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Indoor Air Pollution and Health in Developing Countries

Submission date	Recruitment status	[_] Prospectively registered
01/03/2011	No longer recruiting	[_] Protocol
Registration date	**Overall study status**	[_] Statistical analysis plan
28/04/2011	Completed	[X] Results
Last Edited	**Condition category**	[_] Individual participant data
17/01/2020	Respiratory	

Plain English summary of protocol

Background and study aims
Acute respiratory (lung) infections are the leading killer of children worldwide and indoor air pollution due to biomass (e.g., wood) burning is thought to be a principal cause. However, no study has experimentally studied why so many rural households use inferior cooking technologies with potentially devastating health consequences. This study will address these limitations in current knowledge about indoor air pollution. The studys major objective is to assess why households choose to cook with traditional cooking technologies by randomly allocating various incentives and conditions under which improved cookstoves can be adopted.

Who can participate?
Household heads representative of households in two study districts (Hatia and Jamalpur) will complete surveys, which will include information about all household members (all ages, male and female, almost exclusively ethnic Bengalis) and women, all ethnicities in Bangladesh (all speak Bangla).

What does the study involve?
The study has two parts. The first is a population-representative survey of rural households stated preferences about cooking technologies. The second is a trial that offers cookstoves to households, randomly assigning cookstove types, prices, and household members to which offers were made (male and female household heads) in the districts of Jamalpur and Hatia in Bangladesh.

What are the possible benefits and risks of participating?
The main benefits of participation are the opportunity to obtain a new cookstove (if a participant chooses) and the creation of new knowledge about the determinants of cookstove demand; the main risk associated with participation is loss of confidentiality in the research process.

Where is the study run from?
The project is a collaboration between Stanford University, Yale University, and BRAC.

When is the study starting and how long is it expected to run for?
The study ran from July 2006 to February 2011.

Who is funding the study?
The study is funded by the Woods Institute for the Environment and the Shorenstein Asia-Pacific Research Center at Stanford University, the National Science Foundation, the DFID/LSE/Oxford International GrowthCentre, the National Institute of Child Health and Human Development, and the Yale Climate and Energy Initiative for support.

Who is the main contact?
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Contact information

Type(s)
Scientific

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Additional identifiers

Protocol serial number
N/A

Study information

Scientific Title
Indoor Air Pollution and Health in Developing Countries: An Intervention Study in Bangladesh

Study objectives
Acute respiratory infections are the leading killer of children worldwide and indoor air pollution due to biomass combustion is thought to be a principal cause. However, no study has experimentally studied why so many rural households use inferior cooking technologies with potentially devastating health consequences. This study will address these limitations in current knowledge about indoor air pollution.

The studys major objective is to assess why households choose to cook with traditional cooking technologies by randomising various incentives and conditions under which improved cookstoves can be adopted.

Ethics approval required
Old ethics approval format

Ethics approval(s)
The Stanford IRB approved the project protocol on 07/06/2006 (ref: Stanford IRB protocol 6454)

Study design
Randomised controlled interventional trial

Primary study design
Interventional

Study type(s)
Screening

Health condition(s) or problem(s) studied
Indoor Air Pollution

Interventions
Randomised on the basis of:
1. Price
2. Information about the stove adoption choices of opinion leaders
3. A choice between two types of cookstoves and pre-determined prices
4. Whether or not cookstove offers were made to male or female household heads

Intervention Type
Other

Phase
Not Applicable

Primary outcome(s)
Adoption of an improved cookstove

Key secondary outcome(s))
No secondary outcome measures

Completion date
28/02/2011

Eligibility

Key inclusion criteria
1. Household heads representative of households in two study districts (Hatia and Jamalpur) will complete surveys, which will include information about all household members (all ages, male

and female, almost exclusively ethnic Bengalis) and women, all ethnicities in Bangladesh (all speak Bangla)
2. The inclusion of pregnant women in the pilot project is necessary because the health behaviors of pregnant women in selecting household fuel sources are important because of their implications for the health of both women and unborn foetuses

Participant type(s)
Patient

Healthy volunteers allowed
No

Age group
Adult

Sex
All

Key exclusion criteria
A representative sample of household heads from study regions was chosen. In some cases we selected men, and in others we selected women (and so women were excluded in the former, men in the latter). Otherwise, there were none.

Date of first enrolment
06/07/2006

Date of final enrolment
28/02/2011

Locations

Countries of recruitment
Bangladesh

United States of America

Study participating centre
CHP/PCOR
Stanford
United States of America
94305

Sponsor information

Organisation

Woods Institute for the Environment, Stanford University

ROR
https://ror.org/00f54p054

Funder(s)

Funder type
University/education

Funder Name
Woods Institute for the Environment - The Stanford University (USA)

Results and Publications

Individual participant data (IPD) sharing plan

IPD sharing plan summary
Not provided at time of registration

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article	results	03/07/2012		Yes	No