

Recent biophysical characteristics of domestic water sources in Owerri Metropolis, Nigeria.

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ABSTRACT:

The recent biophysical characteristics of domestic water sources in Owerri metropolis, Nigeria was studied for quality. The selected water sources were borehole, Otamiri River, Nworie Rivers, tap water and rain water. Results of bio-load study of the water sources revealed borehole water to have the least colony forming units per milliliter of total heterotrophic bacterial count (THBC), total coliform count (TCC), total *Salmonella-Shigella* count (TSSC), and total fungal count (TFC), as against the Otamiri River with the highest values. Physicochemical characteristics of water sources studied were within permissible limit of World Health Organization (WHO) standards for domestic use. The high percentage occurrence of *Salmonella species* among other bacterial genera in the studied water sources raises a health concern. These could be behind the high incidence of diarrhoea and typhoid infections, routinely reported in the clinics within the metropolis. With these findings, there is need for public water supply authority within Owerri metropolis to improve in quality of water distributed. The present study has shown the recent biophysical characteristics of domestic water sources in Owerri metropolis, Nigeria.

Keywords:

Bio-load, biophysical characteristics, infections, water sources, Owerri metropolis.