

Original Research Article

Health status of school going children: a cross-sectional study in rural area of Lucknow

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ABSTRACT

Background: School age is a dynamic period where physical, mental and emotional growth of the child occurs, so that child can smoothly turn into an adult. It is also a critical period where child is vulnerable to many communicable and non-communicable diseases due to variations in the living conditions, immunity status, socioeconomic, and cultural factors. Objective of this study was to assess the health and nutritional status of the school going children in rural area of Lucknow and to determine the association of health problems with their socio demographic variables.

Methods: A quantitative research approach and a non-experimental descriptive cross sectional research design were used. The sample size of 150 school going children was selected by using non-probability convenient sampling technique. The written consent was obtained from sample. The tools used were, Performa of demographic variables, checklist to assess the health problem of school going children.

Results: the results of the study revealed that majority of the school children 28.7% were underweight and 10% were overweight, vision problem (40%). hearing problems (2%) dental problem (debris) (34%), dental problem (18.7 calculus) (%).

Conclusions: The study concluded that majority of the children were suffering from one or other common health problems while only few reported to be completely healthy. There is a need to create awareness regarding the reasons for common physical health problems to children and parents and to encourage practicing a healthy lifestyle.

Keywords: School going children, Dental carries, Vision problem, Body mass index

INTRODUCTION

Children of today are citizens of tomorrow. As Nehru “if we do not look after children today, we will be creating more problems for ourselves in future”. The health of children and youth is of fundamental value. Health services for school children are a must for building a healthy young India. Over one fifth of our population comprise of children aged 5-14 years and only about 80% of these children are enrolled in schools, of those enrolled 65-80% regularly attend school and easy to reach.¹

In a developing country like India due to poverty and prevailing socio-cultural milieu a substantial number of school children from paediatric age to adolescents suffer from various diseases. It is estimated that every third child has some sign of ill health manifesting in the form of dental, visual and hearing problems, nutritional deficiencies, respiratory infections, skin disorders, locomotor disabilities etc. School age is a dynamic period where physical, mental and emotional growth of the child occurs, so that child can smoothly turn into an adult. It is also a critical period where child is vulnerable to many communicable and non-communicable diseases due to variations in the living conditions, immunity status,

socioeconomic, and cultural factors. School health is an important branch of community health. School health services are an economical and powerful means of raising community health. It is more important, in future generations. The school health services are a personal health service. It has developed during the past 70 years from the narrower concept of medical examination of children to the present-day broader concept of comprehensive care of the health and wellbeing of children throughout the school years. Schools play a significant role in promoting the health and safety of students. Ideally, rural schools will strive to provide a healthy physical environment for students to learn, provide nutritious meals, and encourage physical activity.²

According to a study published in 'The Lancet', a survey across 10 Indian cities revealed that children suffer from a lack of immunity that result in an absence from schools. The survey conducted by IMRB research agency which involved 1500 mothers who had children in the age group of 6-14 years, also revealed that nearly 30% of mothers take their children to a doctor every month because of some nagging illness. For a country with the second-largest school system in the world, the figures can be more alarming if the money spent on physical travel to the doctor and lost hours of education are also taken into consideration. Even more concerning is the fact that a majority of the population of India resides in rural areas where access to healthcare is limited.³

Problem statement

Health status of school going children - a cross- sectional study in rural area of Lucknow.

Objectives

To assess the health and nutritional status of the school going children in rural area of Lucknow. And to determine the association of health problems with their socio demographic variables.

Hypothesis

The following hypotheses will be tested at 0.05 level of significance.

H1: There will be significant association between health status of school going children with their selected socio demographic variables.

Operational definitions

Health status in this study refers to physical functions of school going children's which includes nutritional status, visual acuity, auditory function, and dental health. School going children in this study refers to children who studying 1st to 10th standard.

METHODS

Research approach

Quantitative research approach was used for the study.

Research design

Descriptive cross sectional research design was used.

Variables

Demographic variables

In this study demographic variables are age, gender, religion, class, food habits, and education of father, education of mother, occupation of father, and occupation of mother.

Research variables

In this study assessment of health status of school going children at Sarojini Nagar, Lucknow was research variable.

Research settings

The present study was conducted in Dabble Public School Banthra Sarojini Nagar Lucknow.

Population

The population for the present study was School Going Children at Lucknow. In this study the target population was school going children at Sarojini Nagar. The accessible population was School Going Children in Dabble Public School Sarojini Nagar, Lucknow.

Sample

In this study, the sample consisted of school going children in Dabble Public School Banthra Sarojini Nagar, Lucknow who met the inclusion criteria.

Sampling technique

The sample was selected through non-probability convenient sampling technique.

Sample size

Sample size was 150. The data collection started from 1st April 2022 to 30 April 2022.

Inclusive criteria

In this present study inclusive criteria were all students present on the days of assessments from class 1st to 10th standard.

Exclusive criteria

In this present study exclusion criteria were student absent during all visits to school for assessment. Student who are not willing to participate.

Tool for data collection

A tool is the formal procedure that the researcher develops to guide the collection of data in a standardized fashion in most quantitative studies.

Description of tools

Based on the objectives and conceptual framework of the study, the following instruments were developed to collect data.

In this study tool consist of two sections,

Section A- Socio demographic variables

Section B- Checklist to assess health status of school going children.

Section A: Socio demographic data

This section consists of 9 items related to socio demographic variables such as age, gender, religion, class, food habits, education of mother and father and occupation of father and mother.

Section B: Checklist to assess the health status of school going children

This section includes nutritional status, visual acuity, auditory function and dental health.

RESULTS

Section I

Frequency and percentage distribution among school going children with their selected socio demographic variables.

Majority of the school going children 40% were in the age group of 9 -12 years, 26.7% were in the age group of 5-8 year, 28.0% were in the age group of 12-15 year and 5.3% were in the age group of 15 and above.

Out of 150 school going children 52.70% were female and 47.30% were male.

Majority of the school going children 88.70% belongs to Hindu religion.

10.70% were to belong to Muslim and 0.70% belongs to other and no one belongs to Christian.

Table 1: Socio-demographic variables of the school going children (n=150).

Socio-demographic variables		Frequency	Percentage
Age in years	5-8	40	26.7
	9-12	60	40.0
	12-15	42	28.0
	Above 15	8	5.3
Gender	Male	71	47.3
	Female	79	52.7
Religion	Hindu	133	88.7
	Muslim	16	10.7
	Christian	0	0
	Other	1	0.7
Class	I-III class	45	30.0
	IV-V class	30	20.0
	VI-VIII class	45	30.0
	IX-X class	30	20.0
Food Habits	Vegetarian	100	66.7
	Non-vegetarian	50	33.3
Education of father	Illiterate	10	6.7
	Primary Education	45	30.0
	Secondary Education	48	32.0
	Graduate and above	47	31.3
Education of mother	Illiterate	31	20.7
	Primary education	70	46.7
	Secondary Education	30	20.0
	Graduate and above	19	12.7
Occupation of father	Daily wages	49	32.7
	Private job	46	30.7
	Government job	18	12.0
	Businessmen	37	24.7
Occupation of mother	House wife	134	89.3
	Private job	6	4.0
	Government job	9	6.0
	Businessmen	1	0.7
	Throw outside	21	32.3
	Dumped	41	63.1

Most of the schools going children 30% were I-III standard and VI-VIII standard, and 20% were IV-V and IX-X standard class.

Majority of the school going children 66.70% were vegetarian and 33.30% were non- vegetarian.

Out of 150 schools going children's father 32% were completed secondary education, 31.30% were graduate and above, 30% were completed primary education, 6.7% were illiterate.

Majority of the school going children's mothers 46.70% were completed primary education, 20.70% were illiterate, 20% were completed secondary education and 12.70% were graduate and above.

Most of the schools going children's fathers 32.7% were involved in daily wages, and 30.7% were involved in

private job and 24.7% were involved in business and 12% were involved in government job

Majority of the school going children's mother 89.3% were housewife, 6% were involved in government job, 4% were involved private job and 0.7% business.

Section II

Frequency and percentage distribution among school going children with their health status of school going children.

Table 2: Health status of school going children (n=150).

Health status of school going children		Frequency	Percentage
Nutritional assessment	Underweight	43	28.7
	Normal	92	61.3
	Overweight	15	10.0
	Total	150	100.0
Vision test (left eye)	Vision impairment absent	104	69.3
	Vision impairment present	46	30.7
	Total	150	100
Vision test (right eye)	Vision impairment absent	102	68.0
	Vision impairment present	48	32.0
	Total	150	100.0
Hearing test (left ear)	Hearing impairment absent	149	99.3
	Hearing impairment present	1	0.7
	Total	150	100.0
Hearing test (right ear)	Hearing impairment absent	148	98.7
	Hearing impairment present	2	1.3
	Total	150	100.0
Dental debris	No soft debris or stain	100	66.7
	Less than 1/3 of surface covered	37	24.7
	1/3 to 2/3 of surface covered	12	8.0
	More than 2/3 of surface covered	1	0.7
	Total	150	100.0
Dental calculus	No calculus	123	82.0
	Less than 1/3 of surface covered	16	10.7
	1/3 to 2/3 of surface covered	11	7.3
	More than 2/3 of surface covered	0	0
	Total	150	100.0

Reveal that majority of the school children had normal nutritional status 61.3% followed by 28.7% were underweight and 10% were overweight.

Reveal that majority of the school children had 69.3% normal vision and 30.7% had to abnormal vision in left eye.

Reveal that majority of the school children had 68.0% normal vision and 32% had abnormal vision in right eye.

Reveal that majority of the school children 99.3% had normal hearing and 0.7% abnormal hearing in left ear.

Reveal that majority of the school children 98.7% had normal hearing and 1.3% had abnormal hearing in right ear.

Reveal that majority of the school children 66.7% had no soft debris or stain, 24.7% had found less than 1/3 of surface covered, 8.05% found 1/3 to 2/3 of surface covered and 0.7% more than 2/3 of surface covered.

Reveal that majority of the school children 82.05% had no calculus, 10.7% found less than 1/3 of surface covered and were 7.3% found 1/3 to 2/3 of surface covered.

Section III

Association between the health status of school going children score with their selected socio demographic variables.

In order to determine the association between the levels of health status of school going children with their

selected socio-demographic variables, the following hypothesis (H1) was formulated.

H1: There will be significant association between health status of school going children with their selected socio demographic variables.

Table 3: Association of nutritional assessment with socio-demographic variable (n=150).

Socio-demographic		Nutritional assessment						χ^2 values (df)	P value
		Underweight		Normal		Overweight			
		N	%	N	%	N	%		
Age in years	5-8	12	27.9	22	23.9	6	40.0	4.77 (6)	0.574
	9-12	15	34.9	41	44.6	4	26.7		
	12-15	15	34.9	23	25.0	4	26.7		
	Above 15	1	2.3	6	6.5	1	6.7		
Gender	Male	18	41.9	47	51.1	6	40.0	1.36 (2)	0.507
	Female	25	58.1	45	48.9	9	60.0		
Religion	Hindu	40	93.0	79	85.9	14	93.3	5.42 (4)	0.247
	Muslim	2	4.7	13	14.1	1	6.7		
	Christian	0	0.0	0	0.0	0	0.0		
	Other	1	2.3	0	0.0	0	0.0		
Class	I-III class	14	32.6	25	27.2	6	40.0	2.01 (6)	0.918
	IV-V class	10	23.3	18	19.6	2	13.3		
	VI-VIII class	11	25.6	30	32.6	4	26.7		
	IX-X class	8	18.6	19	20.7	3	20.0		
Food habits	Vegetarian	29	67.4	60	65.2	11	73.3	0.39 (2)	0.819
	Non-vegetarian	14	32.6	32	34.8	4	26.7		
Education of father	Illiterate	4	9.3	5	5.4	1	6.7	4.28 (6)	0.639
	Primary education	16	37.2	26	28.3	3	20.0		
	Secondary education	10	23.3	31	33.7	7	46.7		
	Graduate and above	13	30.2	30	32.6	4	26.7		
Education of mother	Illiterate	7	16.3	22	23.9	2	13.3	4.36 (6)	0.629
	Primary education	23	53.5	39	42.4	8	53.3		
	Secondary education	6	14.0	20	21.7	4	26.7		
	Graduate and above	7	16.3	11	12.0	1	6.7		
Occupation of father	Daily wages	15	34.9	30	32.6	4	26.7	2.57 (6)	0.860
	Private job	14	32.6	28	30.4	4	26.7		
	Government job	6	14.0	9	9.8	3	20.0		
	Businessmen	8	18.6	25	27.2	4	26.7		
Occupation of mother	House wife	37	86.0	83	90.2	14	93.3	2.52 (6)	0.866
	Private job	3	7.0	3	3.3	0	0.0		
	Government job	3	7.0	5	5.4	1	6.7		
	Businessmen	0	0.0	1	1.1	0	0.0		

Indicates as a significant

The data given in Table 3 shows that the Chi square test used to find out the association between nutritional status of school going children with their selected socio

demographic variables. The finding of the Chi square test shows that there was no association between nutritional status score with their selected demographic variable. Here the p value in each case was more than 0.05 (level of significance).

Table 4: Association of visual (left eye) status with socio –demographic variable.

Sociodemography		Vision left eye				χ^2 value (df)	P value
		Normal		Abnormal			
		N	%	N	%		
Age in years	5-8	25	24.0	15	32.6	5.80 (3)	0.122
	9-12	38	36.5	22	47.8		
	12-15	34	32.7	8	17.4		
	Above 15	7	6.7	1	2.2		
Gender	Male	48	46.2	23	50.0	0.19 (1)	0.664
	Female	56	53.8	23	50.0		
Religion	Hindu	90	86.5	43	93.5	1.68 (2)	0.431
	Muslim	13	12.5	3	6.5		
	Christian	0	0.0	0	0.0		
	Other	1	1.0	0	0.0		
Class	I-III class	29	27.9	16	34.8	5.87 (3)	0.118
	IV-V class	17	16.3	13	28.3		
	VI-VIII class	33	31.7	12	26.1		
	IX-X class	25	24.0	5	10.9		
Food habits	Vegetarian	71	68.3	29	63.0	0.39 (1)	0.531
	Non-vegetarian	33	31.7	17	37.0		
Education of father	Illiterate	7	6.7	3	6.5	4.14 (3)	0.247
	Primary education	26	25.0	19	41.3		
	Secondary education	36	34.6	12	26.1		
	Graduate and above	35	33.7	12	26.1		
Education of mother	Illiterate	20	19.2	11	23.9	5.31 (3)	0.150
	Primary education	44	42.3	26	56.5		
	Secondary education	25	24.0	5	10.9		
	Graduate and above	15	14.4	4	8.7		
Occupation of father	Daily wages	31	29.8	18	39.1	4.14 (3)	0.247
	Private job	32	30.8	14	30.4		
	Government job	16	15.4	2	4.3		

Table 5: Association of visual (right eye) status with socio –demographic variable (n=150)

Sociodemography		Vision right side				χ^2 value (df)	P value
		Normal		Abnormal			
		N	%	N	%		
Age in years	5-8	25	24.5	15	31.2	5.22 (3)	0.157
	9-12	37	36.3	23	47.9		
	12-15	33	32.4	9	18.8		
	Above 15	7	6.9	1	2.1		
Gender	Male	46	45.1	25	52.1	0.64 (1)	0.424
	Female	56	54.9	23	47.9		
Religion	Hindu	89	87.3	44	91.7	0.90 (2)	0.637
	Muslim	12	11.8	4	8.3		
	Christian	0	0.0	0	0.0		
	Other	1	1.0	0	.0		
Class	I-III class	27	26.5	18	37.5	9.68 (3)	0.021
	IV-V class	16	15.7	14	29.2		
	VI-VIII class	33	32.4	12	25.0		
	IX-X class	26	25.5	4	8.3		
Food habits	Vegetarian	70	68.6	30	62.5	0.55 (1)	0.458
	Non-vegetarian	32	31.4	18	37.5		
Education of father	Illiterate	6	5.9	4	8.3	9.85 (3)	0.020
	Primary education	23	22.5	22	45.8		
	Secondary education	38	37.3	10	20.8		

Continued.

Sociodemography		Vision right side				χ^2 value (df)	P value
		Normal		Abnormal			
		N	%	N	%		
Education of mother	Graduate and above	35	34.3	12	25.0	10.1 (3)	0.018
	Illiterate	16	15.7	15	31.2		
	Primary education	45	44.1	25	52.1		
	Secondary education	26	25.5	4	8.3		
	Graduate and above	15	14.7	4	8.3		
Occupation of father	Daily wages	29	28.4	20	41.7	3.55 (3)	0.314
	Private job	31	30.4	15	31.2		
	Government job	14	13.7	4	8.3		
	Businessmen	28	27.5	9	18.8		
Occupation of mother	House wife	90	88.2	44	91.7	1.17 (3)	0.760
	Private job	5	4.9	1	2.1		
	Government job	6	5.9	3	6.2		
	Businessmen	1	1.0	0	0.0		

Table 6: Association of hearing (right ear) status with socio – demographic variable (n=150).

Sociodemography		Hearing right side				χ2 value (df)	P value
		Normal		Abnormal			
		N	%	N	%		
Age in years	5-8	40	27.0	0	0	1.05 (3)	0.789
	9-12	59	39.9	1	50.0		
	12-15	41	27.7	1	50.0		
	Above 15	8	5.4	0	0.0		
Gender	Male	71	48.0	0	0.0	-	0.498
	Female	77	52.0	2	100.0		
Religion	Hindu	131	88.5	2	100.0	0.26 (2)	0.878
	Muslim	16	10.8	0	0.0		
	Christian	0	0.0	0	0.0		
	Other	1	0.7	0	0.0		
Class	I-III class	45	30.4	0	0.0	2.20 (3)	0.533
	IV-V class	29	19.6	1	50.0		
	VI-VIII class	44	29.7	1	50.0		
	IX-X class	30	20.3	0	0.0		
Food habits	Vegetarian	98	66.2	2	100.0	-	0.553
	Non-vegetarian	50	33.8	0	0.0		
Education of father	Illiterate	10	6.8	0	0.0	1.17 (3)	0.759
	Primary education	45	30.4	0	0.0		
	Secondary education	47	31.8	1	50.0		
	Graduate and above	46	31.1	1	50.0		
Education of mother	Illiterate	31	20.9	0	.0	1.59 (3)	0.661
	Primary education	69	46.6	1	50.0		
	Secondary education	29	19.6	1	50.0		
	Graduate and above	19	12.8	0	0.0		
Occupation of father	Daily wages	49	33.1	0	0.0	1.68 (3)	0.641
	Private job	45	30.4	1	50.0		
Occupation of mother	Government job	18	12.2	0	0.0	6.98 (3)	0.072
	Businessmen	36	24.3	1	50.0		
	House wife	133	89.9	1	50.0		
	Private job	6	4.1	0	0.0		
	Government job	8	5.4	1	50.0		
	Businessmen	1	0.7	0	0.0		

Table 7: Association of hearing (left ear) status with socio –demographic variable (n=150).

Sociodemography		Hearing right side				χ ² value (df)	P value
		Normal		Abnormal			
		N	%	N	%		
Age in years	5-8	40	26.8	0	0.0	1.51 (3)	0.680
	9-12	59	39.6	1	100.0		
	12-15	42	28.2	0	0.0		
	Above 15	8	5.4	0	0.0		
Gender	Male	71	47.7	0	0.0	-	1.000
	Female	78	52.3	1	100.0		
Religion	Hindu	132	88.6	1	100.0	0.13 (2)	0.938
	Muslim	16	10.7	0	0.0		
	Christian	0	0.0	0	0.0		
	Other	1	0.7	0	0.0		
Class	I-III class	45	30.2	0	0.0	2.35 (3)	0.503
	IV-V class	30	20.1	0	0.0		
	VI-VIII class	44	29.5	1	100.0		
	IX-X class	30	20.1	0	0.0		
Food habits	Vegetarian	99	66.4	1	100.0	-	1.000
	Non-vegetarian	50	33.6	0	0.0		
Education of father	Illiterate	10	6.7	0	0.0	2.14 (3)	0.544
	Primary education	45	30.2	0	0.0		
	Secondary education	47	31.5	1	100.0		
	Graduate and above	47	31.5	0	0.0		
Education of mother	Illiterate	31	20.8	0	0.0	1.15 (3)	0.765
	Primary education	69	46.3	1	100.0		
	Secondary education	30	20.1	0	0.0		
	Graduate and above	19	12.8	0	0.0		
Occupation of father	Daily wages	48	32.2	1	100.0	2.08 (3)	0.557
	Private job	46	30.9	0	0.0		
	Government job	18	12.1	0	0.0		
	Businessmen	37	24.8	0	0.0		
Occupation of mother	House wife	133	89.3	1	100.0	0.12 (3)	0.989
	Private job	6	4.0	0	0.0		
	Government job	9	6.0	0	0.0		
	Businessmen	1	0.7	0	0.0		

Indicates as a significant

The data given in Table 4 shows that the Chi square test used to find out the association between vision (left eye) of school going children with their selected socio demographic variables. The finding of the Chi square test shows that there was no association between vision (left eye) with their selected demographic variable. Here the p value in each case was more than 0.05 (level of significance).

Indicates as a significant

The data given in Table 5 shows that the Chi square test used to find out the association between vision (right eyes) of school going children with their selected socio demographic variables. The finding of the Chi square test

shows that there was an association between vision (right eye) score with their selected demographic variable like-class standard and education of father and mother. Here the p value in each case was less than 0.05 (level of significance). The finding of the Chi square test also shows that there was an association between the vision (right eye) with their specific socio demographic variables like: - class, education of father and education of mother. Hence, research hypothesis H1 was accepted.

Indicates as a significant

The data given in Table 6 shows that the Chi square test used to find out the association between hearing (right ear) of school going children with their selected socio demographic variables.

The finding of the Chi square test shows that there was no association between Hearing (right ear) score with their selected demographic variable.

Here the p value in each case was more than 0.05 (level of significance).

Table 8: Association of dental (debris) status with socio –demographic variable (n=150).

Sociodemography		Debris								χ^2 value (df)	P value
		No soft debris or stain		Less than 1/3 of surface covered		1/3 to 2/3 of surface covered		More than 2/3 of surface covered			
		N	%	N	%	N	%	N	%		
Age in years	5-8	26	26.0	11	29.7	3	25.0	0	0.0	12.37 (9)	0.193
	9-12	36	36.0	17	45.9	6	50.0	1	100.0		
	12-15	35	35.0	6	16.2	1	8.3	0	0.0		
	Above 15	3	3.0	3	8.1	2	16.7	0	0.0		
Gender	Male	48	48.0	18	48.6	5	41.7	0	0.0	1.09 (3)	0.778
	Female	52	52.0	19	51.4	7	58.3	1	100.0		
Religion	Hindu	89	89.0	33	89.2	10	83.3	1	100.0	1.11 (6)	0.981
	Muslim	10	10.0	4	10.8	2	16.7	0	0.0		
	Christian	0	0.0	0	0.0	0	0.0	0	0.0		
	Other	1	1.0	0	0.0	0	0.0	0	0.0		
Class	I-III class	31	31.0	11	29.7	2	16.7	1	100.0	5.69 (9)	0.770
	IV-V class	20	20.0	8	21.6	2	16.7	0	0.0		
	VI-VIII class	27	27.0	12	32.4	6	50.0	0	0.0		
	IX-X class	22	22.0	6	16.2	2	16.7	0	0.0		
Food habits	Vegetarian	67	67.0	25	67.6	7	58.3	1	100.0	0.89 (3)	0.827
	Non-vegetarian	33	33.0	12	32.4	5	41.7	0	0.0		
Education of father	Illiterate	8	8.0	2	5.4	0	0.0	0	0.0	7.22 (9)	0.615
	Primary education	31	31.0	11	29.7	3	25.0	0	0.0		
	Secondary education	29	29.0	12	32.4	7	58.3	0	0.0		
	Graduate and above	32	32.0	12	32.4	2	16.7	1	100.0		
Education of mother	Illiterate	21	21.0	8	21.6	2	16.7	0	0.0	3.24 (9)	0.954
	Primary education	47	47.0	17	45.9	5	41.7	1	100.0		
	Secondary education	20	20.0	6	16.2	4	33.3	0	0.0		
	Graduate and above	12	12.0	6	16.2	1	8.3	0	0.0		
Occupation of father	Daily wages	32	32.0	12	32.4	5	41.7	0	0.0	3.02 (9)	0.964
	Private job	30	30.0	12	32.4	3	25.0	1	100.0		
	Government job	13	13.0	4	10.8	1	8.3	0	0.0		
	Businessmen	25	25.0	9	24.3	3	25.0	0	0.0		
Occupation of mother	House wife	89	89.0	34	91.9	10	83.3	1	100.0	7.64 (9)	0.571
	Private job	3	3.0	3	8.1	0	0.0	0	0.0		
	Government job	7	7.0	0	0.0	2	16.7	0	0.0		
	Businessmen	1	1.0	0	0.0	0	0.0	0	0.0		

Indicates as a significant

The data given in Table 7 shows that the Chi square test used to find out the association between hearing (left ear) of school going children with their selected socio

demographic variables. The finding of the Chi square test shows that there was no association between Hearing (left ear) score with their selected demographic variable. Here the p value in each case was more than 0.05 (level of significance).

Table 9: Association of dental (calculus) status with socio –demographic variable.

Sociodemography		Debris								χ^2 value (df)	P value
		No calculus		Less than 1/3 of surface covered		1/3 to 2/3 of surface covered		More than 2/3 of surface covered			
		N	%	N	%	N	%	N	%		
Age in years	5-8	30	24.4	6	37.5	4	36.4	0	0.0	3.94 (6)	0.685
	9-12	50	40.7	5	31.2	5	45.5	0	0.0		
	12-15	35	28.5	5	31.2	2	18.2	0	0.0		
	Above 15	8	6.5	0	0.0	0	0.0	0	0.0		
Gender	Male	60	48.8	8	50.0	3	27.3	0	0.0	1.93 (2)	0.382
	Female	63	51.2	8	50.0	8	72.7	0	0.0		
Religion	Hindu	112	91.1	12	75.0	9	81.8	0	0.0	5.10 (4)	0.277
	Muslim	10	8.1	4	25.0	2	18.2	0	0.0		
	Christian	0	0.0	0	0.0	0	.0	0	0.0		
	Other	1	0.8	0	0.0	0	.0	0	0.0		
Class	I-III class	34	27.6	7	43.8	4	36.4	0	0.0	7.61 (6)	0.269
	IV-V class	24	19.5	2	12.5	4	36.4	0	0.0		
	VI-VIII class	41	33.3	2	12.5	2	18.2	0	0.0		
	IX-X class	24	19.5	5	31.2	1	9.1	0	0.0		
Food habits	Vegetarian	83	67.5	8	50.0	9	81.8	0	0.0	3.17 (2)	0.205
	Non-vegetarian	40	32.5	8	50.0	2	18.2	0	0.0		
Education of father	Illiterate	7	5.7	3	18.8	0	.0	0	0.0	7.37 (6)	0.288
	Primary education	35	28.5	6	37.5	4	36.4	0	0.0		
	Secondary education	43	35.0	2	12.5	3	27.3	0	0.0		
	Graduate and above	38	30.9	5	31.2	4	36.4	0	0.0		
Education of mother	Illiterate	22	17.9	7	43.8	2	18.2	0	0.0	7.25 (6)	0.298
	Primary education	59	48.0	5	31.2	6	54.5	0	0.0		
	Secondary education	27	22.0	2	12.5	1	9.1	0	0.0		
	Graduate and above	15	12.2	2	12.5	2	18.2	0	0.0		
Occupation of father	Daily wages	36	29.3	9	56.2	4	36.4	0	0.0	7.28 (6)	0.296
	Private job	37	30.1	4	25.0	5	45.5	0	0.0		
	Government job	16	13.0	1	6.2	1	9.1	0	0.0		
	Businessmen	34	27.6	2	12.5	1	9.1	0	0.0		
Occupation of mother	House wife	111	90.2	13	81.2	10	90.9	0	0.0	10.3 (6)	0.112
	Private job	4	3.3	1	6.2	1	9.1	0	0.0		
	Government job	8	6.5	1	6.2	0	0.0	0	0.0		
	Businessmen	0	0.0	1	6.2	0	0.0	0	0.0		

Indicates as a significant

The data given in Table 8 shows that the Chi square test used to find out the association between dental (debris) of school going children with their selected socio demographic variables.

The finding of the Chi square test shows that there was no association between dental (debris) score with their selected demographic variable.

Here the p value in each case was more than 0.05 (level of significance).

Indicates as a significant

The data given in Table 9 shows that the Chi square test used to find out the association between dental (calculus) of school going children with their selected socio demographic variables. The finding of the Chi square test shows that there was no association between Dental (calculus) score with their selected demographic variable. Here the p value in each case was more than 0.05 (level of significance).

DISCUSSION

The major findings of the study are discussing as follows according to the objectives of the study and hypothesis:

Section I: Frequency and percentage distribution among school going children with their selected socio demographic variables.

Section II: Health status of school going children.

Section III: Association between the health status of school going children score with their selected socio demographic variables.

Section I: Frequency and percentage distribution among school going children with their selected socio demographic variables.

Majority of the school going children 40% were in the age group of 9 -12 years, 26.7% were in the age group of 5-8 year, 28.0% were in the age group of 1215 year and 5.3% were in the age group of 15 and above. Out of 150 school going children 52.70% were female and 47.30% were male. Majority of the school going children 88.70% belongs to Hindu religion and 10.70 % were to belong to Muslim and 0.70% belongs to other and no one belongs to Christian. Most of the schools going children 30% were I-III standard and VI-VIII standard, and 20% were IV-V and IX-X standard class.

Majority of the school going children 66.70% were vegetarian and 33.30% were non- vegetarian. Out of 150 school going children's father 32% were completed secondary education, 31.30%were graduate and above, 30% were completed primary education, 6.7% were illiterate. Majority of the school going children's mothers 46.70% were completed primary education, 20.70% were illiterate, 20% were completed secondary education and 12.70% were graduate and above. Most of the schools going children's fathers 32.7% were involved in daily wages, and 30.7% were involved in private job and 24.7% were involved in business and 12% were involved in government job. Majority of the school going children's mothers 89.3% were housewife, 6% were involved in government job, 4% were involved private job and 0.7% business. The above findings of the study were supported by Neeti Verma (2021) conducted a study. Health status of primary school children: study in urban slums of Lucknow. A community-based cross-sectional study was conducted among 760 students of primary schools.

A pre-designed, pre-tested, and semi-structured questionnaire was used as a study tool. The study result reveal that the Most of the subjects 362 (47.7%) were in age group of 7-9 years, and were distributed almost equally in the classes from 1st to 5th standard. About one fourth (26.8%) school children were underweight, whereas 5.6% school children were found overweight.

Girls (34.0%) were found underweight more than the boys (20.8%). In contrast, more boys (8.8%) were overweight than girl students (2.6%). This finding is consistent with the others study.⁴

Section II: Health status of school going children

Most of the school children had normal nutritional status 61.3% followed by 28.7% were underweight and 10% were overweight. Majority of the school children had 69.3% normal vision and 30.7% had to abnormal vision in left eye. Majority of the school children had 68.0% normal vision and 32% had abnormal vision in right eye. Most of the school children 99.3% had normal hearing and 0.7% abnormal hearing in left ear. Majority of the school children 98.7% had normal hearing and 1.3% had abnormal hearing in right ear. Majority of the school children 66.7% had no soft debris or stain, 24.7% had found less than 1/3 of surface covered, 8.05% found 1/3 to 2/3 of surface covered and 0.7% more than 2/3 of surface covered. Most of the school children 82.05% had no calculus, 10,7% found less than 1/3 of surface covered and were 7.3% found 1/3 to 2/3 of surface covered.

This was supported by Nanditha G et al (2020) conducted a study on health and nutritional status of school children from a rural area of Andhra Pradesh. A cross-sectional study of 500 rural school children from 5 to 15 years was conducted to assess the nutritional status by anthropometry and health status by clinical examination. The study result revel that the Out of the 500 school children 33.4% were stunted. 25.6% and 27% were underweight according to weight and body mass index criteria respectively. Common health problems among school children in this study were anemia (31%), dental caries (27.2%), upper respiratory infections (13.4%), skin infections and scabies (12.6%), head lice infestation (6.8%), refractive errors (6%) and ear discharge (5.2%).⁵

Section III: Association between the health status of school going children score with their selected socio demographic variables

Based on statistical analysis using Chi square test for significant association was found only between vision (right eye) with their selected demographic variable like-class and education of father and mother only. There were no association found in nutritional status, hearing and dental problem with socio demographic variables. The above findings of the study were supported by Manal Matar Al Daajani, Dina Mohammed Al-Habib et al conducted a study on Prevalence of Health Problems Targeted by the National School-Based Screening Program among Primary School Students in Saudi Arabia. The result of the study shows that the most prevalent health problems identified were dental cavities (38.7%), eye refractory errors (10.9%), and overweight and obesity (10.5%); the less prevalent problems included ADHD (2.81%), auditory problems (0.6%), and scoliosis (0.48%) and there was an association between ADHA

disorder and Auditory problems with their socio demographic variables. This finding is consistent with the others study.⁶

Limitations of the study

The study is limited to: Single setting, descriptive study did not use control group.

CONCLUSION

It was concluded that majority of the school children had underweight, vision problem and dental problems. So, school children need periodic health checkup and follow up. When family member participates in a effective school health programme, they may use the resources already in place to create a healthy environment for their children and provide them with the knowledge and skill they need to live healthy lives.

Nursing implications

Any research work has it's worth when it is applied for the benefit of the public. The findings of the study have implication in the Nursing Administration, Nursing education, Nursing Practice and Nursing Research

Recommendations

On the basis of findings of the study the following recommendation have been made: a comparative study can be conducted both in rural and urban area among school going children. A study can be conducted with large samples. A similar study can be conducted on different group or subjects.

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