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Self-reported prevalence of diseases commonly linked to poor environmental sanitation and waterborne diseases among residents of Anil, Rio de Janeiro – cross-sectional study

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Abstract

Background: Understanding the epidemiological profile of diseases linked to environmental sanitation enables the development of preventive public health measures tailored to specific geographic and socio-environmental contexts. Poor sanitation is a key factor contributing to the spread of waterborne diseases. Environmental sanitation practices prevent diseases and ensure greater social hygiene [1]. **Objective:** This study aimed to assess and compare the self-reported prevalence of water-borne and sanitation-related diseases, as well as access to water and sanitation infrastructure, between residents of the Canal do Anil community ("favela") and the central area of the Anil neighborhood in Rio de Janeiro. **Methods:** The analytical observational study was approved by the CEP/CONEP system (Opinion No: 2.620.525, CAAE 74415017.2.0000.5282, approved on 25 April 2018). This cross-sectional analytical study involved a non-probabilistic sample of 494 residents from the Canal do Anil area. A face-to-face questionnaire was administered covering sociodemographic data, health status, and sanitation conditions. Data were described using counts and percentages. Prevalence confidence intervals were calculated using the exact and Wald methods. Comparisons between groups were performed using Chi-square tests. **Results:** Residents of the Canal do Anil community reported significantly fewer cases of Zika (1.6% vs. 5.2%) and chikungunya (2.1% vs. 6.4%; p=0.002) compared to residents of the central neighborhood. They also reported fewer skin diseases (8.5% vs. 13.8%; p<0.001). In terms of sanitation, a lower percentage reported having filtered water at home (83.6% vs. 93.5%; p<0.001), while more residents noted unpleasant smell in the water (12.2% vs. 5.2%; p=0.003). The use of canal water for domestic activities (9.9% vs. 0%; p<0.001) and sightings of children playing in the canal (75.2% vs. 48%; p<0.001) were also more common. **Conclusions:** Despite poorer sanitation conditions and self-perception of water quality, residents of the Canal do Anil community reported fewer cases of some diseases. This finding may reflect differences in disease awareness, access to healthcare, or underreporting, warranting further investigation.

Keywords: waterborne diseases; sanitation; environmental health; epidemiology; urban health inequities

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