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Assessment of the prevalence of intestinal parasitic infections and associated habit and culture-related risk factors among primary schoolchildren in Debre Berhan town, Northeast Ethiopia

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Background: Intestinal parasitic infections (IPIs) are still amongthe majorpublic health issuesin developing countries. Assessingthe prevalence of IPIs and potentialrisk factors in different localities isessentialtoenhance controlstrategies. To date, no prevalence assessment study was conducted in Debre Berhan town. Therefore, the aim of this study was to assess the prevalence of IPIs and associated habit and culture-related risk factors among primary schoolchildren in Debre Berhan town, Northeast Ethiopia.

Method: School based cross-sectional study was conducted from April to June 2017. A total of 645 children aged 6-15 years were selected from six primary schools in Debre Berhan town via a multistage random sampling technique. A structured questionnaire was used to collect data about sociodemographic and potential risk factor variables. Fresh stool samples were collected from each child and examined using direct smear and formal-etherconcentration technique.

Result: Among the 645 children participated in the study, 341 (52.9%) were infected by one or more intestinal parasites. Helminths (33.8%) were more prevalent than protozoa (20%). Double parasitic infectionrate was 0.9%. The predominant parasites were *Ascaris lumbricoides* (22.6%), *Entamoeba histolytica/dispar/moshkovskii* (18.1%) and *Hymenolepis nana* (5.7%). Multivariable logistic regression analysis showed that ageof child (6-9 years),family size (above 5), mother'silliteracy and primaryeducation, father's illiteracy, urban-farmer father,manual-worker father,not washinghands before eating, unclean fingers, open defecation site(ODS) near residence, latrine type, cultural response to dropped food (cleaning and eating; 'kiss and replace'), habit of playing with waste water, habit of playing with soil, habit of sucking fingers and habit of eating when playing were significantly associated with IPIs($p<0.05$). Likewise, age (6-9 years), mother's illiteracy, urban-farmer father, not washing hands before eating, ODS near residence, tradition of cleaning and eating dropped food, habit of playing with soil, sucking fingers and eating when playing were identified as significant risk factors of *A. lumbricoides* infection.

Conclusion: High prevalence of IPIs among the study participants demands improvement of environmental sanitation, personal hygiene, and health education regarding the potential habit and culture-related risk factors.