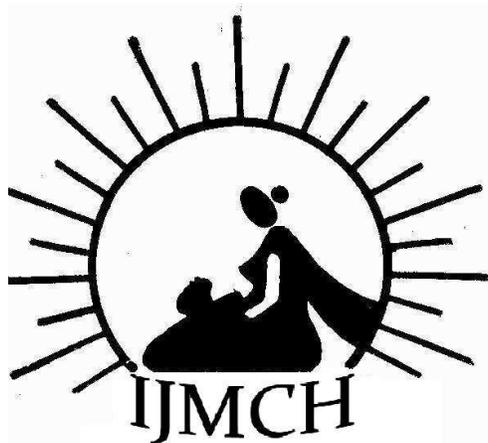


**Health Profile of School Going Children of Rural
Pondicherry.**

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To find out the morbidity pattern among students and to recommend an appropriate solution.

Health Profile of School Going Children of Rural Pondicherry.

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ABSTRACT

Research Question: What is the health status of school going children in a rural area?

Objective: To find out the morbidity pattern among students and to recommend an appropriate solution.

Study Design: Cross sectional descriptive study.

Setting: Two Government primary school in rural area of Pondicherry.

Participants: 169 children (80 boys and 89 girls).

Study variables: Height, weight, general physical examination, visual acuity, dental examination.

Statistical Analysis: Proportions and Chi-square test.

Results: As per our findings 29% of children were stunted, while 37.86% (excluding stunted children) were underweight. On examination 78.1% (132) had dental problems, 13% (22) students were having ophthalmic problems, 15.98% (27) had ENT problems, 9.4% (16) dermatological problems, worm infestation 9.4% (16) and others were 3% (5). Major proportion of students was having health problems, only 12.4% (21) students were apparently morbidity free. Dental problems and under-nutrition were the most common findings in our study.

Keywords: *School health examination, underweight, stunted.*

INTRODUCTION

It is rightly said “A man never stands as tall as when he kneels to help a child”. Everybody accepts that children are the backbone of our society and they represent future generations. 25% of the population in our country constitutes school age children (6-14 yrs.). About 208 million children belong to this group (1) and majority of them reside in underprivileged areas in rural India. It is assumed that school going children are healthy and the sole responsibility of their health is diverted to school authorities. The major problems of school going children are under nutrition, infectious diseases, intestinal parasites, diseases of skin, eye and ear and dental caries (2). But most of the times these problems are ignored by parents and teachers, resulting in poor health of children. Keeping all these points in mind, Department of Community Medicine, A.V. Medical College and Hospital has planned a school health diagnostic and advisory summit at two government run primary schools.

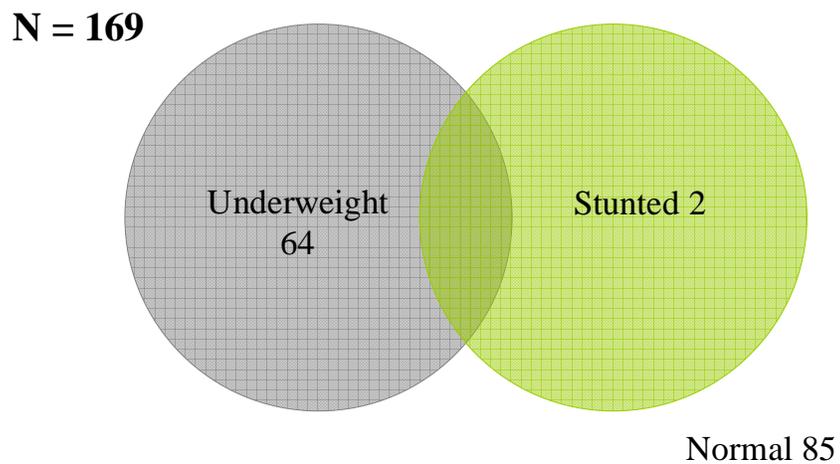
MATERIAL AND METHODS

It is a cross-sectional study in which, all the available students of 2 selected schools were included in the study. The study was conducted in last quarter of year 2008. Out of total six primary government run schools in catchment areas of Department of Community Medicine, two schools were randomly selected for the study. Permission for the study was taken from school authorities before commencement of study. Ethics committee approval had been taken from the institutional ethics committee. Total 169 students participated in the study. Students had been examined on various parameters using standard techniques (height, weight, visual acuity). General physical and systemic examination was done for each child, assisted by medical interns, pediatrician and dentist of A.V.M.C & H. Appropriate intervention (health education, treatment and referral) was done for morbid students.

OBSERVATION

A total of 169 students participated in the study. All students were between 4-10 years of age (Mean 7.11, SD 1.45). 47.3% (80) were boys and 52.7% (89) were girls. The children were studying between kinder garden and class V. 48.5% of children were underweight while 29% were stunted.

Fig. 1. Venn diagram depicting the nutritional status of school children.



Underweight is weight less than 80% of expected weight for age.*

Stunted is height less than 90% of expected height for age.*

*As per Indian Academy of Pediatrics classification 1972. (2)(3)

Table I: Morbidity pattern among Study Subjects (n = 169).

| Examination | Diagnosis | Number n = 169 (%) |
|--------------------|--------------------------|--------------------|
| Ophthalmology | Refractive error | 17 (10.06) |
| | Bitot spot | 2 (1.18) |
| | Conjunctival xerosis | 2 (1.18) |
| | Squint | 1 (0.59) |
| ENT | ARI | 12 (7.10) |
| | Tonsillitis | 9 (5.33) |
| | ASOM | 3 (1.77) |
| | @Others | 3 (1.77) |
| Dermatology | Lice infestation | 7 (4.14) |
| | Prickly heat | 2 (1.18) |
| | Scabies | 2 (1.18) |
| | *Others | 5 (2.96) |
| Dental | Caries | 100 (59.17) |
| | Stain | 10 (5.92) |
| | Calculus | 9 (5.33) |
| | Retained deciduous teeth | 8 (4.73) |
| | Un-erupted tooth | 5 (2.96) |
| | Fluorosis | 1 (0.59) |
| | Lingual eruption | 1 (0.59) |
| General | #Worms | 16 (9.47) |
| | Wound | 4 (2.37) |
| | #Anemia | 1 (0.59) |
| CVS | Murmurs (Valve defects) | 3 (1.77) |
| Respiratory system | LRI | 1 (0.59) |

@Foreign body ear, Ear discharge, Wax in ear

*Keloid, Seborrhic dermatitis, Tinea, Vitiligo and wart.

Diagnosed by history and clinical examination.

1 child had both caries & calculus.

1 child had both un-erupted tooth & retained deciduous teeth.

Abdomen, Central Nervous System, Handicap/disability – No abnormality was detected.

A total of 21 students were apparently morbidity free; others had some or other form of disease or under nutrition.

Table II: Comparison of Examination findings of Under-nourished (n = 84) and Normal Nourished students (n = 85).

| Examination | Diagnosis | Under-nourished n = 84 (%) | Normal-nourished n = 85 (%) |
|---------------|--------------------------|-------------------------------|--------------------------------|
| Ophthalmology | Refractive error | 10 (11.9) | 7 (8.23) |
| | Bitot spot | 2 (2.38) | 0 |
| | Conjunctival xerosis | 2 (2.38) | 0 |
| | Squint | 0 | 1 (1.18) |
| ENT | ARI | 9 (10.71) | 3 (3.53) |
| | Tonsillitis | 1 (1.19) | 8 (9.41) |
| | ASOM | 3 (3.57) | 0 |
| | @Others | 3 (3.57) | 0 |
| Dermatology | Lice infestation | 4 (4.76) | 3 (3.53) |
| | Scabies | 1 (1.19) | 1 (1.18) |
| | Others | 0 | 7 (8.23) |
| Dental | Caries | 50 (59.52) | 50 (58.82) |
| | Stain | 4 (4.76) | 6 (7.06) |
| | Calculus | 7 (8.33) | 2 (2.35) |
| | Retained deciduous teeth | 6 (7.14) | 2 (2.35) |
| | Un-erupted tooth | 1 (1.19) | 4 (4.70) |
| | Others | 0 | 2 (2.35) |
| General | Worms | 8 (9.52) | 4 (4.70) |
| | Wound | 4 (4.76) | 0 |
| | Anemia | 1 (1.19) | 0 |
| CVS | Murmurs (Valve defects) | 1 (1.19) | 2 (2.35) |
| Respiratory | LRI | 0 | 1 (1.18) |

@Foreign body ear, Ear discharge, Wax in ear

1 child has both caries & calculus.

1 child has both un-erupted tooth & retained deciduous teeth.

DISCUSSION

As per our findings 29% of the children were stunted, this depicts the magnitude of chronic malnutrition, while 37.86% (excluding stunted) of children were underweight, this highlights the magnitude of acute malnutrition. The magnitude of stunting was same in another study conducted by Patil et al (4) in which stunting was 30.3%, whereas underweight was found to be comparatively very less (19%) as compared to 37.86% in our study. On examination 78.1% (132) had dental problems, 13% (22) students had ophthalmic problems, 15.98% (27) had ENT problems, 9.4% (16) dermatological problems, 9.4% (16) worm infestation and others were 3% (5). We should also stress on accidental finding of asymptomatic cardiac valvular defects in 1.7% (3) cases. In a study conducted by Patil et al (4), 72.6% had dental caries, 9% had respiratory problems, 6.5% had parasitic infestation, 6% had vision problems and 4.5% had skin infection. Most common morbidity as per our study was dental caries (59.17%) and under-nutrition (50%).

We compared the prevalence of diseases in undernourished and normal nourished children but the difference was found to be insignificant ($\chi^2 = 6.31$, $df = 4$, $p = 0.177$). A total of 87.6% of students were found to be affected with some or other morbid condition. Other study (5) done on school health examination revealed a high (72.4%) morbidity in 11-15 yr age group.

CONCLUSION AND RECOMMENDATIONS

A lot of health problems were found among school going children in Pondicherry, only 12.4% (21) students were apparently morbidity free. This high morbidity will interfere with mental (6) and physical development of students and thus contribute to poor academic performance. Hence the need of the hour to address these problems.

The main solution to these problems is health education of students as well as parents, supported by regular follow-ups. For follow-ups, a strategy should be planned so that each of the school should get half yearly elaborate health check-up. Authors suggest that on basis of ROME (Reorientation of medical education) strategy, 3-4 schools should be connected to primary health centers for health check up and medical advice.

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