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Relation between Socioeconomic Status of Parents and Health of Children

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Abstract The wealth of country in terms of man power totally depends upon the children, the future citizen. Apart from this, children also determine the socio-cultural values of the future. Physical, mental and social well beings of the children are closely related to the socioeconomic well beings of the parents. To know the Relationship between socioeconomic status of parents and health of children of Government primary school of Bangalore, a one-time observational cross sectional study was conducted in the three primary schools of Kottigepalya. 456 children were included in the study. A complete physical examination of the children was done and deviations from normal were recorded. A large number, 319 (69.96%), school children were found to be sick, in which 39 (12.23%) children were belonging to SES lower middle (III), 239 (74.92%) were to SES upper lower (IV) and 41 (12.85%) children were to SES lower (V). This results show that the SES of parents is truly affects the health of children.

Keywords *School Children, School Health Services, Health Appraisal, Socioeconomic Status*

1. Introduction

The wealth of country in terms of man power totally depends upon the children, the future citizen. Apart from this, children also determine the socio-cultural values of the future. Physical, mental and social well beings of the children are closely related to the socioeconomic well beings of the parents. Nurturing the children in affectionate minimum need fulfilling environment is mandatory for their proper growth and development. The child can be grown in a responsible citizen only when he is nurtured well without any stress. Any type of stress interferes with the physical, mental and social development of the children. Achievements in the field of sports and in the field of academy all are somehow concern with stress free environment in which the children are nurtured and trained. Mere reparation of one parent can have so adverse effect on coming days of a child that he/she may pervert towards delinquency. Keeping in view the above fact a study was conducted to observe the relationship between socioeconomic status (SES) of parents and health status of their children. This study was conducted in three Government primary school of Kottigepalya area of Bangalore.

2. Materials and Methods

There are three Government primary schools in the under study area. Prior permission from school administration was taken to conduct the in their schools and the ethical clearance was obtained from Institutional Ethical Committee (IEC). All children from 1st to 5th standard were included in the present study. The schools were visited twice a week, for the collection of data a readymade proforma, consisting of relevant information, was filled by interviewing the parents' of the children. The children were instructed to call their parents for interview day before schedule visit. Every child was examined physically with the help of class teacher. The total 456 children of both sexes and of 5+ to 11+ years age group were found and included in the present study. The children were classified from 5-11 years age group according to ICMR classification [1]. The parents' occupation and education were recorded to calculate the SES as per Kuppuswamy's SES Scale by applying the conversion factor for current year i.e. 2007 [2]. Family type was also recorded.

3. Observations and Results

Table 1: *Relationship between socioeconomic status (SES) and health of school children*

SES	Normal		Sick		Total (n=456)	
	No. of children	Percentage (%)	No. of children	Percentage (%)	No. of children	Percentage (%)
Lower Middle (III)	26	40.00	39	60.00	65	14.25
Upper Lower (IV)	104	30.32	239	69.68	343	75.22
Lower (V)	7	14.58	41	85.42	48	10.53
Total	**137**	**30.04**	**319**	**69.96**	**456**	**100.00**

χ^2=8.537; df=2; P<0.05

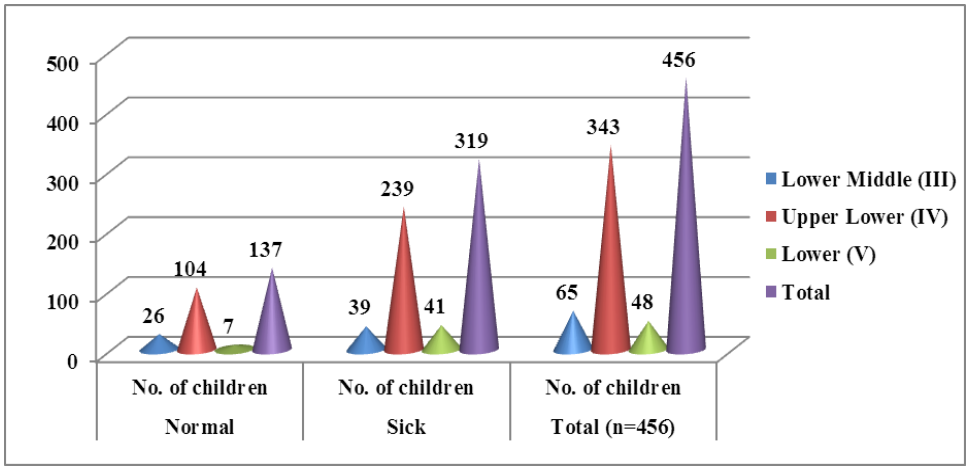

Figure 1: *Relationship between socioeconomic status (SES) and health of school children*

Table 2: *Relation between family type and health of school children*

Family type	Normal		Sick		Total (n=456)	
	No. of children	Percentage (%)	No. of children	Percentage (%)	No. of children	Percentage (%)
Nuclear	76	28.79	188	71.21	264	57.89
Joint	37	36.63	64	63.37	101	22.15
Three generation	22	29.33	53	70.67	75	16.45
Broken	2	12.50	14	87.50	16	3.51
Total	**137**	**30.04**	**319**	**69.96**	**456**	**100.00**

χ^2=4.646; df=3; P>0.05

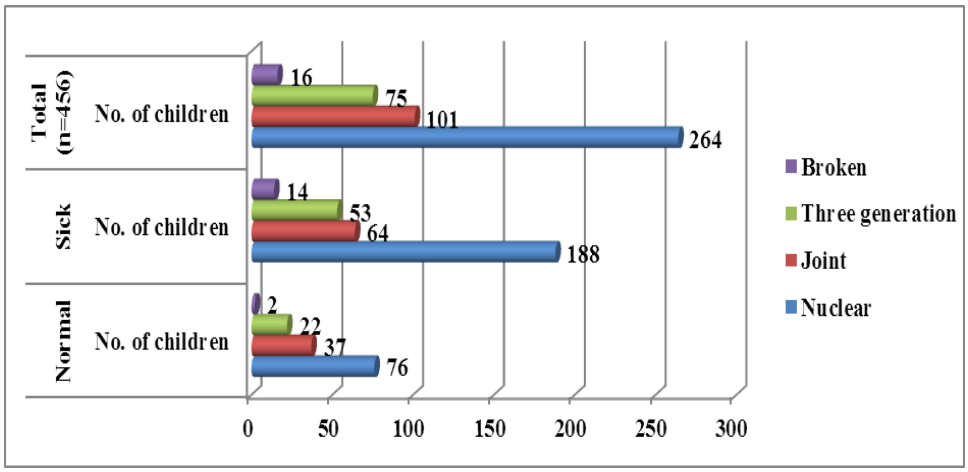

Figure 2: *Relation between family type and health of school children*

Table 3: *Relation between mother educational status and health of school children*

Mother Education Status	Normal		Sick		Total (n=456)	
	No. of children	Percentage (%)	No. of children	Percentage (%)	No. of children	Percentage (%)
Illiterate	88	28.12	225	71.88	313	68.64
Literate	49	34.27	94	65.73	143	31.36
Total	**137**	**30.04**	**319**	**69.96**	**456**	**100.00**

χ^2=1.767; df=1; P>0.05

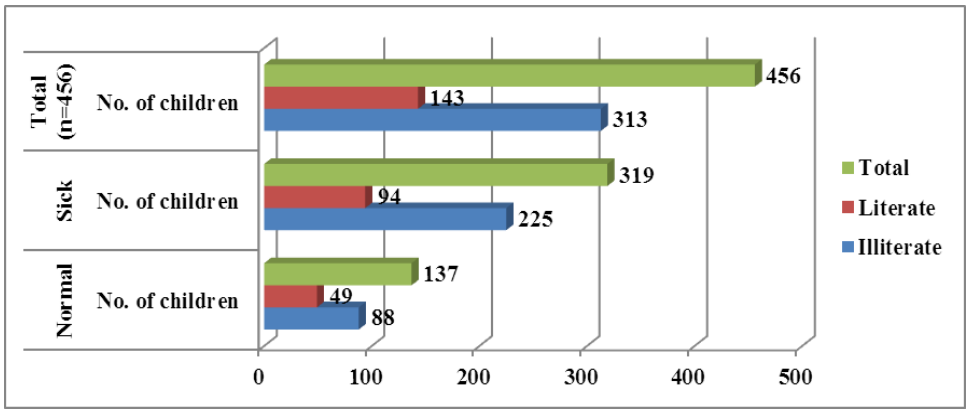

Figure 3: *Relation between mother educational status and health of school children*

Table 4: *Relation between father educational status and health of school children*

Father Education Status	Normal		Sick		Total (n=456)	
	No. of children	Percentage (%)	No. of children	Percentage (%)	No. of children	Percentage (%)
Illiterate	88	29.83	207	70.17	295	64.69
Literate	49	30.43	112	69.57	161	35.31
Total	**137**	**30.04**	**319**	**69.96**	**456**	**100.00**

χ^2=0.0181; df=1; P>0.05

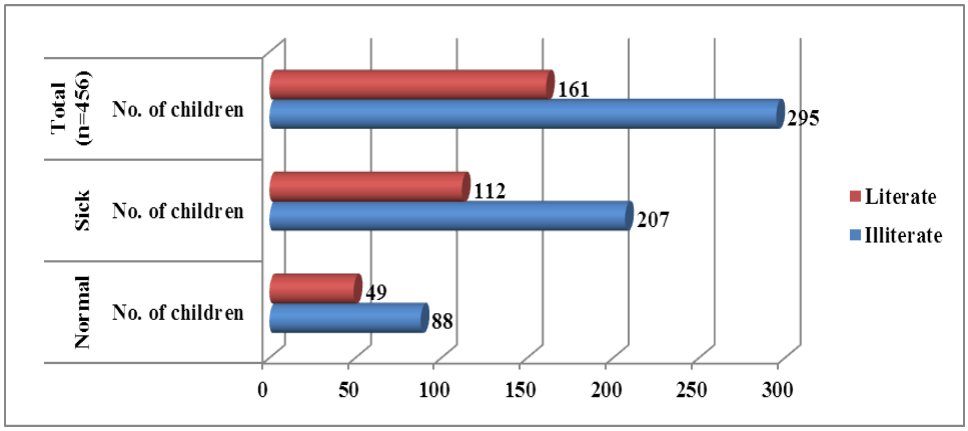

Figure 4: *Relation between father educational status and health of school children*

Table 5: *Nutritional grading of school children according to sex*

Nutritional Grade	Boys (n=246)		Girls (n=210)		Total (n=456)	
	No. of children	Percentage (%)	No. of children	Percentage (%)	No. of children	Percentage (%)
Normal	206	83.74	157	74.76	363	79.60
Grade I Malnutrition	33	13.41	43	20.48	76	16.67
Grade II Malnutrition	6	2.44	9	4.28	15	3.29
Grade III Malnutrition	1	0.41	1	0.48	2	0.44
Total	**246**	**100.00**	**210**	**100.00**	**456**	**100.00**
Total (n=456)	**246**	**53.95**	**210**	**46.05**	**456**	**100.00**

χ^2=5.624; df=1; P<0.05

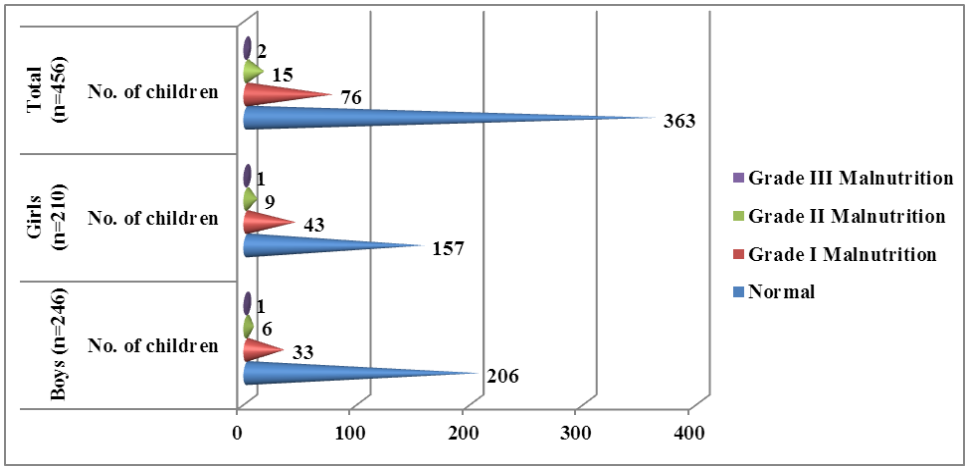

Figure 5: *Nutritional grading of school children according to sex*

Table 6: *Sickness status in school children according to sex*

Sickness status	Boys (n=246)		Girls (n=210)		Total (n=456)	
	No. of children	Percentage (%)	No. of children	Percentage (%)	No. of children	Percentage (%)
Dental Caries	68	27.64	56	26.66	**124**	**27.19**
Scabies	5	02.03	1	00.48	**6**	**01.32**
Pediculosis	32	13.01	64	30.48	**96**	**21.05**
Other Than or Normal	141	57.32	89	42.38	**230**	**50.44**
Total	**246**	**100.00**	**210**	**100.00**	**456**	**100.00**
Total (n=456)	**246**	**53.95**	**210**	**46.05**	**456**	**100.00**

Pediculosis: χ^2=20.799; df=1; P<0.05

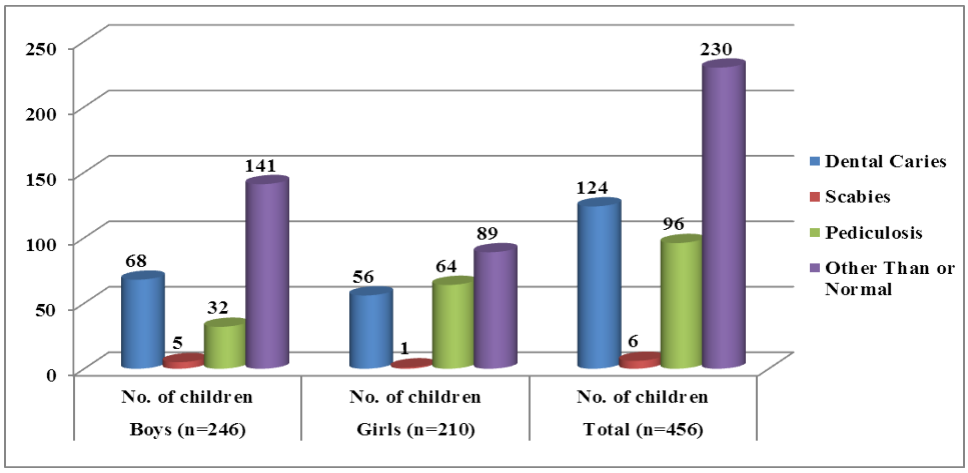

Figure 6: *Sickness status in school children according to sex*

4. Discussion

As shown in Table 1 & Figure 1, out of total 456 children in the present study 65 (14.25%) children were belonging to SES lower middle (III), 343 (75.22%) were to SES upper lower (IV) and 48 (10.53%) children were to SES lower (V). Of the children from SES lower middle (III), 40% (26) children were found normal and 60% (39) children were found sick. Of the children from SES upper lower (IV), 30.32% (104) were found normal and 69.68% (239) were found sick. Similarly the children from SES lower (V), 14.58% (7) were found normal and 85.42% (41) were found sick. Statistically association between SES of parents and health of the school children was found significant (χ2=8.537; df=2; P<0.05). The prevalence of sickness was more (85.42%) in children of lower SES parents as compare to other SES parents' children. No contemporary study was available for comparison.

Out of 456 studied children, 264 (57.89%) were from nuclear, 101 (22.15%) were from joint, 75 (16.45%) were from three generation and 16 (3.51%) were from broken family. Among the children from nuclear family, 28.79% (76) were found normal and 71.21% (188) were found sick. Among the children from joint family, 36.63% (37) were found normal and 63.37% (64) were found sick. The health status of the children from three generation family was as 29.33% (22) normal and 70.67% (53) sick. Among the children from broken family, 12.50% (2) were found normal and 87.50% (14) were found sick. The prevalence of sickness was found highest (87.50%) in the children of broken family, as shown in Table 2 & Figure 2. Statistically the observed difference was not found significant (χ2=4.646; df=3; P>0.05). The prevalence of sickness was equally distributed in all types of families. The statistical connotation clarified that the children are taken care equally in all the families, but this statistical connotation is not practical. Both nurturing and care are affected by the family type.

Mother education is very crucial in child care. In the present study 313 children had illiterate mothers and 143 children had literate mothers. Among the children who had illiterate mothers, 28.12% (88) were found normal and 71.88% (225) were found sick. Among the children who had literate mothers 34.27% (49) were found normal and 65.73% (94) were found sick, as shown in Table 3 & Figure 3. Once more, the difference in health status of children of illiterate and literate mothers was insignificant statistically ($\chi 2=1.767$; df=1; $P>0.05$).

In the present study 295 children had illiterate fathers and 161 children had literate fathers. Among the children who had illiterate fathers, 29.83% (88) were found normal and 70.17% (207) were found sick. Among the children who had literate fathers, 30.43% (49) were found normal and 69.57% (112) were found sick, as shown in Table 4 & Figure 4. Statistically the association between fathers' educational status and health status of their children was not found significant ($\chi 2=0.0181$; df=1; $P>0.05$). The normal and sick children were equally distributed in families with literate and illiterate fathers. It was the first study of its own kind, in which association between various socioeconomic factors of parents and health status of their children was studied. So we could not find any contemporary study for comparison.

The prevalence of malnutrition in under study population of the school children was found to be 20.40% (93). In boys it was 16.26% (40) and in girls it was 25.24% (53), as shown in Table 5 & Figure 5. Statistically this difference was found significant ($\chi 2=5.624$; df=1; $P<0.05$). This may be due preferential food to boys. Goyal RC et al from school children of Ahmednagar city reported the prevalence of malnutrition as 26.8% [3]. Indira Bai K et al from school children of Tirupathi city reported the prevalence of malnutrition as 47% [4]. Dhingra DC et al from school children of Delhi reported the prevalence of malnutrition as 50% [5]. Panda P et al from school children of Ludhiana city reported the prevalence of malnutrition as 52.2% [6]. Sundaram MV et al from school children of Madras city reported the prevalence of malnutrition as 79% [7]. In the present study the observed prevalence of malnutrition was lower than the reference studies. This may be due the good and better awareness of dietary intake in parents of children of present study.

As shown in Table 6 & Figure 6, the prevalence of dental caries in the school children of present study was found to be 27.19% (124). This observed prevalence is lower than the reported prevalence of dental caries by Gill PS et al from Lucknow [8], Sundaram MV et al from Madras city [7] and Koshi ET et al from Lucknow [9] as 48.8%, 38.6% and 34.1% respectively. The lower prevalence may be due to better oral hygiene in the children of the present study. The prevalence of the present study is higher than reported prevalence by Panda P et al (1997), [10] Panda P et al (2000) [6] from Ludhiana city, Rao SP et al from urban Wardha, [11] Gupta RK et al from Jammu [12] and Bhagwat S et al from Talegaon town [13] as 11.1%, 23.1%, 22.8%, 16.84% and 23.20% respectively. This difference may be because of better SES of the parents' of the children of the reference studies.

Barometer of personal hygiene status is scabies. As shown in Table 6 & Figure 6, in the present study prevalence of this contagious disease in school children was found to be 1.32% (6). In boys it was 2.03% (5) and in girls it was 0.48% (1). Koshi ET et al from the school children of Lucknow reported the prevalence of scabies as 6.5% [9]. The observed difference may be due to better personal hygiene and better skin care of the school children of the present study.

Pediculosis is another indicator of personal hygiene status, it was found prevalent in 21.05% (96) school children in present study. In boys the prevalence was 13.01% (32) and in girls it was 30.48% (64), as shown in Table 6 & Figure 6. The difference was found significant by $\chi 2=20.799$; $P<0.05$. Because of long hair and negligence towards proper hair care, the prevalence of pediculosis capitis (involving hair on head region) is higher in girls and the same was observed in present study. Koshi ET et al reported the prevalence of pediculosis as 31.1% from school children of Lucknow [9]. Sundaram MV et al reported the prevalence of pediculosis as 17.6% from school children of Madras

city [7]. The higher and lower prevalence of pediculosis in reference studies may be attributed to the level of personal hygiene status and knowledge about hair care in under study children population.

5. Conclusion

From the present study it can be concluded that better care and nurturing of children are mandatory for better health. It was observed in the studied children that care and nurturing deprived children showed higher prevalence of sickness. The higher prevalence of diseases was observed in children from low socioeconomic status, broken family and illiterate parents. Preferential food to boy is probably the reason for higher prevalence of malnutrition among girl students. Personal hygiene related diseases i.e. scabies and pediculosis were more prevalent in girl students, probably because of less attention towards personal hygiene and habit of close contacts.

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