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Evaluation of occupational risk for *Schistosoma mansoni* and changing parasite population structure in agricultural workers in Salvador, Bahia

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In 2011, we described a group of local agricultural workers who showed a higher risk of infection and higher parasite load than the general population, suggesting an occupational risk. This study aims to evaluate the distribution, prevalence and intensity of *Schistosoma mansoni* infection in all local agricultural workers. Urban gardens identified in 2013 were revisited in 2019, and all workers were invited to answer an epidemiological survey and provide stools. A single stool was examined by Kato-Katz test on 2 slides. Participants positive for schistosomiasis were treated with praziquantel and other helminths were treated with albendazole. Of the 43 existing gardens in 2013, 18 remain active in 2019. They are distributed in 4 out of 12 sanitary districts and scattered among 6 neighborhoods. Twenty-two percent (4/18) of the gardens had individuals infected with *S. mansoni*. Thirty-six agricultural workers participated. The majority were male (83%) with a mean age of 51.1 ± 14.6 years. Most of the individuals (80.6%) were born outside of Salvador and lived about $56.5 \pm 24.8\%$ of their lives in the city. About 36.1% indicated a history of schistosomiasis, and of these, only one (7.7%) reported never being treated. Almost 70% were illiterate or did not finish elementary school. All (100%) reported having contact with surface water during work. Among workers, 36 (100%) were in the parasitological survey, with a 22% (8/36) schistosomiasis prevalence (parasite load of 316.50 ± 612.80 eggs per gram of feces). A higher prevalence than the national one (2%). Our results indicate an occupational risk for some of the gardens in Salvador. To evaluate the local risk level, these sites will be studied and treated longitudinally every 3 months for 6 months. The parasite's population structure, pre- and post-treatment, will be evaluated to better understand local transmission.