

# Prevalence of Intestinal Parasitic Infestations in School going Children of Udaya Kharka Secondary School, Chapagaun, Lalitpur, Nepal

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## **ABSTRACT**

Intestinal Parasitic infestation is major cause of childhood morbidity in developing countries like Nepal with lack of hygiene and safe water supply. This study was done to find the actual scenario of parasitic infestation in a population of Nepal.

This cross sectional, prospective study was undertaken in Udaya Kharka Secondary School, Chapagaun, Lalitpur. The study population included 246 students from school of age 6 years to 18 years. Routine and microscopic examination was done for stool collected from healthy students.

Children among examined incidence of infestation was 52%. And different six types of parasites were found. Among which Giardiasis was the common with 42%. There was high incidence of parasitic infestations in school going children in the school. Incidence of parasitic infestations according to sex showed that girls are infested more than boys and according to age group 11 to 14 years age group is highly infested.

## **INTRODUCTION**

Parasitosis is major health problem in developing countries, including Nepal. This is major problem in places where safe water supply and other sanitary facilities are lacking. Population with low education and income families are prone to get this problem because they do not know the disease, their transmission methods and ways of prevention.<sup>1</sup> They even do not know about the benefits of safe drinking water and sanitary facilities. Parasitosis is major cause of anemia, mal-absorption and related problems. The dispensing of Albendazole tablets for free, every six months to all children throughout the country for less than five years has been adopted by MOH &P in Nepal as strategy to counter the high prevalence of parasitosis in an age group thought to be most vulnerable.

Studies that look at age specific prevalence of intestinal parasites in Nepal have been very few.

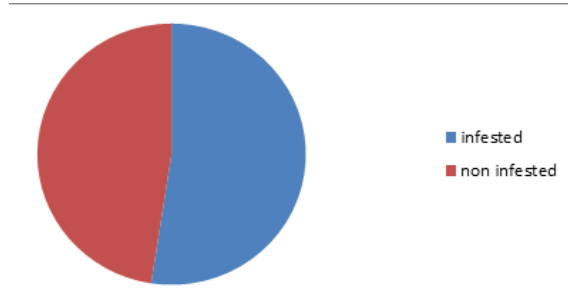
No program covers free deworming to children over five years of age. The knowledge of prevalence of infestation in children over that age may guide policy aimed at increasing the age bar for free deworming. Therefore in this study we have measured the prevalence of intestinal parasitosis in children of school going age.

## **METHODS**

This is a descriptive cross-sectional study, done by stool examination under microscope from 246 students school going children of age 6 years to 18 years in Udaya Kharka Secondary School, Chapagaun, Lalitpur, Nepal. Among 400 students in the school who were advised to bring spoonful stool sample in clean labeled container. Microscopic examination was done for detection for oocytes, cysts and trophozoites of protozoa and detection of larvae and eggs of helminthes. Data was collected as Performa. Data available

were analyzed using SPSS 11.5 by using students Chi square test and P value < 0.05 was considered significant.

**RESULTS**



**Figure 1.** Number of students with parasitic infestation and no parasitic infestation.

**Table 1.** Prevalence of intestinal parasitic infestation in different sex

Gender	Total	Positive	P value
Male	136	54(40 %)	<0.05
Female	110	75 (68%)	
Total	246	129 (52%)	

Prevalence of parasitosis is high in female child in relation to male child in the school which is clinically and statistically significant.

**Table 2.** Prevalence of intestinal parasitic infestation in different age group

Age	Total	Positive	P value
6-10 years	92	47 (51%)	<0.05
11- 14 years	131	80 (61%)	
15 to 18 years	23	2 (9%)	
Total	246	129 (52%)	

According to age group the age group of 11- 14 years were included most and parasitosis was most seen in this age group is 61%. After that 6-10 years of age group is affected most and 15 -18 age group is affected least.

**Table 3.** Incidence of parasitosis according to types of parasites.

Type of Parasites	Number of students	% of students
Giardia Lamblia	54	42
Ascaris Lumbricoides	52	40
Trichusistrichura	28	22
Hook worm	13	10
Hymenolepes nana	7	5
Others	11	8

**DISCUSSION**

Parasitosis is quite common problem from developing countries like Nepal and more prevalent in school going children. Prevalence of parasitosis may be different according to the time place and study groups. Among the children it seems to be high. The prevalence is high in this study in compare to others studies in Nepal by Khanal et al which shows only 17 % prevalence of parasitosis in school going children in a school.<sup>1</sup> It might be because of study time and age population. Deworming program adopted by government of Nepal might have decrease the prevalence of parasitosis. But prevalence is similar to the study done by Ikarm et al done in 2009 in Pakistan of 66%.<sup>2</sup> Incidence of parasitosis is more in female child in this study as compare to other studies. Age group mostly affected is 11- 14 years of age group and least affected group is 15 – 18 years group. The child above 15 years is conscious about the hygiene and sanitation.

The most common parasite found in this study was Giardia Lamblia being 42% of total parasite infestation children. As compare to other study done in Nepal, Pakistan and Nigeria most common parasites was Ascaris Lumbricoides. But the in this study Ascarias Lummbricoides is in the top list but after the Giardia Lamblia. But all the studies in different countries shows the parasites in the top list are Ascaris Lumbricoides and Giardia Lamblia. This concludes intestinal parasitic infestation is common among children of Nepal. With improvement in hygiene, National deworming program has significantly decreased the prevalence of intestinal parasitosis. Giardia Lamblia and Ascarias Lumbricoides are common

intestinal parasites to affect school going children.

### **CONCLUSIONS**

A high percentage of primary school children from rural Lalitpur have intestinal worm infestation and majority of them have Giardia Lamblia and Ascaris lumbricoides.

**Conflict of Interest: None**

### **REFERENCES**

1. Khanal LK, Choudhury DR, Rai SK, Sapkota J, Barakoti A, Amatya R, Hada S. Prevalence of intestinal worm infestations among school children in Kathmandu, Nepal. *Nepal Med Coll J*. 2011 Dec;13(4):272
2. Ikram Ullah, Ghulam Sarwar, Sabina Aziz, Muhammad Hussain Intestinal worm infestation in primary school children in rural Peshawar, Department of Community Medicine, Khyber Girls Medical College, Khyber Medical College Peshawar and Gomal Medical College D.I. Khan, Pakistan, *Gomal Journal of Medical Sciences* July-December 2009, Vol. 7, No. 2