LETTERS FROM INSTITUTIONAL ETHICS COMMITTEE

SRI RAMACHANDRA UNIVERSITY

INSTITUTIONAL ETHICS COMMITTEE

(Other than Clinical Evaluation of Drugs / Procedures / Devices / Diagnostics / Vaccines / Herbal Remedies)

Chairman:
Dr. Venkatesan P

Member Secretary:
Dr. Padmavathi R.

Members:
Dr. Ramesh Hari Harjeet
Dr. Dayal Gopinath David
Dr. C.D. Narayanan
Dr. T.S. Lokeshwari
Dr. S. Narayana
Ms. A.G. Shanthi
Mr. S. Rethinakumar - Legal Consultant
Ms. Sheela Vinod

To
Dr. Padmavathi R.
Associate Professor, Dept of Physiology, SRU.

Dear Madam,

REF: IEC/07/JUN/58/33
Evaluating the Sustainability and Impacts of Water, Sanitation and Hygiene Interventions.
Amendment: Collection of information on Indoor air pollution and Acute respiratory tract infection in the same population (children under five) using questionnaire.

Thank you for the submission of the above proposal with additions (Indoor air pollution and Acute respiratory tract infection in children under five) which was discussed in the meeting, held on 30.08.08. The Institutional Ethics Committee approves the project and has no objection for the study being carried out at SRU. You are advised to be familiar with ICMR guidelines on Biomedical Research in human beings and also to adhere to the Principles of good clinical practice. You are required to submit the final report on the completion of study to the Institutional Ethics Committee.

Yours Sincerely,

[Signature]

Member Secretary
INSTITUTIONAL ETHICS COMMITTEE
SRI RAMACHANDRA UNIVERSITY
Ponneri, Chennai 600 116.

A Harvard Medical International Associated Institution

Ph.D. Thesis entitled “Indoor air pollution due to combustion of biomass fuel and respiratory illness in south Indian population”.
Ph.D. Thesis entitled “Indoor air pollution due to combustion of biomass fuel and respiratory illness in south Indian population”.

SRI RAMACHANDRA UNIVERSITY
(Declared under Section 3 of the UGC Act, 1956)

INSTITUTIONAL ETHICS COMMITTEE
(Other than Clinical Evaluation of Drugs / Procedures / Devices / Diagnostics / Vaccine / Herbal Remedies)

To
Dr. Padmavathi R
Associate Professor
Department of Physiology
SRMC & RI.

Dear Dr. Padmavathi,

Ref: MEC/06/52/44
Sub: Prevalence of Chronic obstructive pulmonary disease in rural women in Tamilnadu.

The Medical Ethics Committee thank you for your submission of the above proposal. The Medical Ethics Committee approves the project and has no objection for the study being carried out at SRMC & RI (DU). You are advised to be familiar with ICMR guidelines on Biomedical Research in human beings and also to adhere to the Principles of good clinical practice. You are required to submit the final report on the completion of study to the Medical Ethics Committee.

Note: Please quote MEC Reference number in all future communications.

Yours Sincerely,

(Dr. Padmavathi R)
Member Secretary

Sri Ramachandra University
Porur, Chennai - 600 116.
Ph.D. Thesis entitled “Indoor air pollution due to combustion of biomass fuel and respiratory illness in south Indian population”.

SRI RAMACHANDRA MEDICAL COLLEGE & RESEARCH INSTITUTE
(DEEMED UNIVERSITY)
Puris, Chennai - 600 116.

MEDICAL ETHICS COMMITTEE

CHAIRMAN
V.C. B. RAGHU

MEMBERS
Prof. K. V. SOMASUNDRAN
Prof. V. K. JAYAKRISHNAN THIMASEKARAAN
Prof. R. W. C. SATHYASEKARAAN
Prof. D. PRATHIBA
Dr. R. PADMAVATHI
Prof. N. DEVARANAYAGAM
Mr. P. MURUGAN
Legal Consultant

To Dr. Padma Vathini
Principal Investigator
Asst. Professor
Dept. of Physiology
SRMC & RI (HU)

Dear Dr. Padma Vathini,

SUB: SRMC/RP/1105 Exposure to biomass fuel smoke and Tuberculosis. A case control study based in a rural district of Tamilnadu in Southern India.


The Medical Ethics Committee thank you for your submission of the above proposal and it has been discussed in its meeting held on 31.3.2005 and the committee approves the project and has no objection for the study being carried out at SRMC & RI (HU). You are also advised to be familiar with ICMR guidelines on Biomedical Research in human beings and also to adhere to the Principles of good clinical practice. You are required to submit the final report on the completion of study and any case of adverse reaction should be informed to the Medical Ethics Committee and action taken thereon.

Wish you all the best.

Yours Sincerely,

(FROM: M.B. RAGHU)
Chairman.
ANNEXURE - II

INFORMED CONSENT

“TO EVALUATE THE ASSOCIATION OF BIOMASS FUEL USE AND ACUTE RESPIRATORY TRACT INFECTION IN CHILDREN UNDER FIVE”

Principal Investigator:
Dr. Padmavathi.R
Department of Physiology
Sri Ramachandra Medical College & Research Institute
Porur, Chennai 600 116

Description of the Study: In this study I propose to evaluate the association of biofuel use and acute respiratory tract infection in children under 5. Your child has been selected as a participant based on a random selection from the list of villages. If you agree to participate you will be administered a structured questionnaire. The questionnaire will have questions related to fuel use, sanitation practices, health care availability, health of your child/children, socio-economic profile, water source, storage and treatment and regarding acute respiratory tract infection in your child. The participation in this study for answering the questionnaire will require approximately one hour of your time. I will also measure the height, weight, & arm circumference of your child/children below the age of five.

Possible Risks to the participant: There are no risks involved in the study.

Possible Benefits to the participant: The participant will be benefited by knowing your child/children’s health status.

Cost and Payments to the participant: There is no cost for participation in this study. Participation is completely voluntary and no payment will be provided.

Confidentiality: Information obtained in this study will be kept confidential. You will be assigned a research number. Your name will not be used in reporting of information in any publication. The data collected about you will be stored in a locked cabinet at the Sri Ramachandra Medical College in Chennai. After the research

Ph.D. Thesis entitled “Indoor air pollution due to combustion of biomass fuel and respiratory illness in south Indian population”. 
is completed, I may save data for use in future research. However, I will not share your or your child’s name with anyone outside of the research study.

**Participants’ right to withdraw from the study:** You have the right to refuse to participate in this study, the right to withdraw from the study and the right to have your data destroyed at any point during or after the study, without penalty.

**Voluntary consent by the participant:** PARTICIPATION IN THIS STUDY IS COMPLETELY VOLUNTARY, AND YOUR CONSENT IS REQUIRED BEFORE YOU CAN PARTICIPATE IN THIS STUDY.

I have read this consent form (or it has been read to me) and I fully understand the contents of this document and voluntarily consent to participate in the study. All of my questions concerning this study have been answered. If I have any questions in the future about this study they will be answered by the investigator listed below. I understand that this consent ends at the conclusion of this study.

By signing this form, I agree to participate in this study. A copy of this form has been given to me.

Date: Participant’s signature

Name:

**CERTIFICATION OF INFORMED CONSENT**

I certify that I have explained the nature and purpose of this study to the above-named individual, and I have discussed the potential benefits of this study participation. The questions the individual had about this study have been answered, and we will always be available to address future questions.

Date: Signature of Investigator

Name:
Association of exposure to combustion of biomass fuel and Tuberculosis in rural population of Thiruvallur district of Tamilnadu

**Principle Investigator:** Dr. Padmavathi.R  
Dept. of Physiology  
Sri Ramachandra Medical College & Research Institute  
#1, Ramachandra Nagar  
Porur, Chennai 600 116

**Description of the Study:** In this study we will be obtaining respiratory health information and exposure information in the randomly selected households of Thiruvallur district and also. You have been selected as a participant based on a random selection. If you agree to participate you will be administered a structured questionnaire by a trained field investigator. The participation in this study for answering the questionnaire will require approximately thirty minutes of your time.

**Possible Risks to the participant:** There are NO risks involved in the study.

**Possible Benefits to the participant:** The participant will be benefited by knowing their health status.

**Cost and Payments to the participant:** There is no cost for participation in this study. Participation is completely voluntary and no payment will be provided.

**Confidentiality:** Information obtained in this study is strictly confidential. You will be assigned a research number, rather than your name which will be recorded on the assessment you receive. Your name will not be used in reporting of information in publications or conference presentations.

**Participants’ right to withdraw from the study:** You have the right to refuse to participate in this study, the right to withdraw from the study and the right to have your data destroyed at any point during or after the study, without penalty.

**Voluntary consent by the participant:** PARTICIPATION IN THIS STUDY IS COMPLETELY VOLUNTARY, AND YOUR CONSENT IS REQUIRED BEFORE YOU CAN PARTICIPATE IN THIS STUDY.

Ph.D. Thesis entitled “Indoor air pollution due to combustion of biomass fuel and respiratory illness in south Indian population”.
I have read this consent form (or it has been read to me) and I fully understand the contents of this document and voluntarily consent to participate in the study. All of my questions concerning this study have been answered. If I have any questions in the future about this study they will be answered by the investigator listed above. I understand that this consent ends at the conclusion of this study.

By signing this form, I agree to participate in this study. A copy of this form has been given to me.

Date:                        Participant’s signature

                                 Name:

Certification of INFORMED CONSENT

I certify that I have explained the nature and purpose of this study to the above-named individual, and I have discussed the potential benefits of this study participation. The questions the individual had about this study have been answered, and we will always be available to address future questions as they arise.

Date:                        Signature of person obtaining consent

                                 Name:
**Study of Prevalence of Chronic Obstructive Pulmonary Disease in rural women**

**Principle Investigator:** Dr. Padmavathi.R  
Dept. of Physiology  
Sri Ramachandra Medical College & Research Institute  
#1, Ramachandra Nagar  
Porur, Chennai 600 116

**Description of the Study:** In this study we will be generating respirable particulate matter concentrations produced by combustion of fuel both biomass fuel and clean fuel in the houses of the villages in Thiruvallur district selected by cluster sampling based on probability proportion to size and also obtain respiratory health information. You have been selected as a participant in this study. If you agree to participate you will be administered a structured questionnaire by a trained field investigators. The participation in this study for answering the questionnaire will require approximately thirty minutes of your time. Pulmonary function tests will also be conducted to assess your lung functions.

**Possible Risks to the participant:** There are NO risks involved in the study.

**Possible Benefits to the participant:** The participant will be benefited by knowing the status of their lung function.

**Cost and Payments to the participant:** There is no cost for participation in this study. Participation is completely voluntary and no payment will be provided.

**Confidentiality:** Information obtained in this study is strictly confidential. You will be assigned a research number, rather than your name which will be recorded on the assessment you receive. Your name will not be used in reporting of information in publications or conference presentations.

**Participants’ right to withdraw from the study:** You have the right to refuse to participate in this study, the right to withdraw from the study and the right to have your data destroyed at any point during or after the study, without penalty.

**Voluntary consent by the participant:** PARTICIPATION IN THIS STUDY IS COMPLETELY VOLUNTARY, AND YOUR CONSENT IS REQUIRED BEFORE YOU CAN PARTICIPATE IN THIS STUDY.
I have read this consent form (or it has been read to me) and I fully understand the contents of this document and voluntarily consent to participate in the study. All of my questions concerning this study have been answered. If I have any questions in the future about this study they will be answered by the investigator listed above. I understand that this consent ends at the conclusion of this study.

By signing this form, I agree to participate in this study. A copy of this form has been given to me.

Date: 
Participant’s signature
Name:

Certification of Informed Consent

I certify that I have explained the nature and purpose of this study to the above-named individual, and I have discussed the potential benefits of this study participation. The questions the individual had about this study have been answered, and we will always be available to address future questions as they arise.

Date: 
Signature of person obtaining consent
Name:
**ANNEXURE - III**

**IAP – ARI QUESTIONNAIRE**

“TO EVALUATE THE ASSOCIATION OF BIOMASS FUEL USE AND **ACUTE RESPIRATORY TRACT INFECTION** IN CHILDREN UNDER FIVE”

Follow-up Survey, Round __

<table>
<thead>
<tr>
<th>IDENTIFICATION</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>BLOCK NAME</td>
<td>VILLAGE ID [<strong>] [</strong>] [__]</td>
</tr>
<tr>
<td>VILLAGE NAME</td>
<td>HOUSE NUM. [<strong>] [</strong>]</td>
</tr>
<tr>
<td>HEAD OF HOUSEHOLD NAME</td>
<td></td>
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<tr>
<td>MOTHER’S NAME</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>CHILD ROSTER</th>
<th></th>
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<tbody>
<tr>
<td>(complete in the office &amp; transfer information to page 3)</td>
<td></td>
</tr>
<tr>
<td>CHILDREN &lt; 5</td>
<td>CHILDREN 5 – 15 who Attend School</td>
</tr>
<tr>
<td>CID</td>
<td>NAME</td>
</tr>
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<td>6</td>
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</tbody>
</table>

Ph.D. Thesis entitled *“Indoor air pollution due to combustion of biomass fuel and respiratory illness in south Indian population”*. 
Child Health

Questions in section 1 need to be answered by the child’s primary caretaker!

Changes in the child health roster

1. Have you given birth to any children in the past month (since our last visit)?
   [ 1 ] Yes (Add new births to the child health roster, Next page)
   [ 2 ] No

2. Has there been a death in your family during the previous month?
   [ 1 ] Yes (» Q3)
   [ 2 ] No (» Next Section)

3. What was the name of the deceased? ______________
4. What was the gender of the deceased?
   [ 1 ] Male
   [ 2 ] Female

5. How old was the deceased? ________________

6. What was the cause of death?
   [ 1 ] Aging
   [ 2 ] Accident
   [ 3 ] Diarrhea
   [ 4 ] Pneumonia / ARI
   [ 5 ] TB
   [ 6 ] Malaria
   [ 7 ] Typhoid
   [ 8 ] Other acute diseases ___________
   [ 9 ] Other chronic diseases __________
   [ 95 ] Other (specify) ____________
   [-99 ] Don't know / not sure

7. IN OFFICE: Record the SN of the deceased from the baseline questionnaire: __
Observations (children < 5 years)

<table>
<thead>
<tr>
<th>CID</th>
<th>In Office:</th>
<th>Record the name of each child for the household from the cover sheet.</th>
<th>CID's MUST MATCH PREVIOUS SURVEY.</th>
<th>If New Birth, add to the roster.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>In Office:</td>
<td>Record the age (in years) of each child from the previous survey.</td>
<td></td>
<td></td>
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<tr>
<td>8 a</td>
<td>Is the child new to the health roster? (1) Yes (2) No</td>
<td>Sex of the child (1) Male (2) Female</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Is [NAME]'s primary care giver available to answer health questions? (1) Yes (2) No</td>
<td></td>
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<tr>
<td>10</td>
<td>Is [NAME] present? (1) Yes (2) No</td>
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<tr>
<td>11</td>
<td>Does the child have:</td>
<td>(1) Yes (2) No</td>
<td>&gt; Q 12</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Is [NAME] currently being breast-fed? (1) Yes (2) No</td>
<td></td>
<td></td>
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<tr>
<td>13</td>
<td>Did [NAME] need to go to the hospital in the last month for any reason? (1) Yes (2) No (-99) Don’t know</td>
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<th>Y</th>
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<th>a</th>
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<td>2</td>
<td>1</td>
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</tbody>
</table>

Ph.D. Thesis entitled “Indoor air pollution due to combustion of biomass fuel and respiratory illness in south Indian population”.
Ph.D. Thesis entitled “Indoor air pollution due to combustion of biomass fuel and respiratory illness in south Indian population”.

Child Health Calendar (ARI, Diarrhea, and HCGI)

(REPEAT FOR EACH CHILD < 5 YEARS OLD)

CID: [___] NAME: _____________________

Now I would like to ask about the health of [NAME] in the last 14 days.

<table>
<thead>
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<th>14</th>
<th>15</th>
<th>16</th>
<th>17</th>
<th>18</th>
<th>19</th>
<th>20</th>
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<th>23</th>
<th>24</th>
<th>25</th>
<th>26</th>
<th>27</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fever?</td>
<td>Constant Cough?</td>
<td>Congestion?</td>
<td>Panting/ wheezing/ difficulty breathing?</td>
<td>Stomach pain or cramps?</td>
<td>Nausea?</td>
<td>Vomit?</td>
<td>3 or more bowel movements in one day and one night?</td>
<td>Watery or soft stool?</td>
<td>Mucus or Blood in the stool?</td>
<td>Refuse to feed / eat?</td>
<td>Abrasions, scrapes or bruising?</td>
<td>Do you think [Symptoms] are / were serious?</td>
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<td>YES: 1</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
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<tr>
<td>NO: 2</td>
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When did (SYMPTOM) begin?

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<tr>
<td>days ago</td>
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<td>OR weeks ago</td>
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How many days did (SYMPTOM) last?

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<th>14</th>
<th>13</th>
<th>12</th>
<th>11</th>
<th>10</th>
<th>9</th>
<th>8</th>
<th>7</th>
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<tbody>
<tr>
<td>days ago</td>
<td>14</td>
<td>13</td>
<td>12</td>
<td>11</td>
<td>10</td>
<td>9</td>
<td>8</td>
<td>7</td>
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</table>
28. Measure the number of chest rises for child over 30 seconds:

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

A) Breaths: __ __ __

B) Result of breathing rate measurement (circle code) [95]

29. Do you observe lower chest wall indrawing?

<p>| | | |</p>
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[99] Could not evaluate (specify) _______________

30. Do you hear the child wheezing or whistling upon inhalation?

<p>| | | |</p>
<table>
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[99] Could not evaluate (specify) _______________

HAS CHILD HAD CONSTANT COUGH (YES IN Q 15)?

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

Yestr.  Today

---

Ph.D. Thesis entitled “*Indoor air pollution due to combustion of biomass fuel and respiratory illness in south Indian population*”.
### Treatment and Non-Health Impacts

#### 31a
*If child had any illness symptoms (YES in Q14 – Q26):*
Did you seek medical advice for [NAME]?
- 1 Yes
- 2 No (>> Q33)
- 99 Don't know / not sure (>> Q33)

#### 31b
*If child had any illness symptoms (YES in Q14 – Q26):*
What type of medical advice did you seek for [NAME]?
If so, what type?
*Circle all that apply*
- 1 Outpatient
- 2 Inpatient
- 3 House visit
- 95 Other (specify) 
- 99 Don't know / not sure

#### 32
*YES in Q31?*
How much did you pay for all the treatments and advice you sought for [NAME]?

#### 33
*If child had any illness symptoms (YES in Q14 – Q26):*
How much time were household members unable to work because they were caring for [NAME]?

#### 34
*If child had any illness symptoms (YES in Q14 – Q26):*
Did any family members miss school because they were caring for [NAME]?

#### Relationship codes
(1) Mother
(2) Father
(3) Sister
(4) Brother
(5) Aunt / Uncle
(6) Cousin
(7) Grandparent
(8) Great-grandparent
(9) Friend of family
(95) Other (specify)

*Record up to two people.*

<table>
<thead>
<tr>
<th>CID</th>
<th>Name</th>
<th>Rupees</th>
<th>Relationship</th>
<th>Days</th>
<th>Relationship</th>
<th>Days</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>1 2 .99</td>
<td>1 2 3 95 .99</td>
<td>Person 1: ___</td>
<td>Person 1: ___</td>
<td>1 ___</td>
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<td>Person 2: ___</td>
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<td>Person 2: ___</td>
<td>Person 2: ___</td>
<td>2 ___</td>
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<tr>
<td>3</td>
<td></td>
<td>1 2 .99</td>
<td>1 2 3 95 .99</td>
<td>Person 1: ___</td>
<td>Person 1: ___</td>
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<td>Person 2: ___</td>
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<td>Person 1: ___</td>
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<td>Person 2: ___</td>
<td>Person 2: ___</td>
<td>2 ___</td>
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</tbody>
</table>

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Ph.D. Thesis entitled “*Indoor air pollution due to combustion of biomass fuel and respiratory illness in south Indian population*.”
Ph.D. Thesis entitled “Indoor air pollution due to combustion of biomass fuel and respiratory illness in south Indian population”.

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<th>Person 1:</th>
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<td>2</td>
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<td>6</td>
<td>1</td>
<td>2</td>
<td>-99</td>
<td>1</td>
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<td>3</td>
<td>95</td>
<td>-99</td>
<td>Person 1:</td>
<td>1</td>
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<td>Person 1:</td>
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<td>Person 1:</td>
<td>1</td>
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<td></td>
<td></td>
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</tbody>
</table>
Hand washing

1. *Is the children’s primary caretaker answering the questions?*
   - [1] Yes
   - [2] No

2. Could I please see the area where you usually wash your hands?

<table>
<thead>
<tr>
<th>SN</th>
<th>Do you observe in the handwashing area?</th>
<th>(1) Yes</th>
<th>(2) No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Flies</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>Water from tap or container</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>Soap or detergent</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>Ash</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>Towel or cloth</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>6</td>
<td>Basin or sink</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

3. Did you wash your hands in the past 24 hours (since this time yesterday)?
   - [1] Yes
   - [2] No
   - [-99] Don’t know

Water Treatment

1. Do you treat or filter your water in any way before you drink it?
   - [1] Yes
   - [2] No
   - [-99] Don’t know / not sure

2. Who consumes the treated water? *(Circle all that apply)*
   - [1] Children < 5 years
   - [2] Children 5 – 15 years
   - [3] Adults > 15 years
   - [-99] Don’t know

3. How do you treat your drinking water? *(DO NOT PROMPT. Spontaneous response. Circle all that apply.)*
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<table>
<thead>
<tr>
<th>SN</th>
<th>Description</th>
<th>(1) Yes</th>
<th>(2) No</th>
<th>(-99) Cannot evaluate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Boil</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Filter</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Chemicals (bleach/chlorine/alum/potash)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>95</td>
<td>Other (specify)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>99</td>
<td>Don’t know / not sure</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. Do you have treated water in your house right now? Can you show me?

*(Does the family have treated water ready to drink?)*

[1] Yes
[2] No

Could you smell feces during the interview?

[1] Yes
[2] No

**Sanitation**

What kind of toilet do you have?

[1] Pit latrine, no slab
[2] Ventilated improved pit latrine
[95] Other (specify) _________
[99] Don’t know / not sure

Does the toilet / latrine, do you observe:

<table>
<thead>
<tr>
<th>SN</th>
<th>Description</th>
<th>(1) Yes</th>
<th>(2) No</th>
<th>(-99) Cannot evaluate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The hole is covered</td>
<td>1</td>
<td>2</td>
<td>-99</td>
</tr>
<tr>
<td>2</td>
<td>Toilet paper</td>
<td>1</td>
<td>2</td>
<td>-99</td>
</tr>
<tr>
<td>3</td>
<td>Soap, detergent, or towel for hands</td>
<td>1</td>
<td>2</td>
<td>-99</td>
</tr>
<tr>
<td>4</td>
<td>Flies</td>
<td>1</td>
<td>2</td>
<td>-99</td>
</tr>
<tr>
<td>5</td>
<td>Feces on the ground (not in hole)</td>
<td>1</td>
<td>2</td>
<td>-99</td>
</tr>
</tbody>
</table>
FUEL RELATED QUESTIONS

I. KITCHEN/FUEL USE CHARACTERISTICS:

1. Where is your kitchen located in the present house? *(Observe or ask; circle all that apply)*
   
   (1) Inside house, no partition  
   (2) Inside house, with partition  
   (3) Inside house, with separate room  
   (4) Outside house, attached room  
   (5) Outside house, stand alone room  
   (6) Outside house, open air *(>> Q5a)*  
   (95) Other (specify) __________

2. Are there windows/openings in the kitchen?
   
   (1) Yes  
   (2) No

3. Is there a closing door in the kitchen?
   
   (1) Yes  
   (2) No

4a. Is cooking done outside the house or in open air for part of the year?
   
   (1) Yes  
   (2) No *(>> Q5a)*

4b. How many months / days is cooking done outside? _____ Months / Days

5a. What type of fuel is **mainly** used for cooking in your home? *(Circle only one)*
   
   (1) Wood (logs/twigs/branches)  
   (2) Dung cake  
   (3) Crop or plant residues  
   (4) Charcoal  
   (5) Coal / Coal cake / coke  
   (6) Kerosene  
   (7) Electricity  
   (8) LPG  
   (9) Biogas  
   (95) Others (Specify: ___________)

5b. How long is this fuel being used for cooking? ___
   
   (1) Years  
   (2) Months  
   (3) Days  
   (95) Always had the same fuel  
   (-99) Don’t know / Not sure
6a. Has any other type of fuel ever been used for cooking?
   (1) Yes
   (2) No (Go To Section II)
   (3)

6b. What was this other fuel mainly used for cooking previously? (Circle only one)
   (1) Wood (logs/twigs/branches)
   (2) Dung cake
   (3) Crop or plant residues
   (4) Charcoal
   (5) Coal / Coal cake / coke
   (6) Kerosene
   (7) Electricity
   (8) LPG
   (9) Biogas
   (95) Other (Specify: ___________ )

6c. How long was this fuel used for cooking? ____
   (1) Years
   (2) Months
   (3) Days
   (95) Always had the same fuel
   (-99) Don't know / Not sure

II. SMOKING

1. Do anybody in your household smoke any tobacco product now / did smoke in the past?
   (Circle only one)
   (1) Current smoker
   (2) Past smoker
   (3) Never smoked (Go To Section III)
   (-99) Don't know / Not sure (Go To Section III)

2. Please tell me which household members currently smoke/did smoke a tobacco product; what product they mainly smoke; whether they smoke inside and/or outside the house; and how many they smoke per day?
<table>
<thead>
<tr>
<th>Family member</th>
<th>What product?</th>
<th>Inside/outside house</th>
<th>How many per day?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1) Cigarette (2) Beedi (3) Cigar (95) Other (-99) Don’t know</td>
<td>(1) Inside (2) Outside (-99) Don’t know</td>
<td>(-99) Don’t know</td>
</tr>
<tr>
<td>2a. Father</td>
<td>1 2 3 95 -99</td>
<td>1 2 -99</td>
<td></td>
</tr>
<tr>
<td>2b. Mother</td>
<td>1 2 3 95 -99</td>
<td>1 2 -99</td>
<td></td>
</tr>
<tr>
<td>2c. Brother</td>
<td>1 2 3 95 -99</td>
<td>1 2 -99</td>
<td></td>
</tr>
<tr>
<td>2d. Grandfather</td>
<td>1 2 3 95 -99</td>
<td>1 2 -99</td>
<td></td>
</tr>
<tr>
<td>2e. Grandmother</td>
<td>1 2 3 95 -99</td>
<td>1 2 -99</td>
<td></td>
</tr>
<tr>
<td>2f. Uncle</td>
<td>1 2 3 95 -99</td>
<td>1 2 -99</td>
<td></td>
</tr>
<tr>
<td>2g. Aunt</td>
<td>1 2 3 95 -99</td>
<td>1 2 -99</td>
<td></td>
</tr>
<tr>
<td>95. Others</td>
<td>1 2 3 95 -99</td>
<td>1 2 -99</td>
<td></td>
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</tbody>
</table>

### III. OTHER SMOKE EXPOSURES

1. Do you burn mosquito coil inside your house? *(Circle only one)*
   - (1) Yes, everyday
   - (2) Yes, 3-5 times a week
   - (3) Occasionally
   - (4) Never *(Go To Q4)*
   - (5)

2. Approximately, for how many hours do you burn the coil in a day? ____ hrs *(Record “-99” if Don’t know / Not sure)*

3. In which rooms do you burn the coil? *(Circle all that apply)*
   - (1) Hall / Bedroom
   - (2) Kitchen
   - (95) Other (Specify) _________

4. Do you burn incense in your house?
   - (1) Yes
   - (2) No
   - (-99) Don’t know / Not sure
ANNEXURE - IV

IAP-TB QUESTIONNAIRE

Participant Code Number ____________

Association of exposure to combustion of biomass fuel and Tuberculosis in rural population of Thiruvallur district of Tamilnadu

Main Study Questionnaire

INSTRUCTIONS FOR THE INTERVIEWER

1. Read out all questions AND responses to the respondent.
2. Items in CAPITALS or [brackets] are not to be read out loud.
3. Follow skip patterns indicated.
4. DO NOT LEAVE ANY QUESTION UNANSWERED.

A: INTRODUCTION

Consent [TO BE READ OUT TO THE PARTICIPANT]:

“Thank you for participating in our study in which we would like to figure out the cause of tuberculosis in this area. With your help we hope to learn more about the main risk factors for the development of tuberculosis disease. With your permission, I’d like to ask you about yourself and your household characteristics. We would also like to ask about your exposures to smoke and about some of your regular activities. It should take about 20 minutes. Your participation is voluntary and all of your responses will be handled in a strictly confidential manner. You will get no direct benefit from this study and there is no penalty for not participating. There is also no risk to you, except perhaps your discomfort with some of the questions which are of a sensitive nature. You may refuse to answer any of the questions or stop at any time. This study is being conducted by [name of institution] in cooperation with the University of California, Berkeley, USA. Do you have any questions before I begin?”

A1. Name of the Interviewer: ____________________________

A2. Date of interview: ___ / ___ / ______

            dd   mm       yyyy

A3. Name of the person interviewed: ____________________________

           LAST,        FIRST

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A4. Present Address:
   House Number: __________
   Street Name: ________________
   Taluk/District: ______________
   Town/Village with PIN code: ________
   Telephone (if available): __________

Participant code number: __________. (also put at top of every page of the questionnaire).

[At the completion of the interview, this page should be separated from the rest of the questionnaire and stored separately in a secure place, as directed by the study Principal Investigator.]

**Study of possible causes of Tuberculosis in India and Nepal**

A5. Start time of interview__ : __
    \[ hh : \ mm \]

A6. Status:
   ☐ 1 Potential Case of TB
   ☐ 2 Potential Control

A7. Age: ☐ ☐ ☐ years

A8. For what reason did you seek care?
   ☐ 1 Felt unwell and decided to come
   ☐ 2 Referred by a doctor or pharmacist
   ☐ 3 Family or friends insisted
   ☐ 4 Other reason (give details: ___________________________)

A9. What is your religion?
   ☐ 1 Hindu
   ☐ 2 Muslim
   ☐ 3 Christian
   ☐ 4 Sikh
   ☐ 5 Other (specify: ________________)

A10. What type of locality do you live in?
    ☐ 1 Rural
    ☐ 2 Urban
    ☐ 3 Peri-urban
    ☐ 4 Other (specify: ___________)

---

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A11. Which of the following applies to you?

☐ 1 Married
☐ 2 Single
☐ 3 Widowed
☐ 4 Other (Specify: _______________

A11.1. At what age did you get married? _____ Years

B. EDUCATION AND OCCUPATION

B1. Are you able to read and write?

☐ 1 Yes
☐ 2 No

B2. Till what level have you received and completed formal education?

☐ 1 Primary school
☐ 2 Secondary school
☐ 3 Post-secondary school
☐ 4 College graduate
☐ 5 Post-graduate or professional degree
☐ 6 Adult education classes
☐ 7 None
☐ 8 Other (specify: _______________

B3. What is your main occupation?

☐ 1 Farming (on your family land)
☐ 2 Agricultural labor (paid)
☐ 3 Government service
☐ 4 Commercial/business
☐ 5 Laborer (non-agricultural)
☐ 6 Industry (specify type _______________
☐ 7 Housewife
☐ 8 Other (specify: __________

B3a. In this work, do you experience dust exposure?

☐ 1 Yes
☐ 2 No

B4. How many years have you been employed in this type of work? _____ years

B5. Do you have a secondary occupation?

☐ 1 Yes [GO TO B5a]
☐ 2 No [GO TO B6]
B5a. What is your secondary occupation?
- ☐ 1. Farming (on your family land)
- ☐ 2. Agricultural labor (paid)
- ☐ 3. Government service
- ☐ 4. Commercial/business
- ☐ 5. Laborer (non-agricultural)
- ☐ 6. Industry (specify type__________________________)
- ☐ 7. Housewife
- ☐ 8. Other (specify: ____________)

B5b. In this work, do you experience dust exposure? ☐ 1. Yes, ☐ 2. No

B6. Have you ever changed your main occupation? ☐ 1. Yes [GO TO B6a]
- ☐ 2. No [GO TO SECTION C]

B6a. How many years ago did you change to your current main occupation? ___ years
- ☐ 999. Don’t know

B6b. What type of work did you do previously?
- ☐ 1. Farming (on your family land)
- ☐ 2. Agricultural labor (paid)
- ☐ 3. Government service
- ☐ 4. Commercial/business
- ☐ 5. Laborer (non-agricultural)
- ☐ 6. Industry (specify type__________________________)
- ☐ 7. Housewife
- ☐ 8. Other (specify: ____________)

B6c. In this previous work, did you experience dust exposure? ☐ 1. Yes, ☐ 2. No

C. HOUSING CHARACTERISTICS

C1. What type of construction is your house?
- ☐ 1. Kutcha
- ☐ 2. Pucca
- ☐ 3. Semi-Pucca
- ☐ 4. Other (specify: ____________)

C2. How many rooms does your house have, excluding bathroom/toilet? ___ rooms

C3. Including yourself, how many persons live in your house? ________ persons

C4. Have you always lived in this house? ☐ 1. Yes [GO TO SECTION D] ☐ 2. No

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C4a. How many years have you lived in this house? _______ years
   ☐ 999 Don’t know

C4b. What type of construction was your previous house?
   ☐ 1 Kutcha
   ☐ 2 Pucca
   ☐ 3 Semi-Pucca
   ☐ 4 Other (specify: ____________)

C4c. How many rooms did your previous house have, excluding bathroom/toilet? ___ rooms

C4d. Including yourself, how many persons lived in your previous house? ____ persons
   ☐ 999 Don’t know

C4e. How many years did you live in your previous house? _______ years
   ☐ 999 Don’t know

D. COOKING EXPOSURES

“Now I’m going to ask you some question about cooking and your kitchen.”

D1. Do you cook now or have you cooked in the past?
   ☐ 1 Cook now [GO TO QUESTION D2]
   ☐ 2 Don’t cook now but cooked in the past [GO TO QUESTION D1a]
   ☐ 3 Never cooked [GO TO SECTION E]

D1a. How old were you when you stopped cooking? _______ years

D2. How old were you when you started cooking? _______ years

D3. How often do you cook now OR if you don’t cook now, how often did you cook in the past?
   ______ Days Per Week OR (if less than once a week) ______ Days per Month

D4. Please tell me how much time you spend (or spent) while cooking in front of the fire/stove at each of the following times of day:
   D4a. Morning: ___ : ___ (hh:mm)
   D4b. Afternoon: ___ : ___ (hh:mm)
   D4c. Evening: ___ : ___ (hh:mm)
   D4d. Other (specify__________): ___ : ___ (hh:mm)
E. KITCHEN/FUEL USE CHARACTERISTICS

E1. Where is your kitchen located in the present house? [CHECK ALL THAT APPLY]
   - □ 1 Open air kitchen outside the house
   - □ 2 Separate kitchen room outside the house
   - □ 3 Kitchen both inside and outside the house (or cook both inside and outside the house)
   - □ 4 Semi-enclosed room (2 sides and a roof or only a roof and a gallery or balcony)
   - □ 5 Separate kitchen room inside the house
   - □ 6 Kitchen inside the house but not separated from other rooms

E2. Are there windows and/or openings in the kitchen? □ 1 Yes □ 2 No

E3. Is there a closing door in the kitchen? □ 1 Yes □ 2 No

E3a. Is there a ceiling fan in the kitchen? □ 1 Yes □ 2 No

E3b. Is there an exhaust fan in the kitchen? □ 1 Yes □ 2 No

E4. Is cooking done outside the house or in open air for all or part of the year? □ 1 Yes □ 2 No [GO TO E5]

   E4a. How many months is cooking done outside? _______ months

E5. What type of fuel is mainly used for cooking in your home? [CHECK ONLY ONE]
   - □ 1 Wood (logs/twigs/branches)
   - □ 2 Dung cake
   - □ 3 Crop or plant residues
   - □ 4 Coal / Coal cake / coke
   - □ 5 Charcoal
   - □ 6 Kerosene
   - □ 7 Electricity
   - □ 8 Biogas
   - □ 9 LPG
   - □ 10 Other (specify: ____________________)

E5a. How many years has this fuel been used for cooking? _____ years
   □ 999 Don’t know
E6. While living in your present house, has any other type of fuel ever been used for cooking? □1 Yes □2 No [GO TO QUESTION E7]
   E6a. What was this other fuel used for cooking? [Check only one]
      □1 Wood (logs/twigs/branches)
      □2 Dung cake
      □3 Crop or plant residues
      □4 Coal / Coal cake / coke
      □5 Charcoal
      □6 Kerosene
      □7 Electricity
      □8 Biogas
      □9 LPG
      □10 Other (specify: ____________________)
   E6b. Is this fuel still used for cooking? □1 Yes [GO TO QUESTION E7] □2 No
   E6c. How many years ago did this fuel stop being used for cooking? ______ years □999 Don't know

E7. What type of fuel is mainly used for heating in your present home? [Check only one]
   □1 Wood (logs/twigs/branches)
   □2 Dung cake
   □3 Crop or plant residues
   □4 Coal / Coal cake / coke
   □5 Charcoal
   □6 Kerosene
   □7 Electricity
   □8 Biogas
   □9 LPG
   □10 Other (specify: ____________________)
   E7a. How many years have you been using this fuel for heating? _____ years
   E7b. Have you ever used any other type of fuel for heating? □1 Yes, □2 No [GO TO QUESTION E8]
   E7c. What was this other fuel you used for heating? [CHECK ONLY ONE]
      □1 Wood (logs/twigs/branches)
      □2 Dung cake
      □3 Crop or plant residues

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☐ 4 Coal / Coal cake / coke
☐ 5 Charcoal
☐ 6 Kerosene
☐ 7 Electricity
☐ 8 Biogas
☐ 9 LPG
☐ 10 Other (specify: ______________)

E7d. Is this fuel still used for heating?  ☐ 1 Yes [GO TO QUESTION E8]  ☐ 2 No

E7e. How many years ago did you stop using this fuel for heating? _____ years
☐ 999 Don’t know

E8. What type of stove do you use for cooking at present? [Show photos where available]

☐ 1 Biomass stove without a chimney
☐ 2 Biomass stove with chimney
☐ 3 Kerosene pump stove
☐ 4 Kerosene wick stove
☐ 5 LPG stove
☐ 6 Biogas stove
☐ 7 Electric stove
☐ 8 Other (specify: ______________)

E8a. How many years has this stove been used for cooking? _____ years
☐ 999 Don’t know

E9. Have you ever used any other type of stove?  ☐ 1 Yes ☐ 2 No [GO TO QUESTION E10]

E9a. What was the other type of stove you used in the past?

☐ 1 Biomass stove without a chimney
☐ 2 Biomass stove with chimney
☐ 3 Kerosene pump stove
☐ 4 Kerosene wick stove
☐ 5 LPG stove
☐ 6 Biogas stove
☐ 7 Electric stove
☐ 8 Other (specify: ______________)

E9c. How many years ago did you stop using the previous stove? _____ years

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E10. What is the main source of lighting in your home? [CHECK ONLY ONE]

☐ 1. Electricity
☐ 2. Kerosene lamp
☐ 3. Lantern
☐ 4. Petromax light
☐ 5. Other (specify: ______________)

"Now I’d like to ask about cooking in your parent’s house."

E11. Do you currently live with your parents  ☐ 1. Yes [GO TO SECTION F] ☐ 2. No

E12. What type of fuel was mainly used for cooking in your parent’s home? [CHECK ONLY ONE]

☐ 1. Wood (logs/twigs/branches)
☐ 2. Dung cake
☐ 3. Crop or plant residues
☐ 4. Coal / Coal cake / coke
☐ 5. Charcoal
☐ 6. Kerosene
☐ 7. Electricity
☐ 8. Biogas
☐ 9. LPG
☐ 10. Other (specify: ______________)

E13. What type of stove was mainly used for cooking at your parent’s house when you lived there? [Show photos where available]

☐ 1. Biomass stove without a chimney
☐ 2. Biomass stove with chimney
☐ 3. Kerosene pump stove
☐ 4. Kerosene wick stove
☐ 5. LPG stove
☐ 6. Biogas stove
☐ 7. Electric stove
☐ 8. Other (specify: ______________)
F. SMOKING

“Now I’m going to ask you some questions about tobacco products”

F1. Did you ever smoke cigarettes or bidis or hookas regularly, that is, at least one per day of any of these for six months or longer?

☐ 1 Yes    ☐ 2 No [GO TO QUESTION F11]

F2. How old were you when you first started smoking at least one cigarette or bidi or one hooka per day?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td></td>
</tr>
</tbody>
</table>

F3. How old were you when you last smoked cigarettes or bidis or hookas?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td></td>
</tr>
</tbody>
</table>

Currently smokes cigarettes or bidis or hookas

☐ 99

F4. Thinking about the years between age (AGE FROM F2) and (AGE FROM F3 OR the present), was there ever a period of one year or longer during which you did not smoke cigarettes or bidis or hookas?

☐ 1 Yes    ☐ 2 No [GO TO QUESTION F6]

F5. For how many years between age (AGE FROM F2) and (AGE FROM F3/the present) did you stop smoking cigarettes and bidis and hookas? _______________Years

Now I have a few questions about cigarettes, bidis, and hookas, separately. First I will ask some questions about cigarettes, then some questions about bidis, and then some questions about hookas. [ASK ALL THE RELEVANT QUESTIONS ABOUT CIGARETTES BEFORE ASKING QUESTIONS ABOUT BIDIS AND THEN ABOUT HOOKAS. “TYPE” REFERS TO CIGARETTES OR BIDIS OR HOOKAS.]
Ph.D. Thesis entitled “Indoor air pollution due to combustion of biomass fuel and respiratory illness in south Indian population”.

<table>
<thead>
<tr>
<th></th>
<th>CIGARETTES</th>
<th>BIDIS</th>
<th>HOOKAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>F6. Did you ever smoke at least one (TYPE) per day for six months or longer?</td>
<td>Yes □1</td>
<td>Yes □1</td>
<td>Yes □1</td>
</tr>
<tr>
<td></td>
<td>No □2 (GO TO BIDIS)</td>
<td>No □2 (GO TO HOOKAS)</td>
<td>No □2 (GO TO F11)</td>
</tr>
<tr>
<td>F7. For how many years altogether did you smoke (TYPE)?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Years</td>
<td>Years</td>
<td>Years</td>
</tr>
<tr>
<td>F8. Thinking about all the years that you smoked (TYPE), how many did you usually smoke per day?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Number per day</td>
<td>Number per day</td>
<td>Number per day</td>
</tr>
<tr>
<td>F9. When you smoked (TYPE), would you say that you usually inhaled only into your mouth, into your mouth and throat, or into your chest?</td>
<td>Mouth only □1</td>
<td>Mouth only □1</td>
<td>Mouth only □1</td>
</tr>
<tr>
<td></td>
<td>Mouth and throat □2</td>
<td>Mouth and throat □2</td>
<td>Mouth and throat □2</td>
</tr>
<tr>
<td></td>
<td>Chest □3</td>
<td>Chest □3</td>
<td>Chest □3</td>
</tr>
<tr>
<td>F10. When you smoked cigarettes, were they mostly filtered or unfiltered, or did you smoke equal amounts of each?</td>
<td>Unfiltered □1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Filtered □2</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Both types equally □3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

F11. Please tell me which household members currently smoke a tobacco product inside the house; what product(s) they smoke (i.e., cigarette, bidi or hukka); and about how many they smoke in the house each day?

<table>
<thead>
<tr>
<th>Family member</th>
<th>Main product? (MARK ALL THAT APPLY)</th>
<th>How many per day?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Cigarettes □1</td>
<td>No. _____ Don't know □99</td>
</tr>
<tr>
<td></td>
<td>Bidi □1</td>
<td>No. _____ Don't know □99</td>
</tr>
<tr>
<td></td>
<td>Hukka □1</td>
<td>No. _____ Don't know □99</td>
</tr>
<tr>
<td>2.</td>
<td>Cigarettes □1</td>
<td>No. _____ Don't know □99</td>
</tr>
<tr>
<td></td>
<td>Bidi □1</td>
<td>No. _____ Don't know □99</td>
</tr>
<tr>
<td></td>
<td>Hukka □1</td>
<td>No. _____ Don't know □99</td>
</tr>
<tr>
<td>3.</td>
<td>Cigarettes □1</td>
<td>No. _____ Don't know □99</td>
</tr>
</tbody>
</table>
G. OTHER SMOKE EXPOSURES

G1. Do you burn mosquito coils inside your house?  
☐ 1 Yes  ☐ 2 No [GO TO QUESTION G4]

G1.1. Which months do you burn coils? From _____ to _____

G1.2. During these months, how often do you burn coils? ____ Days Per Week

   OR (if less than once a week) ___ Days per Month

G2. Approximately, for how many hours do you burn the coil in an average day? _____ hrs

G3. In which rooms do you burn the coil? [MARK ALL THAT APPLY]
   ☐ 1 Bedroom
   ☐ 1 Kitchen
   ☐ 1 Other (specify: ___________

G4. Do you burn incense in your house?  
☐ 1 Yes

☐ 2 No [GO TO SECTION H]

G4.1. How often do you burn incense? ____ Days Per Week

   OR (if less than once a week) ___ Days per Month

G5. Approximately, for how many hours do you burn the incense in a day? _____ hrs

G6. In which rooms do you burn the incense? [MARK ALL THAT APPLY]
   ☐ 1 Bedroom  ☐ 1 Kitchen  ☐ 1 Other (specify: ___________

H. OTHER FACTORS

Now I'm going to ask you some questions about alcoholic drink consumption

H1. Did you ever drink alcoholic drinks regularly, that is, at least one drink per week for six months or longer?

☐ 1 Yes

☐ 2 No [GO TO QUESTION H6]
H2. How old were you when you first started to drink at least one glass of alcoholic drink per week?

|___|___|
| Age |

H3. Do you currently drink at least one alcoholic drink per week?

☐ 1 Yes [GO TO QUESTION H4]
☐ 2 No

H3.1. How old were you when you last drank at least one alcoholic drink per week?

|___|___|
| Age |

H4. Thinking about all the years that you have drunk alcoholic drinks, how many glasses do you or did you usually drink?

Glasses per day______ OR Glasses per week ________

H5. How many glasses of alcoholic drink do you usually drink now?

Glasses per day______ OR Glasses per week ________

H6. Are you currently taking any medications?

☐ 1 Yes ☐ 2 No [GO TO QUESTION H8]

H7. PLEASE LIST ALL MEDICATIONS YOU ARE CURRENTLY TAKING OR, IF YOU DON’T REMEMBER, THE ILLNESS FOR WHICH THEY HAVE BEEN PRESCRIBED. ☐ 88 Refuse ☐ 99 Don’t know

1. ______________________________
2. ______________________________
3. ______________________________
4. ______________________________

H8. Has anyone in your household ever been diagnosed with tuberculosis?

☐ 1 Yes
☐ 2 No [GO TO SECTION I]
☐ 3 Don’t Know [GO TO SECTION I]
☐ 4 Refused [GO TO SECTION I]

H9. What is your relationship to this person (or these persons)? [MARK ALL THAT APPLY]

☐ 1 Husband
☐ 1 Parent
☐ 1 Parent‐in‐law
☐ 1 Child
☐ 1 Brother or sister
☐ 1 Other (specify: ______________)
I. INCOME AND ASSETS

I1. Approximately what is your total annual household income?

☐ 1 Less than Rs. 25,000
☐ 2 Between Rs. 25,000 and Rs. 50,000
☐ 3 More than Rs. 50,000, but less than Rs. 1,00,000
☐ 4 More than Rs. 1,00,000
☐ 5 Don’t know
☐ 6 Refused to answer

I2. Does your family own any land?  ☐ 1 Yes  ☐ 2 No [GO TO I3]

I2a. How much land does your family own? ________ bhigas

☐ 1 Don’t know

I3. Does your family own any of the following? [READ OUT LIST AND MARK ALL THAT APPLY]

☐ 1 Car, jeep or van
☐ 1 Motorcycle or scooter
☐ 1 Bullock cart
☐ 1 Tractor
☐ 1 Bicycle
☐ 1 Other (specify:____________________)

That is the last question that we need to ask you. Is there anything that we did not ask that you think we should know about?

___________________________________________________________________________________________________________

TERMINATION SCRIPT:

Thank you for your time and assistance in completing this questionnaire. If you have any questions about the study or about your information you can always ask us. Your personal data will be kept confidential and will be used to give us important information on the causes of tuberculosis disease in this area. Thank you for your participation.

End time of interview __ : ___ (hh : mm)

Check the following:

All questions have been answered (or a note beside the question, indicating why this was not possible). [Initial here:  ]

All pages have the participant code number entered at the top. [Initial here:  ]

Provide the completed questionnaire to your supervisor

Ph.D. Thesis entitled “Indoor air pollution due to combustion of biomass fuel and respiratory illness in south Indian population”. 
STUDY ID: □□□

Association of exposure to combustion of biomass fuel and Tuberculosis in rural population of Thiruvallur district of Tamilnadu

Screening Questionnaire: Eligibility of Cases and Controls

1. Name of the Interviewer: ________________________________
2. Date of screening: ___ / ___ / ______ (dd mm yyyy)
3. Status: □₁ Potential Case of TB □₂ Potential Control
4. Name of the Recruiting location: ____________ [Provide a list]
5. Name of the respondent: ______________________________
   LAST, FIRST
6. Age: □□□ years
7. Gender: □₁ Male □₂ Female
8. Religion: □₁ Hindu
   □₂ Muslim
   □₃ Christian
   □₄ Sikh
   □₅ Other (specify: ____________)
9. Present Address:
   House Number: ______
   Street Name: ________________________
   Taluk/District: ________________________
   Town/Village with PIN code: _________
   Telephone (if available): ____________
10. What type of locality is this?
    □₁ Rural
    □₂ Urban
    □₃ Peri-urban
    □₄ Urban-slum
    □₅ Other (specify: ____________)
Health history

11. Do you regularly have cough with phlegm?
   - Yes
   - No [GO TO Q15]
   - DK
   - Refused

12. For how many consecutive months in the past year did you have cough with phlegm? ______ months

13. For how many consecutive years did you have cough with phlegm for three months or more? ______ years

14. Which of the following factors do you think precipitates the cough?
   - Change in weather
   - Common cold
   - Occupation
   - Dust
   - Food
   - Other (specify: ____________)
   - Don’t know

15. Are you pregnant now?
   - Yes [Thank & Exclude the subject from the study]
   - No
   - DK
   - Refused

16. Has anyone in your household ever been diagnosed with tuberculosis?
   - Yes
   - No [GO TO 18]
   - DK
   - Refused
17. What is your relationship to this person?

☐ 1 Parent
☐ 1 Parent-in-law
☐ 1 Child
☐ 1 Sibling
☐ 1 Other (specify: ________________)

CLINICAL EXAMINATION:

18. Height (in Centimeters): __________ cm s

19. Weight (in Kilograms): __________ kgs

20. Sputum Examination Date:  ____ / ____ / ______

   dd   mm   yyyy

21. Smear:  ☐ 1 Positive
            ☐ 2 Negative

18. Chest X ray (PA view)

☐ 1 TB
☐ 2 COPD
☐ 3 Lung cancer
☐ 4 Other (specify: ________________)

19. Description of Chest X-ray findings: ______________________

                                                      ______________________

20. Has a doctor ever told you that you have any of the following conditions?

☐ 1 Diabetes
☐ 2 HIV or AIDS
☐ 3 Cancer
☐ 4 Chronic lung disease
☐ 5 Other chronic illness (specify: ________________)

Ph.D. Thesis entitled “Indoor air pollution due to combustion of biomass fuel and respiratory illness in south Indian population”. 
21. Pallor (anemia)  
☐ 1 Present  
☐ 2 Absent

22. Findings of examination of Respiratory system:

FINAL OUTCOME:  
☐ 1 Include  
☐ 2 Exclude [TERMINATE INTERVIEW]

TERMINATE: Thank you for your time and interest in participating in our study. At this time we do not need to ask you any further questions.

ENROLL: Thank you for your interest in our study. We would like to proceed with asking you some additional questions which will take about 20 minutes.
ANNEXURE - V

COPD QUESTIONNAIRE

PREVALENCE OF CHRONIC OBSTRUCTIVE PULMONARY DISEASE IN RURAL WOMEN

Health Evaluation Questionnaire:

1. Name of the Interviewer: ____________________
2. Date of screening: ___ / ___ / ______
   
3. Status:  □1 Biomass fuel user      □2 Clean fuel user
4. Name of the Recruiting location: ____________ [Thiruvallur district]
5. Name of the respondent: ____________________
6. Age: □□ years

Health history

7. Do you regularly have cough with phlegm?
   □1 Yes     □2 No     □3 DK     □4 Refused
8. Do you get phlegm while coughing?
   □1 Yes □2 No
9. If yes, is it
   □1 Copious    □2 Scanty
10. What is the nature of the phlegm?
    □3 Mucoid     □3 Purulent     □3 Mucopurulent     □4 Blood tinged
11. For how many consecutive months in the past year did you have cough with phlegm?
    ______ months
12. For how many consecutive years did you have cough with phlegm for three months or more?
    ______ years
13. Which of the following factors do you think precipitates the cough?
    □1 Change in weather    □2 Common cold    □3 Occupation
    □4 Dust    □5 Food    □6 Other(specify: ___________)
    □7 Don’t know

Ph.D. Thesis entitled “Indoor air pollution due to combustion of biomass fuel and respiratory illness in south Indian population”.
14. Do you have difficulty in breathing?
   □ 1 Yes □ 2 No

15. If yes, when do you get it
   □ 1 At rest □ 2 On exertion

16. Do you suffer from wheeze?
   □ 1 Yes □ 2 No

17. What provokes an attack of wheeze?
   □ 1 Cold weather □ 2 Dust □ 3 Physical work

18. If yes, which category do you belong
   □ 1 History of cough with expectoration followed by wheeze
   □ 2 History of wheeze followed by cough with expectoration

19. Do you suffer from symptoms of sneezing
   □ 1 Yes □ 2 No

20. If yes,
   □ 1 Frequently □ 2 Occasionally

21. Are you pregnant now?
   □ 1 Yes [Thank & Exclude the subject from the study] □ 2 No
   □ 3 DK □ 4 Refused

22. Has anyone in your household ever been diagnosed with tuberculosis?
   □ 1 Yes □ 2 No □ 3 DK □ 4 Refused

23. What is your relationship to this person?
   □ 1 Parent □ 2 Parent-in-law
   □ 3 Child □ 4 Sibling □ 5 Other (specify: __________)

24. Has a doctor ever told you that you have any of the following conditions?
   □ 1 Diabetes □ 2 HIV or AIDS □ 3 Cancer
   □ 4 Chronic lung diseases □ 5 Other chronic illness (specify: ___)
**CLINICAL EXAMINATION:**

25. Height (in Centimeters): __________ cms
26. Weight (in Kilograms): __________ kgs
27. Build:

   □ 1 Normal  □ 2 Undernourished  □ 3 Obese

28. Pallor (anemia)

   □ 1 Present  □ 2 Absent

29. Clubbing:

   □ 1 Present  □ 2 Absent

30. Cyanosis:

   □ 1 Present  □ 2 Absent

31. Lymphadenopathy:

   □ 1 Present  □ 2 Absent

32. Inspection:

   i. Shape of the chest:

      □ 1 Elliptical  □ 2 Barrel  □ 3 Pigeon shaped

   ii. Spinal abnormality

      32.2.1. Kyphosis: □ 1 Yes □ 2 No

      32.2.2. Scoliosis: □ 1 Yes □ 2 No

   iii. Engorged veins on the chest wall:

      □ 1 Present  □ 2 Absent

   iv. Abnormal pulsations on the chest wall:

      □ 1 Present  □ 2 Absent

   v. Chest Movements

      □ 1 Symmetrical  □ 2 Asymmetrical

   vi. Chest Expansion

      □ 1 Normal  □ 2 Diminished

33. Palpation

   33.1. Apical Impulse

      □ 1 Normal  □ 2 Shifted to the right  □ 3 Shifted to the left

   33.2. Tracheal position

      □ 1 Midline  □ 2 Shifted to the right  □ 3 Shifted to the left
33.3. Tactile fremitus
- Normal
- Increased
- Decreased

33.4. Chest movements
- Normal
- Increased
- Decreased

33.5. JVP
- Normal
- Raised

34. Percussion
34.1. Percussion note
- Normal
- Hyper resonant
- Dull

34.2. Liver dullness
- Normal
- Abnormal

35. Auscultation
35.1. Vocal fremitus
- Normal
- Increased
- Decreased

35.2. Breath sounds
- NVBS
- Bronchial breathing

35.3. If bronchial, in which area

35.4. Added sounds
- Wheeze / Rhonchi
- Crepitations / Rales
- Not heard

36. Chest X-ray (PA view)
- TB
- COPD
- Lung cancer
- Others (specify: ___)

37. Description of Chest X-ray findings:

38. Final Diagnosis:
EXPOSURE QUESTIONNAIRE

Instructions for the interviewer

1. Read out all questions AND responses to the respondent.
2. Items in CAPITALS or [brackets] is not to be read out loud.
3. Follow skip patterns indicated.
4. DO NOT LEAVE ANY QUESTION UNANSWERED.

A: INTRODUCTION

Consent [TO BE READ OUT TO THE PARTICIPANT]:

“Thank you for participating in our study in which we would like to figure out the cause of COPD in this area. With your help we hope to learn more about the main risk factors for the development of COPD. With your permission, I'd like to ask you about yourself and your household characteristics. We would also like to ask about your exposures to smoke and about some of your regular activities. It should take about 20 minutes. Your participation is voluntary and all of your responses will be handled in a strictly confidential manner. You will get no direct benefit from this study and there is no penalty for not participating. There is also no risk to you, except perhaps your discomfort with some of the questions which are of a sensitive nature. You may refuse to answer any of the questions or stop at any time. This study is being conducted by Sri Ramachandra Medical College & Research Institute (Deemed University) Do you have any questions before I begin?”

A1. Name of the Interviewer: ____________________________

A2. Date of interview: ____ / ____ / ________

   dd   mm   yyyy

A3. Start time of interview: ___ : __________

   hh : mm

A5. Status:  □₁ Biomass fuel user

           □₂ Clean fuel user

A6. Name of the Recruiting location: ______________ (Thiruvallur District)

A7. Name of the respondent: ______________________

A8. Age:  □□□□□ years

A9. Present Address:

   House Number: ________
Street Name: __________________________
Taluk/District: __________________________
Town/Village with PIN code: ____________
Telephone (if available): _____________

A10. Religion:  
☐ 1 Hindu  
☐ 2 Muslim  
☐ 3 Christian  
☐ 4 Sikh  
☐ 5 Other (specify: _____________)

B. EDUCATION AND OCCUPATION

B1. Are you able to read and write?  
☐ 1 Yes  ☐ 2 No

B2. Till what level have you received and completed formal education?  
☐ 1 Primary school  ☐ 2 Secondary school  ☐ 3 Post-secondary school  
☐ 4 College graduate  ☐ 5 Post-graduate or professional degree  ☐ 6 Other (specify: ______)

B3. What is your main occupation?  
☐ 1 Farming  ☐ 2 Government service  ☐ 3 Commercial/business  
☐ 4 Housewife  ☐ 5 Others (specify: _____________)

B3a. How many years have you been employed in this type of work? ______ years

B4. Do you have a secondary occupation?  
☐ 1 Yes [Go to B4a]  ☐ 2 No [Go to B5]

B4a. What is your secondary occupation?  
☐ 1 Farming  ☐ 2 Government service  ☐ 3 Commercial/business  
☐ 4 Housewife  ☐ 5 Others (specify: _____________)

B5. Have you ever changed occupations?  
☐ 1 Yes [Go to B5a]  ☐ 2 No [Go to section C]

B5a. How many years ago did you change to your current occupation? ______ years

B5b. What type of work did you do previously?  
☐ 1 Farming  ☐ 2 Government service  ☐ 3 Commercial/business  
☐ 4 Housewife  ☐ 5 Others (specify: _____________)

B5c. For how many years were you employed in this? ______

C. HOUSING CHARACTERISTICS

C1. What type of construction is your house?  
☐ 1 Kutchta  ☐ 2 Pucca  ☐ 3 Semi-Pucca

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C2. How many rooms does your house have, excluding bathroom/toilet? ___ rooms
C3. Including yourself, how many persons live in your house? _______ persons
C4. How many years have you lived in this house? _______ years
C5. Have you always lived in this house?
   ☐ 1 Yes [Go to Section D]   ☐ 2 No [Go to C5a]
C5a. What type of construction was your previous house?
      ☐ 1 Kutcha   ☐ 2 Pucca   ☐ 3 Semi-Pucca
C5b. How many rooms did your previous house have, excluding bathroom/toilet? ___ rooms
C5c. Including yourself, how many persons lived in your previous house? ___ persons
C5d. How many years did you live in your previous house? _______ years

D. COOKING EXPOSURES

D1. Do you cook now or have you cooked in the past?
   ☐ 1 Cook now [Go to D2]   ☐ 2 Cooked in the past   ☐ 3 Never cooked [Go to D4]
D1a. How old were you when you stopped cooking? _______ years
D2. How old were you when you started cooking? _______ years
D3. How often do you cook now or did you cook in the past?
   ☐ 1 Daily   ☐ 2 3-5 times per week   ☐ 3 A few times a month   ☐ 4 Occasionally
D4. Please tell me how much time you spend while cooking in front of the fire/stove at each of the following times of day:
   D4a. Morning: ___: ___ (hh:mm)   D4b. Afternoon: ___: ___ (hh:mm)
   D4c. Evening: ___: ___ (hh:mm)   D4d. Other (specify _______): ___: ___ (hh:mm)

E. KITCHEN/FUEL USE CHARACTERISTICS

E1. Where is your kitchen located in the present house?
   ☐ 1 Open air kitchen outside the house   ☐ 2 Separate kitchen room outside the house
   ☐ 3 Kitchen both inside and outside the house (or cook both inside and outside the house)
   ☐ 4 Semi-enclosed room (2 sides and a roof or only a roof and a gallery or balcony)
   ☐ 5 Separate kitchen room inside the house   ☐ 6 Kitchen inside the house but not separated (ex in corridor, and in the room also used for sleeping)
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E2. Are there windows/openings in the kitchen? □ 1 Yes □ 2 No

E3. Is there a closing door in the kitchen? □ 1 Yes □ 2 No

E4. Is cooking done outside the house or in open air for part of the year? □ 1 Yes □ 2 No

E4a. How many months is cooking done outside? ______ months

E5. What type of fuel is mainly used for cooking in your home? [Check only one]

□ 1 Wood (logs/twigs/branches) □ 2 Dung cake □ 3 Crop or plant residues
□ 4 Coal / Coal cake / coke □ 5 Charcoal □ 6 Kerosene
□ 7 Electricity □ 8 Biogas □ 9 LPG
□ 10 Other (specify: __________)

E6. Has any other type of fuel ever been used for cooking? □ 1 Yes □ 2 No

E6a. How many years has this fuel been used for cooking? _____ years

E6b. What was this other fuel mainly used for cooking previously? [Check only one]

□ 1 Wood (logs/twigs/branches) □ 2 Dung cake □ 3 Crop or plant residues
□ 4 Coal / Coal cake / coke □ 5 Charcoal □ 6 Kerosene
□ 7 Electricity □ 8 Biogas □ 9 LPG
□ 10 Other (specify: __________)

E6c. How many years was this fuel used for cooking? _______ years

E7. What type of fuel is mainly used for heating in your home? [Check only one]

□ 1 Wood (logs/twigs/branches) □ 2 Dung cake □ 3 Crop or plant residues
□ 4 Coal / Coal cake / coke □ 5 Charcoal □ 6 Kerosene
□ 7 Electricity □ 8 Biogas □ 9 LPG
□ 10 Other (specify: __________)

E7a. Have you ever used any other type of fuel for heating? □ 1 Yes □ 2 No

E7b. How many years have you been using this fuel for heating? ______ years

E7c. What was this other fuel you mainly used for heating previously? [Check only one]

□ 1 Wood (logs/twigs/branches) □ 2 Dung cake □ 3 Crop or plant residues
□ 4 Coal / Coal cake / coke □ 5 Charcoal □ 6 Kerosene
□ 7 Electricity □ 8 Biogas □ 9 LPG
□ 10 Other (specify: __________)

E7d. How many years have you used this previous fuel for heating? _____ years
E8. What type of stove do you use for cooking at present?

☐ 1 Unimproved biomass stove ☐ 2 Improved biomass stove with chimney ☐ 3 Kerosene pump stove
☐ 4 Kerosene wick stove ☐ 5 LPG stove ☐ 6 Biogas stove
☐ 7 Electric stove ☐ 8 Other (specify: __________)

E9. Have you ever used any other type of stove? ☐ 1 Yes ☐ 2 No
E9a. How many years have you used this stove? ________ years
E9b. What was the other type of stove you used in the past?

☐ 1 Unimproved biomass stove ☐ 2 Improved biomass stove with chimney
☐ 3 Kerosene pump stove
☐ 4 Kerosene wick stove ☐ 5 LPG stove ☐ 6 Biogas stove
☐ 7 Electric stove ☐ 8 Other (specify: __________)

E9c. How many years have you used the previous stove? ________ years

E10. What is the main source of lighting in your home?

☐ 1 Electricity ☐ 2 Kerosene lamp ☐ 3 Lantern
☐ 4 Petromax light ☐ 5 Other (specify: __________)

F. SMOKING

F1. Do you smoke any tobacco products now or in the past?

☐ 1 Current smoker ☐ 2 Past smoker [Go to F3] ☐ 2 Never smoked [Go to F8]
F2. What product do you currently smoke?

☐ 1 Cigarette ☐ 2 Bidi ☐ 3 Hukka ☐ 4 Other (specify: ___)
F3. What product did you smoke in the past?

☐ 1 Cigarette ☐ 2 Bidi ☐ 3 Hukka ☐ 4 Other (specify: __________)
F4. If you smoked in the past, when did you stop smoking? ________ years
F5. Do you or did you smoke every day or less than once a day?

☐ 1 Every day ☐ 2 Less than once a day
F6. How many of each type do you or did you smoke in one day?

Cigarettes: ☐ ☐ ☐ ☐ Bidi: ☐ ☐ ☐ ☐ Hukka: ☐ ☐ ☐ ☐ Other: ☐ ☐ ☐ ☐
F7. At what age did you start smoking? ________ years
F8. Please tell me which household members currently smoke a tobacco product; what product they mainly smoke; whether they smoke inside and/or outside the house; and how many they smoke per day?
<table>
<thead>
<tr>
<th>Family member</th>
<th>What product?</th>
<th>Inside/outside house</th>
<th>How many per day?</th>
</tr>
</thead>
<tbody>
<tr>
<td>F8a. Father</td>
<td></td>
<td>☐₁ Inside ☐₂ Outside</td>
<td></td>
</tr>
<tr>
<td>F8b. Mother</td>
<td></td>
<td>☐₁ Inside ☐₂ Outside</td>
<td></td>
</tr>
<tr>
<td>F8c. Son</td>
<td></td>
<td>☐₁ Inside ☐₂ Outside</td>
<td></td>
</tr>
<tr>
<td>F8d. Daughter</td>
<td></td>
<td>☐₁ Inside ☐₂ Outside</td>
<td></td>
</tr>
<tr>
<td>F8e. Mother-in-law</td>
<td></td>
<td>☐₁ Inside ☐₂ Outside</td>
<td></td>
</tr>
<tr>
<td>F8f. Father-in-law</td>
<td></td>
<td>☐₁ Inside ☐₂ Outside</td>
<td></td>
</tr>
<tr>
<td>F8g. Daughter-in-law</td>
<td></td>
<td>☐₁ Inside ☐₂ Outside</td>
<td></td>
</tr>
<tr>
<td>F8h. Son-in-law</td>
<td></td>
<td>☐₁ Inside ☐₂ Outside</td>
<td></td>
</tr>
<tr>
<td>F8i. Brother-in-law</td>
<td></td>
<td>☐₁ Inside ☐₂ Outside</td>
<td></td>
</tr>
<tr>
<td>F8j. Sister-in-law</td>
<td></td>
<td>☐₁ Inside ☐₂ Outside</td>
<td></td>
</tr>
<tr>
<td>F8k Husband</td>
<td></td>
<td>☐₁ Inside ☐₂ Outside</td>
<td></td>
</tr>
<tr>
<td>F8l. Other (specify:_________)</td>
<td></td>
<td>☐₁ Inside ☐₂ Outside</td>
<td></td>
</tr>
</tbody>
</table>

**G. OTHER SMOKE EXPOSURES**

G1. Do you burn mosquito coil inside your house?
☐₁ Everyday ☐₂ 3-5 times a week ☐₃ Occasionally ☐₄ Never [Go to G4]

G2. Approximately, for how many hours do you burn the coil in a day? _____ hrs

G3. Which rooms do you burn the coil?
☐₁ Bedroom ☐₂ Kitchen ☐₃ Other (specify: __________)

G4 Do you burn Incense in your house?
☐₁ Everyday ☐₂ 3-5 times a week ☐₃ Occasionally ☐₄ Never [Go to H5]

G5. Approximately, for how many hours do you burn the incense in a day? _____ hrs

G6. Which rooms do you burn the incense?
☐₁ Bedroom ☐₂ Kitchen ☐₃ Other (specify: __________)
H. OTHER RISK FACTORS FOR COPD

H1. Do you consume alcohol on a regular basis?
   ☐ 1 Everyday ☐ 2 3-5 times a week ☐ 3 Occasionally ☐ 4 In the past
   ☐ 5 Never [Go to H5]

H2. How many drinks do/did you consume at one sitting? _____ drinks

H3. How many years have/had you been drinking? _____ years

H4. If you no longer drink, how many years since you stopped? _____ years

H5. Do you take any medication. ☐ 1 Yes ☐ 2 No (Go to H7)

H6. Details about the medication, (the interviewer needs to find out whether it is an immunosuppressive medication or not)
   ☐ 1 Yes ☐ 2 No ☐ 3 DK ☐ 4 Refused

H7. Has a doctor ever told you that you have any of the following conditions?
   ☐ 1 Diabetes ☐ 2 HIV or AIDS ☐ 3 Cancer ☐ 4 Chronic lung disease ☐ 5 Other chronic illness (specify:__________)

H8. Has anyone in your household ever been diagnosed with tuberculosis?
   ☐ 1 Yes ☐ 2 No [Go to Section I] ☐ 3 DK ☐ 4 Refused

H9. What is your relationship to this person?
   ☐ 1 Parent ☐ 2 Parent-in-law ☐ 3 Child ☐ 4 Sibling ☐ 5 Other (specify:______)

I. INCOME AND ASSETS

I1. Approximately what is your total annual household income?
   ☐ 1 < Rs. 25,000 ☐ 2 Rs.25,000 to Rs. 50,000 ☐ 3 >Rs.50,000 & < Rs. 1,00,000
   ☐ 4> Rs. 1,00,000 ☐ 5 Don’t know ☐ 6 Refused to answer

I2. Do you own any land? ☐ 1 Yes ☐ 2 No [Go to I3]

   I2a. How much land do you own? _______ bhigas

I3. Do you own any vehicles? ☐ 1 Yes ☐ 2 No [Go to I4]

   I3a. Which of the following do you own?
   ☐ 1 Car, jeep or van ☐ 2 Motorcycle or scooter ☐ 3 Bullock cart
   ☐ 4 Tractor ☐ 5 Bicycle ☐ 6 Other (specify:______________)

I4. End time of interview ___ : ___ (hh : mm)
TERMINATION SCRIPT:

Thank you for your time and assistance in completing this questionnaire. If you have any questions about the study or about your information you can always ask us. Your personal data will be kept confidential and will be used to give us important information on the causes of COPD disease in this area. Thank you for your participation.
ANNEXURE - VI

PUBLICATIONS


9. Kalpana Balakrishnan, Padmavathi Ramaswamy, et al. Air pollution from household solid fuel combustion in India: an overview of exposure and health related information to inform health research priorities Citation: Global Health Action 2011, 4: 5638 - DOI: 10.3402/gha.v4i0.5638

CONFERENCE PRESENTATIONS

1. “Estimation of Burden of Disease Attributable to Indoor Air Pollution in Andhra Pradesh, India”, Presented at ISEE Conference held at Pasadena, California, USA October 11th to 15th, 2008.


ANNEXURE - VII

PHOTOGRAPHS

Objective 1: Acute Respiratory tract Infection in children under five

Ph.D. Thesis entitled “Indoor air pollution due to combustion of biomass fuel and respiratory illness in south Indian population”
Ph.D. Thesis entitled “Indoor air pollution due to combustion of biomass fuel and respiratory illness in south Indian population”
Objective 2: Tuberculosis in rural adult women

Ph.D. Thesis entitled “Indoor air pollution due to combustion of biomass fuel and respiratory illness in south Indian population”
Objective 3: Chronic Obstructive Pulmonary Disease

Ph.D. Thesis entitled “Indoor air pollution due to combustion of biomass fuel and respiratory illness in south Indian population”