

Abstract

Medical Officer of Health (MOH) area Bibile, is situated in Badulla district, Sri Lanka. This MOH area uses different types of water sources which contribute to several water projects. Majority are supplied by small water projects where quality of supplied water is different from each other. Some water sources have repeatedly been found positive for E.coli and Coliforms. Bibile MOH area consists of 4 PHI areas. Out of them, Malhewa and Yalkumbura PHI areas reported polluted water sources repeatedly. The objective of the study was to describe the practices on usage of safe water and the level of microbiological safety of water sources in the Malhewa GN division.

This was a Community based cross sectional descriptive study. Malhewa GN division is an area with a population of 1214 which consist of 446 families with 294 households. Of them, 204 houses are supplied water by a single project, others use well water and water from small water streams (MOH, Bibile, 2015). Adult population age more than 18 years who are resident of Malhewa GN division for more than 6 months chosen for the study. New residents who came after 2015 census of population and housing were excluded. Sample size required for the survey to detect 50% good practices with 5% confidence level in an infinite sample of 294 households was 167. However, 220 people from the population participated to the study. Data collection was done by a pretested interviewer administered questionnaire.

Majority (55.9%) of the participants were GCE O/L. (General Certificate Exam Ordinary Level) not qualified, so the researcher gave the questionnaire to the most educated person in a family. Percentage of the study participants who use a common well for drinking and cooking was 59.6%. Samples were collected from 11 of these main wells. Although 105(47.1%) of the participants used a common well for bathing and other use, majority (52.9%) of participants used collected rain water(14.8%) and unchlorinated village water projects water(29

Majority (58.7%) answered as they boiled their water before use, but only 89 participants out of 131(67.9%) always boiled their water before use. This showed a practice of raw water usage. Satisfactory level of participants stored their water in closed containers. Practices vary regarding storage of water. Nevertheless, satisfactory amount of participants cleaned their storage containers. Regarding transportation of water, majority received water through a pipe line. Significant amount (30.0%) of participants transport water in open containers, which can cause

contamination. From participated families, 82.1% took treatment from a government hospital. In a self-reported practice of washing hands before meals and after toilet use, was satisfactory. Although 111(50.5%) washed hands with soap, many participants 74(33.6%) practices regarding handling children 's stools was not satisfactory.

According to distribution of households and population by type of toilet/latrine facilities, according to residence, (Sri Lanka, 2006-07) improved, not shared facility 84.7%.

But almost all of this study area used water sealed latrines.

All analysed common water sources were microbiologically unsuitable as drinking water in the Malhewa GN area. To ensure safety of drinking water measures should be taken place to treat common water sources. Educational and awareness programs should be taken place to encourage the use of boiled water and proper storage. Also, educational programs regarding hand washing after handling children's stools were a necessity.

