XVII INTERNATIONAL SYMPOSIUM ON
SCHISTOSOMIASIS
PERSPECTIVES ON SCHISTOSOMIASIS ELIMINATION
NOVEMBER 10-13TH 2024 | SALVADOR - BAHIA

Indicate the format in which you wish to present your work: ☒ Poster ☐ Oral Presentation

TITLE

SANITATION AND WATER EXPOSURE AS RISK FACTORS FOR SCHISTOSOMA MANSONI PARASITIC LOAD IN A RURAL COMMUNITY IN BAHIA

AUTHORS

*Santos, M.G.Ba; Nascimento, A.B.Sa; Monteiro, L.C.A.Ba; Silva, B.R.B.Ca; Santos, R.Aa; Santos, K.Ra; Souza, B.O.La; Casaes, A.C.Ta; Menezes, C.Aa; Queiroz, L.Ca; Costa, B.G.Ga; Francisco, M.V.L.Oa; Siqueira, I.Ca; Oliveira , R.Ra

AFFILIATIONS

Laboratório de Investigação em Saúde Global e Doenças Negligenciadas, Instituto Gonçalo Moniz, Fiocruz, Salvador, Brasil

ABSTRACT

Introduction: The lack of sanitation and consumption of unsafe water pose a health risk and contribute to the persistence of diseases such as schistosomiasis, which proliferate due to contact with contaminated water during essential activities for community development. Our objective is to assess how varying levels of river water exposure and inadequate sanitation conditions influence Schistosoma mansoni parasitic load in affected populations. Methodology: Individuals from a cross-sectional study conducted in 2018 who had Kato-Katz results and completed questionnaires on water exposure were evaluated. Data from previous studies in the same area were used complementarily to analyze trends in the prevalence of Schistosoma mansoni, parasitic load, and practices related to sanitation and water exposure. The objective of this study is to assess how varying levels of river water exposure and inadequate sanitation conditions influence Schistosoma mansoni parasitic load in affected populations. Results: Between 2004 and 2018, the association between basic sanitation, river water exposure, and S. mansoni parasitic load was investigated. In 2018, 340 individuals were included in the study, with a median age of 23 (IQR 13-43), the majority being female (57.1%). However, parasitic load was significantly higher among men (p= 0.0209). Of these, 189 (55.6%) had S. mansoni eggs in their stools, with a median parasitic load of 36 (IQR 12-108) epg. River water exposure was predominant, with 93.5% of participants reporting contact with local water bodies, similar to 84.34% in 2010 and 70.76% in 2004. Among 2018 participants, the highest infection rate was observed among those who bathed in the river (96.2%), with 69.9% of infected individuals engaging in this activity more than three times per week, followed by activities such as fishing and leisure. However, the frequency of these activities did not influence the intensity of S. mansoni infection, corroborating data from other periods. Basic sanitation data over the period indicated limited improvement in water treatment and waste disposal conditions. In 2018, only 13.82% reported treating their drinking water, a decrease from 39.54% in 2010. Burning waste continued to be the predominant method of waste disposal (66.66% in 2014, 61.30% in 2010). Analysis of parasitic load over time revealed that although there was a high prevalence of infection among those exposed to water, the intensity of infection remained low, which may be related to the frequency and type of exposure, as well as to other factors, such as repeated treatment and improvement in socioeconomic conditions. Conclusion: The persistence of schistosomiasis in a community is complex, as continuous exposure to contaminated water bodies occurs during daily and subsistence tasks. To eradicate schistosomiasis in these areas, actions such as those proposed in the WASH strategy are of fundamental importance and extreme necessity.

KEYWORDS

Key Words: Schistosomiasis; WASH; Sanitation

FINANCIAL SUPPORT

FIOCRUZ IGM PIAP 001/2017; FIOCRUZ IGM-002-FIO-20-2-24; FIOCRUZ VPPCB-007-FIO-18-2-87; CNPq 433141/2018-2.