

## Medico-social and behaviour problems amongst primary school children in rural area of Kathmandu, Nepal

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### ABSTRACT

The objective of the study was medico-social and behaviour problems among primary school children of age (6-10 years) in rural area of Eastern part of Kathmandu Valley. Observational descriptive study was conducted in Govt. and Private Boarding Schools of rural Kathmandu Valley. Total 503 school children in primary school (6-10 years), Schools of rural area of Eastern part of Kathmandu, 4 were randomly chosen by systematic random technique. All students aged 6-10 years were included in the study. Complete data of each child was collected in a pre-designed, pre-tested questionnaire proforma. Out of 503 children, 230 (45.7%) boys and 273(54.3%) were girls. Four hundred and thirteen (82.1 %) children were found to be suffering from one or more morbid conditions. Hygienic condition was poor as in apparent look. Ninety nine (19.7%) respondents had lice and urticarial rashes in 47(9.3%), behaviour problems in 117(23.3%), eye related diseases in 94(18.7%), ear diseases in 413 (82.1%) and dental carries in 130 (25.8%) as observed in the study. Diseases that are seen among the school children are mostly preventable and the health of the child can be improved by promotion of hygienic practices through proper health education by the teachers and parents.

**Keywords:** Medic-social problems, primary school children.

### INTRODUCTION

The World Health Organization's Expert Committee on School Health Services noted as long as 1950 that "to learn effectively, children need good health".<sup>1</sup> Children's health is an important concern for all societies since it contributes to overall development of nation. Health, nutrition and awareness are important for the development of the child and these inputs need to be considered in a comprehensive manner. A review of available data and studies shows that the major causes of mortality and morbidity among children are a group of diseases that are related to poor living conditions and lack of basic needs. The burden of child mortality is being borne disproportionately by the schedule castes and tribes as compared to other groups.<sup>2</sup> Much of the disease burden derives from the poor environmental conditions, in which children live, including exposure to biological, physical and chemical hazards in the environment and a lack of resources essential for human health.

Extensive surveys have been carried out in different parts of the country and the findings show that sickness, morbidity and mortality rates in India are among the highest in the world.<sup>3</sup> The potential risks uncovered are biological infections, respiratory problems, psycho-social stress, physical injuries and musculoskeletal disorder.<sup>4</sup> Keeping all the facts in view, a felt need was to survey

of primary school children in various schools of rural area in Kathmandu with the following objectives-

To detect the problems at the earliest age in school children

To study the psycho-social and medical problems among primary school children

### MATERIAL AND METHODS

The present descriptive study was carried out from July 2011 to January 2012 in rural area in Kathmandu Valley. The study subjects were school going children (6-10 years). For the purpose of study, the rural area in Kathmandu was selected. A list of all School of rural area in Kathmandu was taken and four schools randomly selected. The primary school children in grades 1 to 4 were examined from the selected school. Total of 503 students (230 boys and 273 girls) were interviewed and examined. They were interviewed through oral questionnaire method and desired information was collected on pre-designed and pre-tested pro-forma.

### RESULTS

In this study Table-1 depicts 273 (54.3%) female and 230 (45.7%) male children out of 503 children. Bathing habit was once a week in 307(61%), twice a week in 109(21.7%) and more than twice a week in

**Table-1:** Age and sex wise distribution of the children

| Age in year  | Male n (%)        | female n (%)      | Total n (%)      |
|--------------|-------------------|-------------------|------------------|
| 6            | 69 (13.7)         | 85 (16.9)         | 154 (30.6)       |
| 7            | 38 (7.6)          | 40 (8)            | 78 (15.5)        |
| 8            | 47 (9.3)          | 51 (10.1)         | 98 (19.5)        |
| 9            | 33 (6.6)          | 47 (9.3)          | 80 (15.9)        |
| 10           | 43 (8.5)          | 50 (9.4)          | 93 (18.5)        |
| <b>Total</b> | <b>230 (45.7)</b> | <b>273 (54.3)</b> | <b>503 (100)</b> |

only 87(17.3%) subjects. Good personal hygiene like combing of hair, trimming of nail and clean dress was observed in 418(83.1%) subjects and poor in 85(16.9%) subjects. Ninety nine (19.7%) students were suffering from head lice as ecto-parasite and also urticarial rashes 47(9.3%) over the body depicted in Table-2. The commonest habit disorder was nail biting in 58(11.5%) cases. In this disorder female contributed 54(10.7%) and remaining 4(0.8%) were only boys. Bruxism was as observed only in 1 case (0.2%). In 18(3.6%) children were found to have bed wetting which contributed 14 (2.8%) female children and 4 (0.8%) male children. In this study 5(1%) also had temper tantrum. Out of which 3(0.6%) were male and 2(0.4%) females. Two (0.4%) female were mental retarded child with low scholastic carrier Table-3. Eye disease revealed in 28(5.6%) muddy conjunctiva, 18(3.6%) itching problems in eye, 10(2%) bitot's spot and 38 (7.6%) with refractive error. Further 13(2.6%) male and 25(5%) female child having refractive error as depicted in Table-4. Of the total 413(81.1%) had ENT problems as observed in Table-5. The wax observed in 196(39%), foreign body in ear of 15(3%), ear ache 40(8%), discharge from ear(s) was 24(4.8%) and itching problems was in 204(40.6%). The common oral hygiene problems of the children were dental carries 130(25.8%), tartar 27(5.4%), enlarge tonsillitis 71(14.1%) and halitosis in 13(2.6%) as revealed Table-6. Amongst other common infections as acute respiratory infection (ARI) in 30(6%) worm infestation in 68(13.5%) and cervical lymphadenopathy in only 4 (0.8%).

**Table-3:** Common behaviour problems of children

| Behaviour problems | Male n (%)        | female n (%)      | Total n (%)      |
|--------------------|-------------------|-------------------|------------------|
| Normal             | 215(42.7)         | 171(34)           | 386 (76.7)       |
| Nail biting        | 4 (0.8)           | 54 (10.7)         | 58 (11.5)        |
| Thumb sucking      | 3 (0.6)           | 30 (6)            | 33 (6.6)         |
| Bed wetting        | 4 (0.8)           | 14 (2.8)          | 18 (3.6)         |
| Temper tantrum     | 3 (0.6)           | 2 (0.4)           | 5 (1)            |
| Bruxism            | 1 (0.2)           | 0                 | 1 (0.2)          |
| Mental retardation | 0                 | 2 (0.4)           | 2 (0.4)          |
| <b>Total</b>       | <b>230 (45.7)</b> | <b>273 (54.3)</b> | <b>503 (100)</b> |

**Table-2:** Bathing habits, Personal appearance and ecto- parasite amongst students

| Bathing habits     | Male n (%) | female n (%) | Total n (%) |
|--------------------|------------|--------------|-------------|
| Once a week        | 148 (29.4) | 159 (31.6)   | 307 (61)    |
| Twice a week       | 52 (10.3)  | 57 (11.3)    | 109 (21.7)  |
| >twice a week      | 30 (6)     | 57 (11.3)    | 87 (17.3)   |
| Poor hygiene       | 28 (5.6)   | 57 (11.3)    | 85 (16.9)   |
| Head lice          | 24 (4.8)   | 75(14.9)     | 99 (19.7)   |
| Urticarial in body | 38 (7.6)   | 9 (1.8)      | 47 (9.3)    |

\*Multiple responses

Immunization status: The immunization status could not be revealed due to non availability of immunization card except BCG scar absent in 108(21.5%) cases as depicted in Table-5.

## DISCUSSION

In this study the female subjects were more as 273(54.2%) and male children were 230 (45.7%) in school as good family awareness for girl's education. Bathing habits in 307(61%) was once a week which indicate poor awareness of maintaining hygiene appearance. They were found less conscious in hand washing, using the junk foods. The higher prevalence of morbidity in children from low socio economic status in our study can be attributed to the poor dietary intake, higher incidence of infection and infestation among them.<sup>5</sup> Other study of Shakya *et al*<sup>6</sup> also found that prevalence of anaemia, malnutrition and dental caries was more in girls than boys. In contrast Srinivasan *et al*<sup>7</sup> found that the prevalence of anaemia and worm infestation was significantly higher in boys 87.7% and in girl 52.6% respectively as compared to that among girls (9.3% and 4.2%). The commonest disorder was nail biting in female child were 54(10.7%) and male only 4(0.8%) commonly affected. Kafle *et al*<sup>8</sup> showed that nail biting is the common behavioural problem in children of age group of 6-10 years. Nail biting habit can make parents, teacher or care taker as a cause of concern. Eventually infected nail can lead to the skin disease also. Eighteen (3.6%) children had enuresis (bed wetting). Among them 14(2.8%) were female and 4(0.8%) were male child. Generalized anxiety, social phobia and separation anxiety probably cause for

**Table-4:** Eye diseases in children

| Eye Diseases      | Male n (%)        | female n (%)      | Total n (%)      |
|-------------------|-------------------|-------------------|------------------|
| Normal            | 190 (37.8)        | 219 (43.5)        | 409 (81.3)       |
| Muddy conjunctiva | 17 (3.4)          | 11 (2.2)          | 28 (5.6)         |
| Itching           | 8 (1.6)           | 10 (2)            | 18 (3.6)         |
| Bitots            | 2(0.4)            | 8 (1.6)           | 10 (2)           |
| Refractive error  | 13(2.6)           | 25 (5)            | 38 (7.6)         |
| <b>Total</b>      | <b>230 (45.7)</b> | <b>273 (54.3)</b> | <b>503 (100)</b> |

Table-5: E.N.T. problems in school children

| Otosopic exam*     | Male n (%) | female n (%) | Total n (%) |
|--------------------|------------|--------------|-------------|
| Normal             | 39(7.8)    | 51(10.1)     | 90(17.9)    |
| Wax present        | 94(18.7)   | 102(20.2)    | 196(39)     |
| Foreign body       | 2(0.4)     | 13(2.6)      | 15(3)       |
| Pain ear           | 26(5.2)    | 14(2.8)      | 40(8)       |
| Discharge from ear | 3(0.6)     | 21(4.2)      | 24(4.8)     |
| Itching            | 66(13)     | 138(22.4)    | 204(40.6)   |

\*Multiple responses

this situation. School phobia occurs in 1-2% of children of an estimated 75% may be suffering some degree of depression and anxiety.<sup>9</sup> In our study bruxism was rare disorder as observed in one case (0.2%) only. Nilner M, Laberge L and others<sup>10,11</sup> explained that the prevalence of bruxism in children is estimated to range from 7% to 15.1%. Some authors describe bruxism as a condition of multifactorial etiology, determined by an association of psychological, local and systemic factors<sup>12</sup>. In the present study 5(1%) children had temper tantrum. Oysterman *et al.*<sup>13</sup> showed that the limited existing research indicates that normative temper outbursts differ from clinically concerning ones in frequency, duration, quality, context, and triggering events. Visual impairment is one of the important refractive errors as health problem among the school going children.<sup>14</sup> Visual disorders are caused by various physiological, environmental and pathological conditions, and have been reported to be associated with higher rate of morbidity and mortality; in particular, uncorrected refractive errors increase morbidity.<sup>15</sup> In this study the poor hygienic condition and poor environment pollution (dusty and smoky) impacted the different eye diseases. The ENT problems in children is screened out from otoscopic exam and morbidity found in 413(81.1%). The impacted wax in 196(39%), foreign body in ear 15(3%), ear ache 40(8%), discharge from ear(s) in 24(4.8%) and itching problem was in 204(40.6%). Rijal *et al.*<sup>16</sup> coded that the most common problem was wax impact as in this study. ENT-related diseases in children is major burden in paediatric age group. According to World Health Organization 42 million people (age > 3 years) have hearing loss. The major cause for hearing loss is otitis media, which is only common cold as a cause of infection in childhood.<sup>17</sup> Otitis media is also the commonest cause of persistent mild to moderate hearing impairment in children and young adults in developing countries.<sup>18</sup> In the Nepal approximately 16% of the population above the age of 5 years suffers from otitis media. The high prevalence of wax in our study corresponds to the results obtained elsewhere in similar study population.<sup>19</sup> Overall incidence of chronic suppurative otitis media in our study was (35.7%). Chronic suppurative otitis media (CSOM) is a major health problem throughout the world

Table-6: Oral hygiene and communicable diseases in children

| Description                          | Male N (%) | female N (%) | Total N (%) |
|--------------------------------------|------------|--------------|-------------|
| Dental carries                       | 82 (16.3)  | 48 (9.5)     | 130(25.8)   |
| Tarter                               | 7 (1.4)    | 20 (4)       | 27 (5.4)    |
| Enlarge tonsillitis                  | 24 (4.8)   | 47 (9.3)     | 71 (14.1)   |
| Enlarge lymph node                   | 0          | 4 (0.8)      | 4 (0.8)     |
| Helitosis                            | 5 (1)      | 8 (1.6)      | 13 (2.6)    |
| Angular Stomatities                  | 3 (0.6)    | 12 (2.4)     | 15 (3)      |
| Acute ARI                            | 11 (2.2)   | 19 (3.8)     | 30 (6.0)    |
| History of worm passing              | 21 (4.2)   | 47 (9.3)     | 68 (13.5)   |
| Immunization status: BCG scar absent | 27 (5.4)   | 81 (16)      | 108 (21.5)  |

\*Multiple responses

Figures in parenthesis are in percentage

in developing countries including Nepal.<sup>20</sup> The previous research showed that Foreign Body in the ear was seen in (2.3%) children.<sup>21,22</sup> In our study foreign body was found in 3% of the children which may be the poor knowledge health or ignorant of parents that they use to put the oil or other herb's liquid during the earache.

The foremost important aspect here is existing awareness in family to send girl child to school in this area. This has to continue further for secondary education also which is felt need in Nepal. So health is a key factor in school entry, as well as continued participation and attainment in school. Most of the defects and diseases that are seen among the school children are preventable and the health of the child can be preserved and improved, by promotion of simple hygienic practices through proper health education by the professional to teachers. The main cause may be the male child is not sent to school in minor sickness but female child are sent in minor sickness is to be brought to notice for avoiding gender discrimination. Nail biting was most commonly observed as behavioural problem in this study which needs services of psychologist as counsellor in school. The psychological aspect needs to be a part of concern for primary school children hence the service of counsellor is desired time to time in school premises itself. Early detection and timely referrals helps in reducing morbidity as in ear, nose and throat problems.

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