

Impact of Improved Stove Intervention in Lowering Hap Exposure in Women and Children in Rural Area of Pakistan

Department: Community Health Sciences

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Principal Investigator: Dr. Zafar Fatmi

Co-Investigators: Dr. Tanzil Jamali, Dr. Afshan Shahid, Dr. Aneeta Khoso, Dr. Aysha Zahidie

Interventions to reduce Household air pollution (HAP) exposures due to solid fuel burning in households are mainly focused around developing stoves with improved technology aimed at reduction of HAP. These improved stoves have been disseminated and used in different countries among small or large populations with both successes and failures. Escorts foundation resource organization (EFRO) improved stove program was implemented in rural areas of Punjab and Sindh. The effectiveness of these stoves will be assessed by comparing them with three-stone stoves (referred to as 'traditional stoves') in surrounding villages.

A mixed methods design will be used consisting of quantitative exposure/ outcome (cross-sectional study) and qualitative (focus groups) components. Controlled cooking test (CCT) will be conducted to evaluate effectiveness of EF stove by assessing stove performance and exposure assessment for indoor air pollution will be done for CO and PM_{2.5}, these exposures will be assessed by using scientific calibrated instruments. Cross sectional study will be conducted to evaluate health impact of using EF stoves by assessing respiratory health in young children and mothers through multiple questionnaires. Focus Group Discussions (FGDs) and Key Informant (KI) interviews will be conducted to evaluate the socioeconomic (SES) impact on women and environment.

Objectives of the study:

1. To evaluate effectiveness of EF stove by assessing stove performance and exposure assessment
2. To evaluate the socioeconomic impact (time, fuel use, money and consequences on social interaction) of using EF stove
3. To evaluate health impact of using EF stoves by assessing respiratory health in young children and mothers
4. To conduct an economic evaluation of using the EF stove