

ABSTRACT

Information about the quality of rural drinking water sources can be used to manage their safety and mitigate risks to health. Sanitary surveys, which are observational checklists to assess hazards present at water sources, are simpler to conduct than microbial tests. We assessed whether sanitary survey results were associated with measured indicator bacteria levels in rural drinking water sources in Kisii Central, Kenya. Overall, thermotolerant coliform (TTC) levels were high: all of the samples from the 20 tested dug wells, almost all (95%) of the samples from the 25 tested springs, and 61% of the samples from the 16 tested rainwater harvesting systems were contaminated with TTC. There were no significant associations between TTC levels and overall sanitary survey scores or their individual components. Contamination by TTC was associated with source type (dug wells and springs were more contaminated than rainwater systems). While sanitary surveys cannot be substituted for microbial water quality results in this context, they could be used to identify potential hazards and contribute to a comprehensive risk management approach.