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Culture change and helminthiasis among the Tsimane' of lowland Bolivia.

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The goal of this study was to investigate how acculturation and economic integration influence the distribution of soil-transmitted helminths among the Tsimane' Amerindians of lowland Bolivia. Although several researchers have examined the effects of culture change on intestinal parasitism, results have been mixed. In a one year panel study, fecal samples and lifestyle interviews were collected for 119 adults (64 females and 55 males) ranging in age from 17 to 69 years. Microscopic examinations revealed high levels of helminth infections with 86% harboring one or more species of helminth. The most common infection was hookworm (*Ancylostoma duodenale* or *Necator americanus*) with 82% of adults infected. *Ascaris lumbricoides*, *Trichuris trichiura*, and *Strongyloides stercoralis* were also identified at lower frequencies. A repeated measures linear regression model was used to examine how variation in behavioral factors, education levels, and economic resources was associated with the distribution of the soil-transmitted helminths. Formal education was most strongly associated with reduced levels of soil-transmitted helminth infection. Age, sex, and household access to potable water also were significantly associated with parasite levels. Variation in individual material wealth and cash income was not associated with the distribution of helminths throughout the study communities. This study suggests that for Tsimane' adults the occurrence of parasitic disease is more closely related to education and individual behaviors than economic resources.

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