Evaluating the impact of empowering female entrepreneurs to effectively advocate and sell improved cookstoves in Kenya

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Kenya Cookstove Research Project

Collaborators

• Johns Hopkins University, The Center for Global Clean Air at the School of Public Health

• Envirofit International

• ESVAK, Kenya
Background

- Women are the fastest growing cohort of entrepreneurs and business owners in developing countries
- Leveraging women’s strengths offers a huge opportunity for the energy sector
- While microfinance has leveraged the women social units and community support groups to impact economic development, women entrepreneurship is largely untapped in many contexts
Challenges to Women’s Entrepreneurship

• Lack of education
  – Not only do women in developing countries lack basic education and training to engage in technological developments, they also lack the basic skills to access and use the technologies.

• Women have a greater range of tasks and responsibilities as compared with men.
  – These roles, particularly in domestic chores, mean less time to explore new technologies
  – Suffer from ‘time poverty’, which could otherwise be used for other things

• Intrinsic factors affecting individual’s capacity to function
  – there are multiple intrinsic factors, such as self-efficacy, agency, motivation, drive that contribute substantially to women’s capacity to succeed.
Research objectives

• Specific Aim 1: To determine if female entrepreneurs are as effective as male entrepreneurs in marketing and distributing improved cookstoves to households in Kenya.

• Specific Aim 2: To determine if an agency-based empowerment training improves the effectiveness of ICS entrepreneurs.

• Specific Aim 3: To determine how characteristics of ICS entrepreneurs are associated with cookstove purchase and sustained use.
Research Sites

- Kayole, Nairobi (urban slum)
- Meru county (rural – last mile)
Empowerment Intervention

- Developed Gershon and Straub (30+ years)
- 3-4 days in a group
- Culturally adapted
- Core beliefs
- Sources of personal power
- Introspective examination of key life areas
  - Emotions
  - Relationship
  - Body/health
  - Money
  - Work

- Empowerment methodology
  - Increase their self-knowledge
  - Provide tools to translate this knowledge into a compelling vision
  - Help identify and transform the limiting beliefs that inevitably arise when creating something new
  - Create and adopt an actionable growth strategy to attain their goals
Proposed schematic of intervention

Pool of eligible ICS entrepreneurs

Recruitment of eligible WOMEN ICS entrepreneurs

Recruitment of eligible MEN ICS entrepreneurs

BASELINE ASSESSMENTS

RANDOMIZATION

WOMEN
Basic business training

WOMEN
Basic business + empowerment training

MEN
Basic business training

MEN
Basic business + empowerment training

FOLLOW-UP ASSESSMENTS for 6 months

Random selection of household adoptees per ICS entrepreneur

ADOPTEE FOLLOW-UP ASSESSMENTS
Mixed Methods Analysis

• Qualitative data (interviews, focus groups)
  • Challenges in selling
  • What worked in selling
  • After sales support

• Quantitative data (actual sales)
  – Success outcome
    • Proportion of cookstoves sold per household contact
Proposed Data Analysis
Primary analysis

• Outcome metric:
  – Success proportion - the number of stoves sold per number of households contacted.
  – These data will be collected on a bi-weekly basis for six months

• Intention to treat analysis:
  – will be assessing the effect of gender as an effect modifier by treatment group through the interaction term within the multivariate model using GEE.
Current Status of project

• Entrepreneurs selected and trained
  • Men trained = 42
  • Men trained +plus = 41
    – Total = 83
• Women trained = 84
  • Women trained +plus = 85
    – Total = 169
• Have been selling since late Dec 2013
Current status of project and timeline

• Entrepreneurs were trained late Nov 2013
• Started selling in December 2013
• Approximately 500 stoves have been sold to date
• Expected 6 month follow-up – May 2014
• Both qualitative and quantitative assessments
• Focused on entrepreneur experience and challenges
• Adoption assessment on 1000 adoptees at the end of the study (not to be included in the paper)