

ABSTRACT

Community Led Total Sanitation (CLTS) is an innovative way to achieve communities free from open defecation. Globally 1.1 billion people still practice open defecation and are at risk of diarrhea resulting in 2 million deaths annually. In Kenya 75.7 % population lack improved sanitation facilities and of these, 17.1% experience diarrhea cases. In Siaya diarrheal diseases are ranked third among the top ten diseases. Boro Division with latrine coverage 55%. However, there is still limited knowledge and documented evidence on the influence of CLTS approach on diarrheal occurrences. The objective of this study was to assess the influence of CLTS on diarrhea occurrence in households living in intervention and control villages in Boro Division, Siaya County targeting 3889 households. Comparative cross-sectional study design was used. Sample size of 398 was determined using Yamane 1969 (Isreal, 2009) sample size calculation formula. Sample random sampling was used to sample 398 households. Quantitative data was collected using semi structured questionnaires while qualitative data was collected using observation checklist. Descriptive statistics was used to assess the difference in the sanitation practices, compare the level of awareness and diarrhea occurrence while chi-square test was used to compare proportions between control and intervention villages. Association between independent variables and diarrhea occurrence was done using binary logistic regression. Odds ratio with 95% confidence intervals was used to measure the magnitude of diarrhea morbidity. P value < 0.05 denoted significant results. Analysis was done using SPSS version 20. The results showed that 83.7% households from the intervention villages had latrines compared to 45.5% of households in the control villages, the difference were statistically significant ($P < 0.0001$, $\chi^2 = 63.019$). About 83.3% in the intervention villages practiced safe waste disposal compared to 37.6% in the control villages. The result on water source showed that 83.8% household reported that their water source is safe compared to 67.8% in the control villages. The result indicated about 90.3% of the households from intervention villages were aware of CLTS compared to only 38.10 % in the control villages. Majority 83.7% of the respondents from control villages reported they were aware of people in their village who practiced open defecation compared to 18.9% from intervention villages. Majority 96.4 % of households in the intervention villages reported they are aware occurrence of diarrhea is associated with poor sanitation practices compared to 74.3% from the control villages. CLTS was significantly associated with reduced prevalence diarrhea in the intervention villages compared to control villages, 17.3% and 76.7% respectively. CLTS is therefore associated with improved sanitation practices, high level of awareness and reduced episodes of diarrhea. CLTS policy should be rolled out in all the rural areas in Kenya since it has shown potential for reduction in sanitation related diseases. This may help Kenya achieve sustainable development and vision 2030, Communities should be encouraged to practice CLTS. Future studies should target quasi experimental study to evaluate baseline and end line findings in intervention and control villages.