



Issue 146 | May 16, 2014 | Focus on Clean Cookstoves and Behavior Change

This issue of WASHplus Weekly highlights recent reports, papers, webinars, and presentations that help broaden and further understanding of the potential of behavior change in the clean cooking sector. Resources identify strategies to promote behavior change with the goal of enhancing clean cookstove acquisition as well as correct and consistent use.

The next WASHplus Weekly (May 23) will focus on menstrual hygiene management to celebrate Menstrual Hygiene Day. Please contact Dan Campbell, WASHplus Knowledge Resources Specialist, at dacampbell@fhi360.org, if you have recent studies or resources that can be featured on this topic.

REPORTS

The Kaleidoscope of Cooking: Understanding Cooking Behaviour and Stove Preferences in Rural India, 2014. GIZ. ([Link](#))

This study conducted an empirical comparative evaluation of six different types of improved cookstove (ICS) models. Users perceived ICS to be superior to traditional cookstoves, and they liked their portability, reduced fuel consumption, lower smoke emissions, and aesthetics. However, households also suggested several improvements: accommodating a larger range of local fuels, making the cooking experience easier, and reducing the cooking time required.

PAPERS

Behavioural Change, Indoor Air Pollution and Child Respiratory Health in Developing Countries: A Review. *Int. J. Environ. Res. Public Health* 11(5), 2014. B Barnes. ([Link](#))

A review of published studies spanning 1983–2013 suggests that behavioral change strategies have the potential to reduce indoor air pollution (IAP) exposure by 20 percent to 98 percent in laboratory settings and 31 percent to 94 percent in field settings. However, the evidence is based on studies that are methodologically weak and have little or no underlying theory. The paper concludes with a call for more rigorous studies to evaluate the role of behavioral change strategies (with or without improved technologies) to reduce IAP exposure in developing countries.

How do People in Rural India Perceive Improved Stoves and Clean Fuel? Evidence from Uttar Pradesh and Uttarakhand, *Int. J. Environ. Res. Public Health*, 2014. V

Bhojvaid. ([Link](#))

This paper presents evidence from a TRAction- (Translating Research into Action) funded study in the Indian states of Uttar Pradesh and Uttarakhand. Researchers at Duke University investigated barriers and facilitators to ICS adoption as well as their correct and sustained use.

The Effect of Marketing Messages, Liquidity Constraints, and Household Bargaining on Willingness to Pay for a Nontraditional Cookstove, 2014. T Beltramo, CEGA Working Papers. ([Link](#))

This paper is the result of a project partially funded by the TRAction project in partnership with Impact Carbon and University of California Berkeley Haas School of Business. The focus is on strategies to increase consumers' willingness to pay for an improved cookstove.

A Guide to Optimizing Behavior Change in Fuel Efficient Stove Programs, December 2013. S Harrell. ([Link](#))

This guide identifies behavioral determinants of ICS acquisition and ongoing usage. The goal of the study is to offer advice on the key elements necessary for a successful stove project. The research was designed to identify program strategies that are replicable in developing countries with high burdens of disease from IAP.

Using Formative Research to Design a Behavior Change Strategy to Increase the Use of Improved Cookstoves in Peri-Urban Kampala, Uganda, *Int. J. Environ. Res. Public Health*, 2013. S Martin. ([Link](#))

The purpose of the study was to investigate the role of behavior change strategies in the adoption, correct, and sustained use of improved cookstoves. Participants consistently cited financial considerations as the most influential factor related to ICS acquisition and use. In contrast, participants did not prioritize the potential health benefits.

WEBINAR

Behavior Change Approaches on the Use of Clean Stoves and Fuels, TRAction. ([Recording](#)) ([Link](#))

On May 7, 2014, the USAID-funded TRAction project hosted a webinar with WASHplus on lessons learned from three TRAction household air pollution projects. The webinar highlighted findings on successful and unsuccessful behavior change approaches for increasing adoption of improved cookstoves, how the lessons can be used to enhance the uptake of clean stoves, and consideration of next steps to broaden and further our understanding of behavior change in the clean cooking sector.

FORUM

Open Forum on Behavior Change Approaches in the Clean Cooking Sector, Summary of Key Research Questions, Household Air Pollution (HAP) Open Forum, George Washington University Marvin Center, March 12, 2014. ([Link](#))

The purpose of this open forum discussion was to bring together experts to discuss lessons learned to date on behavior change approaches within and beyond the clean cooking sector. The goal was to identify priorities for future research on how behavior change approaches can best enable the uptake and adoption of clean stoves and fuels.

FORUM PRESENTATIONS

These presentations were given as part of the March 12, 2014, Household Air Pollution (HAP) Open Forum, a roundtable event for the special issue of the *Journal of Health Communication: International Perspectives*. As part of the publication process, TRAction hosted a meeting of authors selected to publish in the special issue and the guest editorial board. Authors made brief presentations on their research and findings and received feedback. Links to and descriptions of their presentations are provided below.

Assessing Effectiveness and Acceptability of Improved Cookstoves in Kisumu, Kenya through Integrating Qualitative and Quantitative Methods, 2014. D. Stanistreet. ([Link](#))

This research explores the challenges of quantitatively measuring HAP in the household setting, using qualitative methods to understand barriers and facilitators to behavior change, the importance of measuring behavior in the context in which it occurs, and how to best integrate knowledge on stove effectiveness with views on user preference.

Field Report: Drivers of Uptake and Usage in the Paradigm Project's Kenya Operations, 2014. J Matocha. ([Link](#))

The Paradigm Project conducts an annual household survey with a randomly selected subset of its stove users, gathering data on demographics, detailed cookstove usage (including frequency), and perceived social benefits and satisfaction with the product. From this data, Paradigm will draw conclusions for drivers of uptake and sustained adoption of clean cookstoves.

Integrating Behavior Change Theory into Cookstove Research: An Epidemiologic Perspective, 2014. M Clark. ([Link](#))

Community-engaged research using multiple approaches combined with stove use monitoring, may be used to inform the various community-specific framework constructs for the target population. This approach allows for the development of testable hypotheses through the examination of complex multi-level pathways leading from barriers/predictors to sustained cookstove adoption.

Which Behavior Change Techniques Work in Household Air Pollution? A Review of the Evidence and Scorecard of Intervention Effectiveness, 2014. N Goodwin. ([Link](#))

The aim is to review the use of behavior change techniques (BCTs) in clean cooking interventions in resource-poor settings. This includes defining a set of behaviors and BCTs. Researchers will synthesize the evidence of the impact of BCTs on human welfare and the environment, and develop a scorecard on intervention effectiveness.

Tossing the Three Stones—How Much Traditional Stove Displacement Is Needed? 2014. M Johnson. ([Link](#))

A quantitative context has been provided on how much displacement of traditional technologies is needed to achieve targets for fundamental indicators such as household air pollutant concentrations or fuel savings. To provide instructive guidance on this challenge, the authors relate displacement of traditional technologies with indoor concentrations of air pollutants and fuel savings using the ISO International Workshop Agreement tiers of performance. The stove use guidance provided here may help behavior change efforts set quantitative goals.

Factors Influencing the Acquisition and Correct Use of the Top-Lit Updraft Cook Stove in Uganda, 2014. A Namagembe. ([Link](#))

This study looked at the effects of selected behavior change interventions on the purchase and the consistent and correct use of a Top-Lit Updraft stove in Uganda. Interventions included training community sales agents and village health team volunteers on HAP, referral to sales agents, community cooking demonstrations, and informational flyers.

Understanding Consumer Preference and Willingness to Pay for Improved Cookstoves in Bangladesh, 2014. J Rosenbaum. ([Link](#))

This study uses qualitative and quantitative methods to understand consumer needs and preferences related to increased uptake of ICS in Bangladesh, including advanced models not widely available. Researchers applied the Trials of Improved Practices approach, wherein five imported ICS models were placed in 120 village homes in wood-burning districts. Two different innovative methods were used to assess willingness to pay. The study clearly revealed both desirable and undesirable attributes of various ICS, and measured consumer satisfaction for ICS over time.

Advocate Program of Healthy Traditional Houses “Ume Kibu” in Timor Community, 2014. R Prasodjo, Indonesian Ministry of Health. ([Link](#))

In Timor society, it is a common traditional practice for a newborn baby and its mother to spend their first 40 days together in a traditional house (Ume kibu) that uses a continuously burning wooden/biomass stove to provide warmth. Inadequate ventilation at the house leads to high levels of indoor air pollution, which present a significant health risk to the mother and baby. This study aims to emphasize the issues and to advocate changing behavior to a healthy traditional practice.

How Does Communication Among Neighbors Affect Demand for Efficient Cookstoves? Evidence from a Randomized Trial in Uganda, 2014. T Beltramo. ([Link](#))

Understanding what motivates the purchase decision of a durable good for poor rural consumers is essential to inform a successful market-based strategy to increase adoption of ICS. In a phased randomized controlled trial in rural Uganda the researchers tested the role of peer effects in raising consumer demand for clean cookstoves. The study discusses how to take peer effects into consideration when developing strategies for communications relating to new cookstoves.

The Challenges of Promoting Improved Cook Stoves: Lessons from Pilot Programs in India, 2014. J Lewis. ([Link](#))

Households were offered different combinations of three technologies: two improved biomass (natural and forced draft) and one electric stove. These pilots were designed to test the feasibility of efforts to stimulate demand for ICS by providing information on their potential benefits, addressing the inability (and/or unwillingness) of most households to pay for them up front, and incentivizing stove use through the provision of rebates.

Evaluating the Impact of Empowering Female Entrepreneurs to Effectively Advocate and Sell Improved Cookstoves in Kenya, 2014. AV Shankar. ([Link](#))

This is a longitudinal study to assess the impact of women’s engagement in the ICS value chain in Kenya. The objectives were to determine if female entrepreneurs are as effective as male entrepreneurs in distributing ICS in both urban and rural settings; if engagement in a novel empowerment intervention improves the sales and communication effectiveness of either/or/both male or female ICS entrepreneurs; and how the gender of the ICS seller affects the adoption behaviors of their consumers.

WASHplus Weeklies will highlight topics such as Urban WASH, Indoor Air Pollution, Innovation, Household Water Treatment and Storage, Hand Washing, Integration, and more. If you would like to feature your organization's materials in upcoming issues, please send them to Dan Campbell, WASHplus Knowledge Resources Specialist, at dacampbell@fhi360.org.



About WASHplus - WASHplus, a five-year project funded through USAID's Bureau for Global Health, supports healthy households and communities by creating and delivering interventions that lead to improvements in access, practice and health outcomes related to water, sanitation, hygiene (WASH) and indoor air pollution (IAP). WASHplus uses at-scale, targeted as well as integrated approaches to reduce diarrheal diseases and acute respiratory infections, the two top killers of children under five years of age globally. For information, visit www.washplus.org or email: contact@washplus.org.