

## ABSTRACT

**Introduction:** As a public water source establishing of reverse osmosis purified water plants become one of the effective solutions for the mystery disease of Sri Lanka known as chronic Kidney Disease of Unknown Origin (CKDu).

**Objective:** To determine the pattern of using reverse osmosis purified water for consumption and factors associated with its usage among the residents of Medical Officer of Health area Welikanda.

**Methods:** A descriptive cross-sectional study was conducted among 506 households. Two staged randomized cluster sampling technique was applied. An interviewer administered questionnaire used to collect data. Data was analyzed using statistical package for social sciences (SPSS version 23). Chi square test was performed to assess associations.

**Results:** Respondents were females (64.2%) and falls in age category 25-44 years (50.8%). Currently (68%) consuming reverse osmosis water, (54.9%) using only for drinking purpose. Younger age, being Sinhala Buddhist, lower income, adequate information and taste of osmosis water were significantly associated with knowledge ( $p < 0.005$ ). Being female, younger age, being Sinhala Buddhist, lower income, adequate information and taste of osmosis water, knowledge were significantly associated with attitudes ( $p < 0.005$ ). Younger age, lower education, having good knowledge and attitudes, amount of water distribution, distance to the plant, travelling time, cost for travelling, availability of manpower, service charge at the plant were significantly associated with consuming reverse osmosis water ( $p < 0.005$ ).

**Conclusion:** Great number of households in Medical Office Health area Welikanda were using reverse osmosis purified water. Streamlining the reverse osmosis unit's installation, maintenances and regular monitoring proper purification process including water quality are recommended. Facilitating consumption of reverse osmosis water, strengthening awareness improve knowledge and attitudes, studies on impact on long-term use are also recommended.

**Keywords:** Reverse osmosis water, water source selection, pattern of consumption