status, per capita monthly income, no. of siblings and data in respect of age, sex, family size, dietary habits, breast feeding, infant feeding practices etc. were collected. History of any illness in the last 1 year was elicited.

Inclusion & Exclusion Criteria

All under five children available in the house during the survey visit. Locked houses during the survey period and the children who have gone to their relative's house were excluded.

Statistical Analysis

The data collected is entered into MS Office Excel work book and analyzed with Excel and Epi Info version 3.4.3. The data is presented in the form of frequency distribution tables and in percentages. Significant findings are subjected to Chi-Square test to look for associations between variables at 5% Level of Significance.

RESULTS

This study involves 583 families with 740 underfive children (367 boys and 373 girls). The maximum number of families have only 1 underfive child, followed by 2. Three fourths of the families belong to Hindu religion. Half of the families belong to BC caste. The mean household size is 4.23. Most of the mothers (96.6%) are between 20 to 30 years. Women with more than 10 years of education are 28.9%. Most of the women (78.0%) are housewives. There are no families in the Lower SES class of V. The upper classes (I & II) are 16.0 %, half of them being Hindu families and 86.02% from upper castes. Families having improved housing, safe drinking and washing water sources, a functional toilet and a safe cooking fuel (LPG) are 75.98%.

Underfive children included in the study comprise 26.1% infants, 20.8% between 1 and 2 years age and 53.1 % in 3 to 5 years age.

Table 1: Age distribution of children included in the study

Age of under-five child	Boys (%)	Girls (%)	Total (%)
0 - 1 yr	104 (28.3)	89 (23.9)	193 (26.1)
1 - 2 yr	71 (19.3)	83 (22.2)	154 (20.8)
3 - 5 years	192 (52.3)	201 (53.9)	393 (53.1)
Total	367 (100.0)	373 (100.0)	740 (100.0)

Chi Square 2.26, 2 df, p value 0.3

There were 426 families with one underfive child (73.1%), 149 (25.6%) families with 2 under five children and only 8 families with 3 under five children (1.4%).

Table 2: Distribution of underfive children per study family

No. of Under-fives in each family	No.	%
1 child	426	73.1
2 children	149	25.6

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3 & above children	8	1.4
Total	583	100.0

The overall prevalence of congenital defects seen among these children is 1.6% and is equal in both genders. The rate of congenital deformities when parents were consanguineous is 3.0%. The common congenital defects are club foot, deaf and dumb and polydactyly. Among the boys, the chronic disease burden is 5.2% and among the girls it is 4.8% (overall 5%). The chronic conditions that the children have are mainly asthma (1.9%), skin conditions (1.2%), and respiratory allergies (0.9%). There were 4 children with mental retardation (0.5%) and 1 child with epilepsy. Other health issues identified in this group of 740 children are 3.5% suffering with anaemia and 5.3% with avitaminosis.

Table 3: Prevalence of congenital defects among under five children

Congenital Defects	Boys(n=367)	Girls(n=373)	Total(n=740)
Club foot	1 (0.3)	1 (0.3)	2 (0.3)
Deaf & Dumb	2 (0.5)	0	2 (0.3)
Imperforate anus	0	1 (0.3)	1 (0.1)
Nasal defect	0	1 (0.3)	1 (0.1)
Polydactyly	1(0.3)	1 (0.3)	2 (0.3)
Strabismus	0	1 (0.3)	1 (0.1)
Hypospadias	1 (0.3)	0	1 (0.1)
Cleft lip	0	1 (0.3)	1 (0.1)
Microcephaly	1 (0.3)	0	1 (0.1)
Total	6 (1.6)	6 (1.6)	12 (1.6)

The chronic conditions that the children have are mainly Asthma (1.9 %), Skin conditions (1.2 %) and respiratory allergies (0.9 %). There were 4 children with mental retardation (0.5 %) and 1 child with epilepsy.

Table 4: List of chronic conditions among underfive children

Chronic conditions	Boys (%) n= 367	Girls (%) n=373	Total (%) n=740
Asthma	6 (1.6)	8 (2.1)	14 (1.9)
Skin conditions	5 (1.4)	4 (1.1)	9 (1.2)
Respiratory Allergies	4 (1.1)	3 (0.8)	7 (0.9)
Mental Retardation	2 (0.5)	2 (0.5)	4 (0.5)
Epilepsy	1 (0.3)	0 (0.0)	1 (0.1)
Other	1 (0.3)	1 (0.3)	2 (0.3)
Total	19 (5.2)	18 (4.8)	37 (5.0)

Other health issues identified in this group of 740 children are 3.5% are suffering with anaemia, 5.3% have Avitaminosis, 1.8% was found to have poor personal hygiene. 1.2% are found to have congenital deformities and 1.1% have hearing problems.

Table 5: Prevalence of health issues among underfive children

Health issues	Boys(n=367) (%)	Girls(n=373) (%)	Total(n=740) (%)
Avitaminosis	19 (5.2)	20 (5.4)	39 (5.3)
Chronic conditions	19 (5.2)	18 (4.8)	37 (5.0)
Pallor	15 (4.1)	11 (2.9)	26 (3.5)
Personal hygiene is poor	7 (1.9)	6 (1.6)	13 (1.8)
Poor mental Status	6 (1.6)	5 (1.3)	11 (1.5)
Congenital deformities	6 (1.6)	6 (1.6)	12 (1.6)
Poor hearing	4 (1.1)	4 (1.1)	8 (1.1)
Delay in milestones	3 (0.8)	4 (1.1)	7 (0.9)
Total	79 (21.5)	74 (19.8)	153(20.7)

DISCUSSION

The study population was made up of 75% Hindu families, 18.7% Muslim and 6.3% Christian families. The religious census data of 2011, Census 2011,[4] showed that the Hindu population is 79.8%, Muslim 14.2% and Christian 2.78 crore 2.3%. According to the DLHS,[4] in Andhra Pradesh, 85.8 % of the households belong to the Hindu religion, 7.3 % to Christian and 6.7 % to Muslim. Caste wise distribution of the study population was 22.3% OC, 55.1% BC, 20.6% Sc and 2.1% ST. According to the 2011 census,[4] the Scheduled Castes and Scheduled Tribes comprise about 16.6 % and 8.6 %, respectively, of India's population. According to the DLHS 4 in AP,[5] 47% of the households belong to other backward classes, 20.2
% to others, 10.8 % belong to scheduled tribe and 22.3 % of households belong to scheduled castes. Gupta S et al,[6] in their study found that approximately one fourth (28.16%) of the sample studied belonged to scheduled and backward castes. Patnaik L 7 found BC 44.35%, SC 11.29% and ST 4.84%. In this study, 72% of the families are nuclear type. 3 Generation families are 23.2% and joint families are 4.7%. Nuclear families Patnaik L et

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al,[7] found 92.2% nuclear families and Gupta S 6 found 57.3%. In urban slums with migrated populations, the nuclear type of family may be the norm.

70.9% of the families had 4 or less members. Large families with 6 or more members were only 9.8%. This study revealed a family size of 4.23. In India the declining household size is being driven by the falling family size. According to the National Family health survey (NFHS)-3, the average size of an Indian family is 4.8 members whereas in the state of Andhra Pradesh it is 3.9.[8]

The majority are between 20 to 30 years of age. In this study, 28.9% of the women studied beyond class 10. Literacy rate among women in this study group (i.e. 5thclass and above) is 90.9%, 9.1% not having attended school at all. Female literacy in Guntur District Urban according to the NLHS 4 2015 -16 is 73%.[8] According to DLHS 2012-13, AP state,[5] it is 30%. In the current study women with more than 10 years of education make up 28.9%. Women with 10 or more years of schooling was 42.5% according to NLHS 2015-16 in Guntur district urban and 43.9% according to the DLHS 2012-13, AP state. Currently married women who are literate according to DLHS 4, Guntur district urban is 51.6%, 10 or more years of schooling is 23.1%. Looking at educational levels of mothers in terms of religion and caste also showed significant differences between the classes.

Monthly per capita income of less than Rs. 2000 was seen in 337 families i.e. 57.8%. Applying the Kuppuswamy scale it is found that there are no families in class V i.e. Lower class. Upper Lower and Lower Middle Classes are 84.0 %. Upper Middle and Upper Class are 15.9 %. Gupta S et al,[6] found in their study 74.8% in middle or higher SES. Srivastava DK et al 9 found in their study, Lower 48.2, Upper lower 32.8 and Middle 18.97%.

Most of the women 78% are housewives. 8.1% are unskilled workers while 39 women are employees in Govt. and private firms. Patnaik L et al,[7] found that in their study, 87.8% were Housewives and 8.7% skilled workers.

The underfive children included in the study comprise 26.1% infants, 20.8% children between 1 to 2 years age and children between 3 to 5 years age are 53.1%.

There were 426 families with one underfive child (73.1%), 149 (25.6%) families with 2 under five children and only 8 families (1.4%) with 3 under five children. Patnaik et al,[7] in Bhubaneswar, Orissa found in 628 households, 30.7% single child, 46.7% with 2 children, 16.1% with 3 children and 6.5% with more than 3 children.

Congenital anomalies: The overall prevalence of congenital defects in this study is children is 1.6%. It is equal in both genders. The common congenital defects are club foot, deaf and dumb and polydactyly. Narkhede et al,[10] reported 0.25% of mental retardation and 0.5% squint. They found phimosis 0.25%, cleft lip 0.25% and undescended testes 0.25%.

One-year recall by the mothers revealed that 5% of the children have some chronic illness. Among the boys the chronic disease burden is 5.2% and among the girls it is 4.8%. The chronic conditions that the children have are mainly asthma (37.8%), skin conditions (24.3%), and respiratory allergies (18.9%).

There were 4 children with mental retardation (10.8%) and 1 child with epilepsy. The prevalence of bronchial asthma in Indian children is high with a mean prevalence of 7.24%.[11] The median prevalence of childhood bronchial asthma in India is around 3.3%. According to Pal R et al, chronically ill children have the risk of developing psychological and emotional problems.[12]

Other health issues identified in this group of 740 children are 3.5% are suffering with anaemia, 5.3% with avitaminosis and 1.8% are having poor personal hygiene. Narkhede et al,[10] showed in their study avitaminosis due to Vitamin B complex 46.5%, Vitamin A 15.6% and vitamin D 2.72%.

CONCLUSION

This study revealed the importance of certain socio-demographic factors like mothers' education, religion, caste and SES in the health status and also the health care awareness and child care practices of the mother. Child health status showed the role of congenital defects and chronic illnesses, especially airway disorders, which have a small but definite burden on the health of an underfive child.

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