

ABSTRACT

Vavuniya district is in the south of the Northern Province of Sri Lanka having four DS division, each DS division having one MOH division namely Vavuniya, Cheddikulam, Vavuniya South and Vavuniya North. Vavuniya MOH division consists of 42 GN divisions with 12739 populations. People in this area are using groundwater, RO filtered water and bottled water as their drinking water sources. The main issue with the groundwater is the low acceptance by the users, mainly due to high concentration of hardness and calcium. The bottled water and RO filtered water industries have flourished. However, the manufacturers' adherence to the regulations is questionable, raising concerns regarding the quality of bottled and RO water. 53 common and 4 water supply wells mainly used 7 bottled water brands and 42 RO samples were collected and quality parameters were analyzed based on SLS 614. 2013. Findings reveal that groundwater turbidity (11.2%) and colour (11.2%), pH (5%), EC(78.6%), TDS (76.2%), Total hardness (83.3%), Chloride (9.5%), Fluoride (23.8%), Nitrate (4.8%) and Phosphate (7.2%) were above the SLS limit and 7.1% of the sample shows total coliform contamination. Physical parameters of bottled /RO water were within SLS limit but findings show 31% RO and 57% of bottled water were acidic in nature and EC, TDS, Total hardness, Fluoride and Chloride were significantly varied with SLS limit and considered to be low mineral water. In terms of the five demographic factors there was a relationship between income, education level and occupation and no relation between gender and age with water selection behavior and weak negative relationship between perception and water selection behavior.