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EDUCATIONAL STATUS OF MOTHER AS A FACTOR FOR ROUNDWORM INFECTION IN CHILDREN

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Ascaris lumbricoides Linnaeus, 1758 and *Trichuris trichiura* (Linnaeus, 1771), Stiles, 1901 are the two most common soil transmitted roundworms (nematodes) in Bangladesh. The World Health Organization(1) estimated around 1000 million cases of ascariasis due to *A. lumbricoides*, and 500 million cases of trichuriasis infection due to *T. trichiura* world-wide. Children are more exposed to these soil-transmitted worms which are also associated with malnutrition, stunted growth and severe gastrointestinal abnormalities.(2,3) High prevalence rates of these two worms were correlated with poverty, poor hygienic condition and environmental degradation. In the present study professional and educational status of mother were correlated with the infection of these two worms among the children.

This cross-sectional study was carried out among 253 children (up to 12 years of age) from whom stool samples were collected from two selected slum areas in Dhaka city from October, 2001 to June, 2002. These two areas were Mirpur slum area (Mirpur-11) and Agargaon slum area (opposite to LGED Building). Both of them had apparently similar types of housing, demographic and socioeconomic pattern. The presence of ova in the stools was considered for the presence of adult / mature worms in the individuals. Each stool sample was examined using several coprological techniques (direct smear, form-ether concentration, and Ziehl-Neelsen). Procedures for those techniques were followed after Cable,(4) Ash *el al.*(5) and Khanum *el al.*(6)

At first the selected mothers were explained about the nature of the study through direct interview. The information regarding their children and status of mother's education and occupation was recorded, complied and analyzed through a standard questionnaire. Parasitological examinations were performed at the Parasitology Laboratory, Department of Zoology, University of Dhaka.

In the present observation, the prevalence of *A. lumbricoides* (34.61%) and mixed infection (21.15%) were found highest among the children of housewife mothers. While the highest infection of *T. trichiura* (19.67%) was reported from the children of labour mothers (mostly brick crusher and garments worker). While among the children whose mothers were housemaid the prevalence rates for *A. lumhricoides, T. trichiura* and mixed infection were 25.31, 18.99 and 16.45 %, consecutively (Table 1).

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On the other hand, the highest prevalence of *A. lumbricoides* and *T. trichiura* (39.13 and 24.64%) were reported among the children whose mothers could sign only. The highest prevalence (21.82%) for mixed infection was found among the children whose mothers were illiterate. No positive case of *T. trichiura* and mixed infection were reported from the children whose mothers were educated at least up to S.S.C. (Table 2).

Table 1. Prevalence of roundworm in relation with the occupation of mothers.

Occupation	Total No. of observation	No. of *A. l.** positive	Pre %	No. of *T. t.*** positive	Pre %	No. of mixed inf.	Pre %
Housewife	52	18	34.61	5	9.61	11	21.15
Housemaid	79	20	25.31	15	18.99	13	16.45
Labour	122	38	31.15	24	19.67	17	13.93

**Ascaris lumbricoides*, ***Trichuris trichiura*.

Table 2.Prevalence of roundworm in relation with the educational status of mothers.

Educational qualification	Total no. of observation	No. of *A.l.** positive	Pre %	No. of *T.t.* positive	Pre %	No. of mixed inf.	Pre %
Illiterate	55	21	38.18	10	18.18	12	21.82
Can sign only	69	27	39.13	17	24.64	9	13.04
Primary	83	30	36.14	13	15.66	7	8.43
Class VI to X	39	8	20.51	4	10.26	4	10.26
S.S.C.+	7	1	14.26	0	0	0	0

The present result showed that the infection rates of these two soil transmitted nematodes do not vary greatly regarding the occupation of the mothers. While a little education of mother (illiterate and can sign only) reveals a risk factor for the infection of the children. Rowsan[7] also found that the prevalence of soil transmitted nematodes were very high (92.3%) among the children whose mothers were illiterate.

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