

ABSTRACT

Since the 1940s, efforts have been made to increase the efficiency of biomass cook stoves by governments, international development organizations, and NGOs. But improved biomass cook stoves have not reached enough households in rural settings in developing countries. In Kenya studies done so far indicate that the uptake of improved cook stoves such as Maendeleo jiko and the Rocket stoves has been very slow in the rural areas. This study was therefore aimed at investigating the key challenges that contribute to low adoption of improved cook stoves in rural areas of Kenya. The study was carried out in Wundanyi, Mwatate and Voi districts in the Coast province of Kenya. The sample of the study comprised of 100 households in Wundanyi, Mwatate and Tausa divisions of the three districts. Structured questionnaires were used to collect primary data from the sample households. Data collected from the field was analysed using descriptive statistical measures, namely frequency distribution and cross tabulation. Interpretation and discussion of the results was done after which conclusions and relevant recommendations were made. The study established that 98.5% of the households in the target districts were aware of improved cook stove technologies but only 32% had adopted one or more improved cook stove technologies. This result shows that despite the high awareness levels of improved cook stoves by households, adoption rate was still relatively low. Thus it can be concluded that awareness of households on improved cook stoves had little influence on the adoption of improved cook stoves in rural areas of Kenya. Another finding of the study is that 79% of households who get their fuel wood free of charge were not using improved cook stoves and that 62% of households who buy their fuel wood were using improved cook stoves. This shows clearly that adoption of improved cook stoves is low where households get their fuel wood free of charge and that it is high where households have to buy their fuel wood. The study also found out that education level of the wife in a household influences the adoption rate of improved cook stoves. Generally the higher the education level of the wife in a household the more likely the household will adopt improved cook stove technologies. Other benefits derived from use of traditional three stone open fire cook stove especially that of warming the house were found to be influencing adoption of improved cook stoves. In line with these findings the researcher recommends that programs aimed at promoting improved cook stoves in rural areas should focus on public education on disadvantages of using traditional cook stoves and advantages of using improved cook stoves. In addition it is recommended that promotion of improved cook stoves should mostly target areas where majority of the households buy their fuel wood. This will ensure high adoption rates because such communities are motivated to adopt the new technologies by the fact that they will save on fuel costs. In rural areas where literacy levels are low promotion of improved cook stoves should be coupled with adult education programs targeting the women. Designers of improved cook stoves should factor in the element of warming the house since this is an aspect valued by most households. This study focused on investigating the challenges affecting wide scale adoption of improved cook stoves in rural areas of Kenya. It will be interesting to research on public knowledge on the effects of using traditional open fire cook stoves as well as the benefits of using improved cook stoves. It will also be important to research on the relationship between incidences of upper respiratory diseases at household level and use of traditional open fire cook stoves.