

**STUDY ON PARASITIC INFECTIONS AMONG CHILDREN OF
SUKUMBASI BASTI OF
KATHMANDU VALLEY**

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RECOMMENDATION

This is to certify that **Mr. Dhiraj Thapa Magar** has completed this dissertation work entitled "**STUDY ON PARASITIC INFECTIONS AMONG CHILDREN OF *SUKUMBASI BASTI OF KATHMANDU VALLEY***" as a partial fulfillment of Master of Science Degree in Microbiology under our supervision. To the best of our knowledge, this work has not been submitted for any other degree.

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ABSTRACT

Intestinal parasitic infections still constitutes one of the major public health problems in Nepal. Present study was done to find out the prevalence of intestinal parasitosis in children (aged <16 years) of *Sukumbasi* (people living without land ownership) *Basti* (area), Ward No-34, Sinamangal in Kathmandu Valley. A total of 279 stool samples were collected from August 2008 to December 2008. The samples were collected in clean, dry and screw capped plastic container and were subjected to macroscopic examination for adult parasites and/or segment of parasites. Samples fixed in 10% formal-saline and parasites were examined microscopically after concentration by formal ether sedimentation technique. Overall parasite positive rate was 43.3% with no significant difference in two genders (Boys: 48.3%, Girls: 37.5%) ($p=0.07$). The percentage of monoparasitism (80.1%) were higher than multiparasitism (19.8%). Altogether 11 species of parasites were detected of them. *Giardia lamblia* was most common followed by *Entamoeba histolytica*, *Trichuris trichiura* and others. Younger children (aged 10) had marginally higher positive rate (45.4%) than older children (40.8%) ($p=0.44$). Prevalence of parasitic infection rate was higher in family size > 5 (50.0%) than ≤ 5 (40.0%) ($P=0.1$). Positive rate was higher in *Tibeto-Burman* (55.0%) and the least in *Indo-Aryan* (25.4%) ($p=0.01$). The parasitic prevalence rate was higher among children not having toilet (62.1%) compared with children having toilet (41.2%) in home. Children drinking water from *kuwa* (shallow well) had marginally lower prevalence rate (38.6%) than who used tap water (45.0%). The higher infection rate (52.5%) was observed in children belonging to labour family and the least in the business family (28.1%). Children taking anti-parasitic drug in last six months had low positive rate (25.4%) than others (48.2%) ($p=0.002$). Results showed that nearly half of the children in this area had intestinal parasitosis and suggests periodic deworming as well as sanitary hygienic practices.

Key words: *Giardia lamblia*, Intestinal parasites, *Sukumbasi* children, *Trichuris trichiura*.

TABLE OF CONTENTS

	Page No.
Title page	i
Recommendation	ii
Certificate of approval	iii
Board of examiners	iv
Acknowledgement	v
Abstract	vi
Table of contents	vii
List of abbreviations	ix
List of tables	x
List of photographs	xi
List of appendices	xii
CHAPTER I: INTRODUCTION	1-2
CHAPTER II: OBJECTIVES	3
CHAPTER III: LITERATURE REVIEW	4-26
3.1 Global Scenario	4
3.2 SAARC Countries Scenario	15
3.3 National Scenario	20
CHAPTER IV: MATERIALS AND METHODS	27-31
4.1 Materials	27
4.2 Methods	27
4.2.1 Study area	27
4.2.2 Samples collections	28

4.2.3 Transportation of the samples	28
4.2.4 Laboratory processing of the samples	28
4.2.4.1 Macroscopic Examination	28
4.2.4.2 Microscopic Examination	29
4.2.5 Recording of the data	30
4.2.6 Report distribution	30
4.2.7 Statistical analysis	31
CHAPTER V: RESULTS	32-37
CHAPTER VI: DISCUSSION AND CONCLUSION	38-44
6.1 Discussion	38
6.2 Conclusion	44
CHAPTER VII: SUMMARY AND RECOMMENDATION	45-47
7.1 Summary	45
7.2 Recommendation	46
CHAPTER VIII: REFERENCES	48-61

LIST OF ABBREVIATIONS

AF	Acid Fast
STH	Soil Transmitted Helminthes
<i>A. lumbricoides</i>	<i>Ascaris lumbricoides</i>
<i>S. stercoralis</i>	<i>Strongyloides stercoralis</i>
<i>H. nana</i>	<i>Hymenolepsis nana</i>
<i>E. histolytica</i>	<i>Entamoeba histolytica</i>
<i>E. coli</i>	<i>Entamoeba coli</i>
<i>I. butschlii</i>	<i>Iodamoeba butschlii</i>
<i>C. mesnili</i>	<i>Chilomastix mesnili</i>
<i>E. nana</i>	<i>Endolimax nana</i>
<i>E. hartmani</i>	<i>Entamoeba hartmani</i>
<i>B. hominis</i>	<i>Blastocystis hominis</i>
<i>C. cayetanensis</i>	<i>Cyclospora cayetanensis</i>
<i>T. trichiura</i>	<i>Trichuris trichiura</i>
<i>N. americanus</i>	<i>Necator americanus</i>
<i>P. westermani</i>	<i>Paragonimus westermani</i>
VDC	Village Development Committee
WHO	World Health Organisation
MoHP	Ministry of Health and Population
NITMPHR	National Institute of Tropical Medicine and Public Health Research
Total. no	Total number
Pos. n	Positive number

LIST OF TABLES

	Page No.
Table 1: Types of parasites detected	32
Table 2: Types and frequency of parasites detected	33
Table 3: Gender wise prevalence of parasitic infection	34
Table 4: Age wise distribution of parasitic infection	34
Table 5: Prevalence of parasite by family size	34
Table 6: Prevalence of parasite in different ethnic group	34
Table 7: Parasite prevalence in the relation to presence of toilet	35
Table 8: Prevalence of parasitic infection according to nail cutting habit	35
Table 9: Prevalence of parasitic infection according to the source of drinking water	36
Table 10: Prevalence of parasitic infection according to the type of water used for drinking	36
Table 11: Prevalence of parasite infection according to parent's occupation	36
Table 12: Prevalence of parasitic infection in relation to anti- helmenthic drug intake in the past six month	36

LIST OF PHOTOGRAPHS

Photograph 1: Cysts of *Giardia lamblia* (Iodine mount, 40X)

Photograph 2: An egg of *Hymenolepis nana* (Wet mount, 40X)

Photograph 3: An egg of Hookworm (Wet mount, 40X)

Photograph 4: An egg of *Ascaris lumbricoides* (Wet mount, 40X)

Photograph 5: An egg of *Trichuris trichiura* (Wet mount, 40X)

Photograph 6: Specimen processing with the use of microscope in the laboratory.

LIST OF APPENDICES

	Page No.
Appendix 1: Materials and chemicals used	I
Appendix 2: Composition and Reagents Preparation	II
Appendix 3: Questionnaire and report form	III
Appendix 4: Map of <i>Sukumbasi Basti</i> , Sinamangal, Kathmandu	IV