

81. Influence of perceived health risk factors on adoption of community-led total sanitation: a case of Turkana Central Sub-County, Turkana County, Kenya.

Kibet Jackson^{1*}, Kirimi Lilian Mukiri¹, Kirema Nkanata Mburugu² and Grace Kasiva Eliud¹

¹Meru University of Science and Technology, School of Engineering and Architecture

²University of Embu, School of Agriculture, 60100, Embu, Kenya

*Corresponding author: Email. kibetjackson7@gmail.com

Subtheme: Engineering - Sustainable Infrastructure Solutions for climate resilience; Sustainable Sanitation Systems for climate-responsive urban environments.

Abstract

The study was conducted to the household members of Lodwar township and Kalokol ward, targeting a population of 8,509 households, with a sample size of 382 respondents as determined by Yamane formula. The study objective was to investigate perceived risk health. The research employed a convergent design methodology, which combined quantitative and qualitative data collection methods, enabling the simultaneous gathering of both types of data. Quantitative data were gathered using structured questionnaires while qualitative data was gathered from Focus Group Discussion. The study used stratified technique to group the village units and simple random to selected the households' heads. Qualitative results were organized into themes and direct quotes. The study established that only perceived knowledge on health risk was significant with R value of 0.031 which explained variability of latrine presence, (AOR=0.023 p-value< 0.05) suggested that an increase in knowledge regarding health risk is associated with a higher likelihood of latrine presence, understanding and awareness about health risk yield p>0.05 implied no influence of latrine presence. The multiple regression analysis which utilized Root Mean Square Error revealed that education level is a significant positive predictor for awareness, understanding, and knowledge (p=0.000), while gender shows a significant negative relationship with awareness and understanding (p=-0.2573), suggesting males score lower in these areas compared to females. Age positively predicts awareness and is marginally significant for understanding (p=0.043), indicating older individuals have higher scores, whereas marital status negatively predicts awareness (p=0.019), with married individuals scoring lower. Household size and income were not significant predictors for any dependent variables, indicating they have minimal impact on awareness, understanding, or knowledge (p>0.05). The study found that increased knowledge about health risk in terms of vulnerability and susceptibility significantly predicts latrine presence and thus the adoption of community-led total sanitation programs in Turkana Central Sub-County, with education notably impacting knowledge, awareness, and understanding (p=0.000). Despite the regression model's significance, it explains only 3.1% of the variance in latrine presence, highlighting the critical role of knowledge in achieving open defecation-free status. The study recommends that the intervention prioritize knowledge enhancement to better inform communities, thereby increasing the adoption of improved sanitation practices and reducing open defecation and related health issues.

Keywords: Sustainable development goals, community-led total sanitation, open defecation, RANAS.