

Non-Experimental Methods, and Research During the Pandemic

Kenyatta University Workshop #6

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Yale University

Goals

- Share about a set of linked studies focused on women's use of mobile phones, illustrating more program evaluation approaches
- Discuss specific challenges when surveying women, and data collection through the pandemic

The Opportunity: Project SKY

**A program run by the
Chhattisgarh
government, with a goal
of distributing smart
phones to female heads
of households in urban
poor and rural areas**



The Opportunity: Project SKY



Phone Type

Micromax/Jio provided Bharat 2+



Timeline

August-September 2018:

Distributed 2.95 million phones



Program Enhancements

Network expansion

Digital literacy training

Pre-loaded government apps

Does access lead to use?

The SKY program removes the **economic constraints** on phone ownership

But is access alone enough given the **normative** and **human capital constraints** women face?



Source: www.betterindia.com

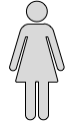
...and if not, how do we get women to use smartphones?

Short-Run Impact Survey

Survey Sample



3,392 individuals



1,696 SKY beneficiaries



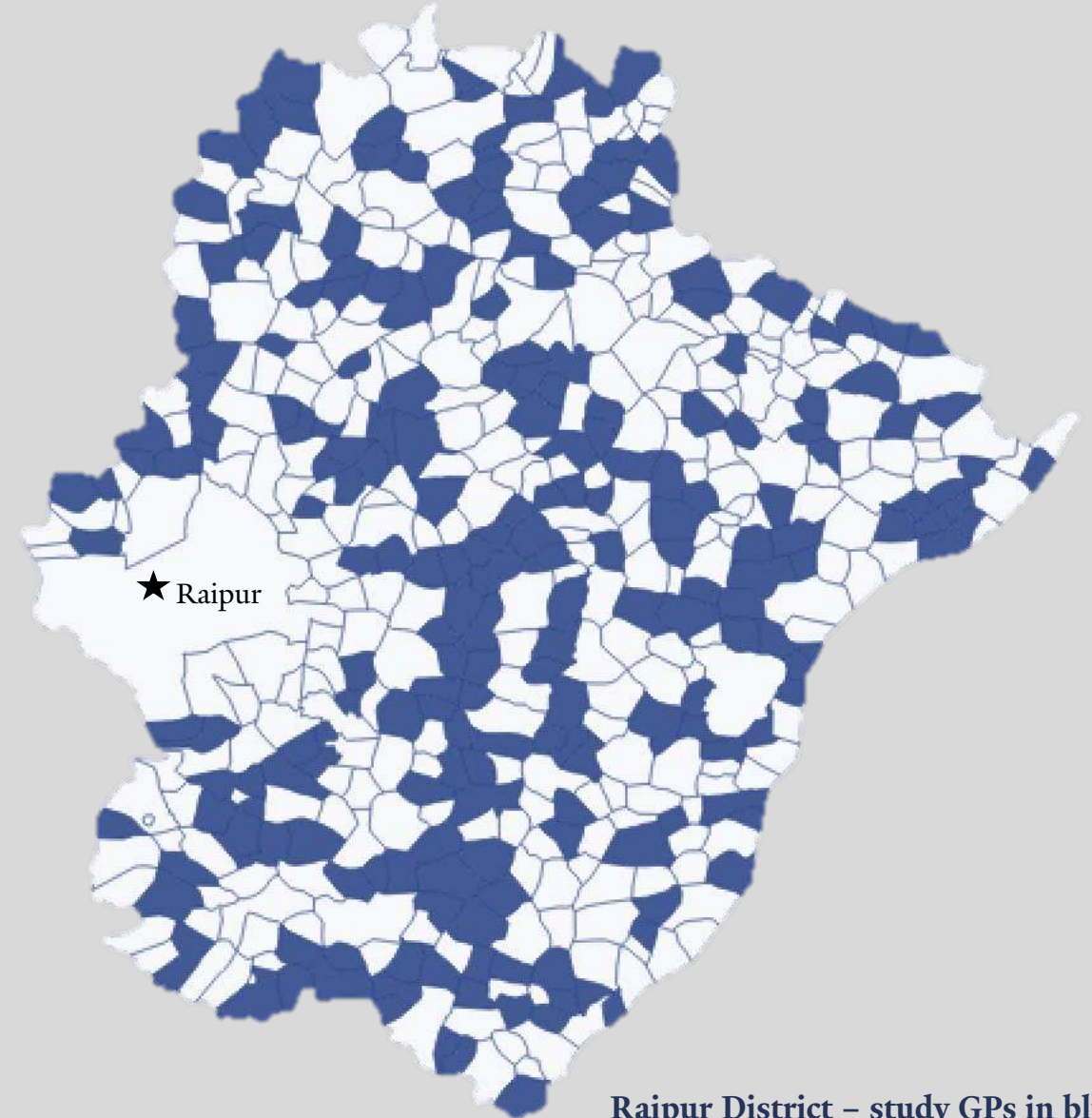
1,696 Husbands



212 GPs across 4 blocks

Key Content

- Women's phone use
- Normative environment
- Short-run impact on SKY



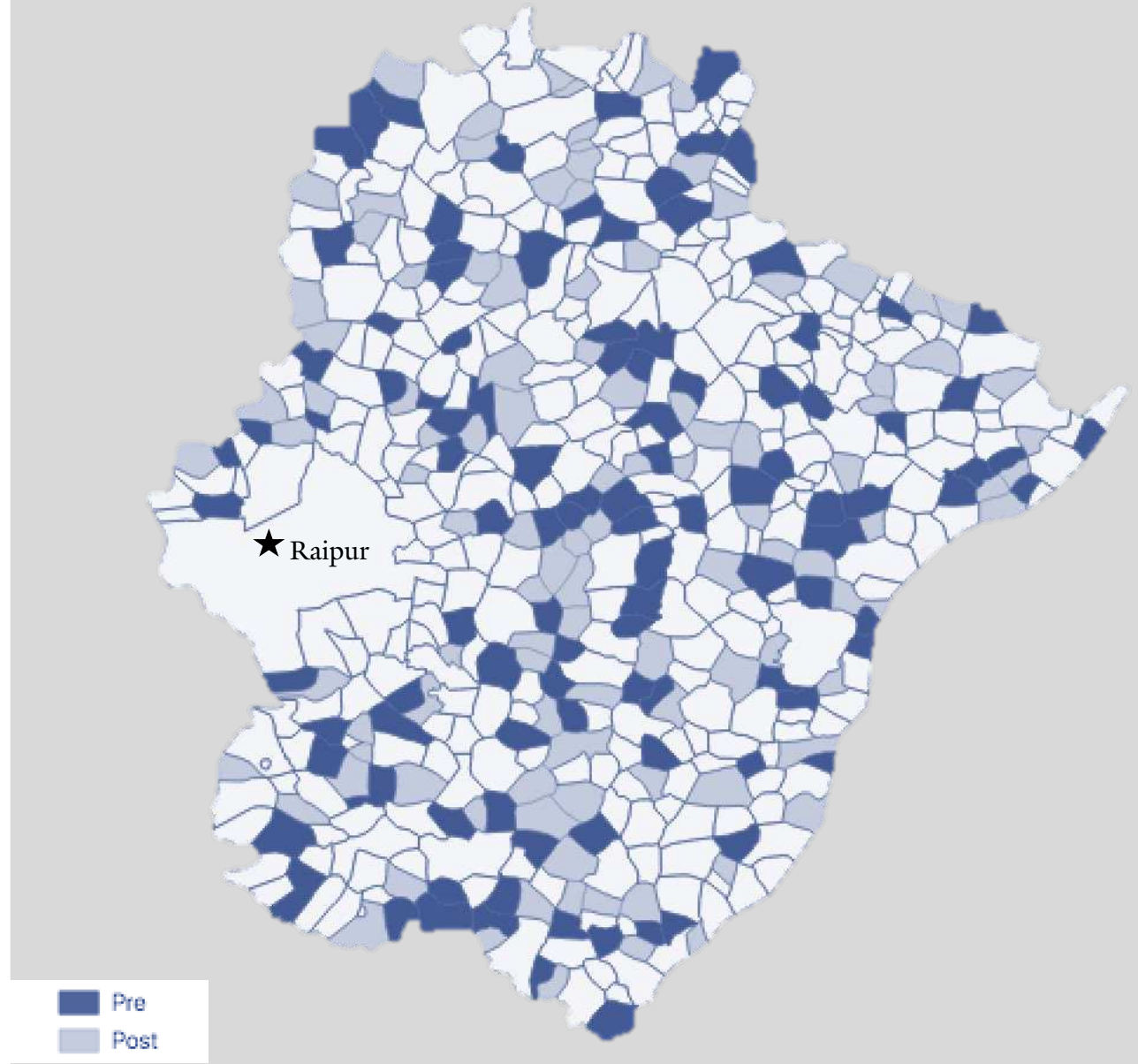
Estimating Impact

Approach

Randomly selected some villages to be surveyed **before** distribution, others **after**

Assumption

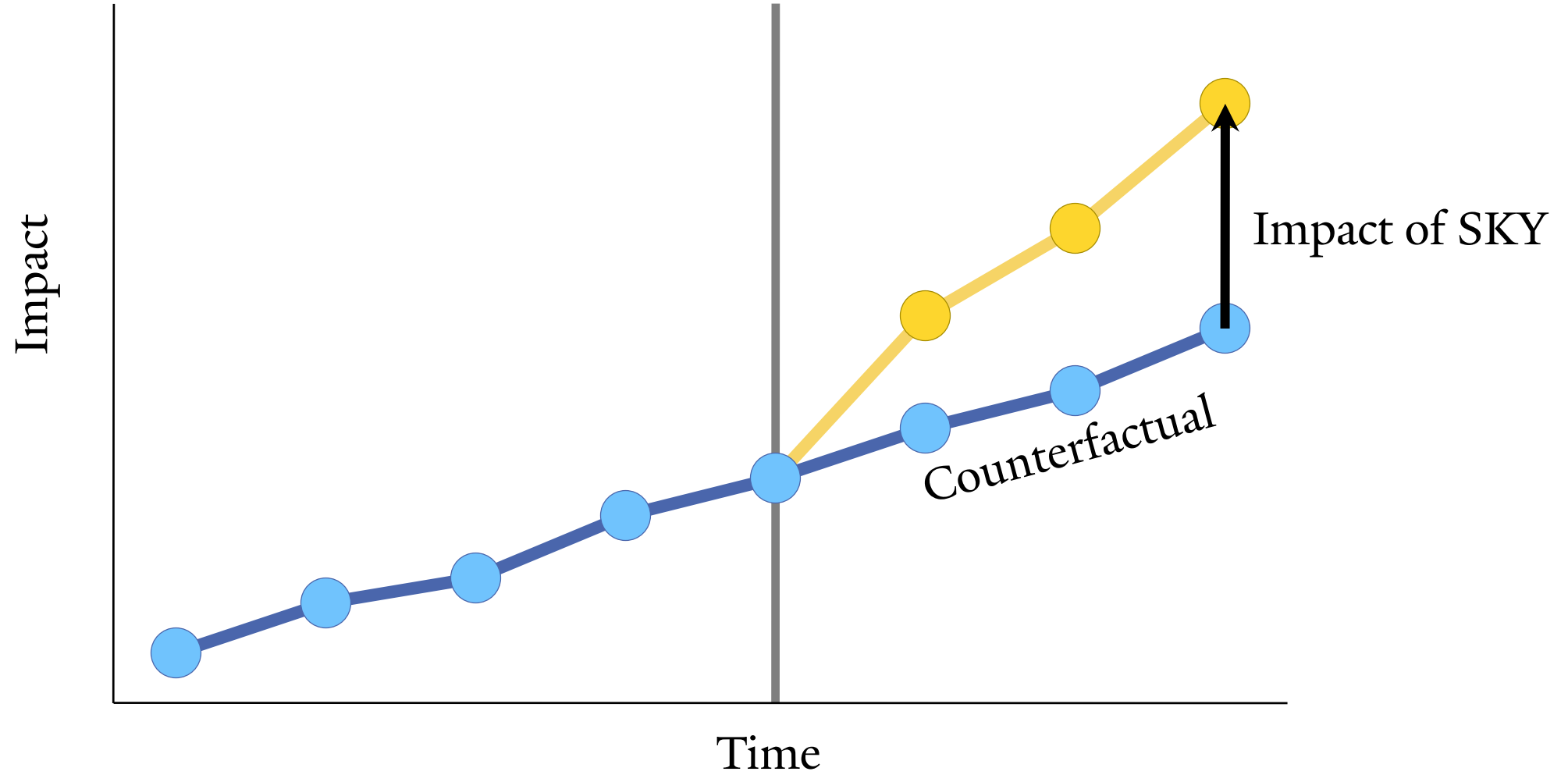
Aside from **time**, the only thing different between pre- and post-villages is the **SKY program**



What is the Program Design?

- NOT an RCT since the delivery of phones was not randomly assigned to villages
- Entire sample of villages would receive phones - but we randomized timing of our survey instead
- Compare average responses across villages that had already received smartphone with average response across villages that had not yet received their smartphones (but would soon)

Phone Distribution



Surveying Female Respondents

Snapshot of Phone Recipients



SKY Beneficiaries



34 years old



Married at 17 years old



65% literacy rate

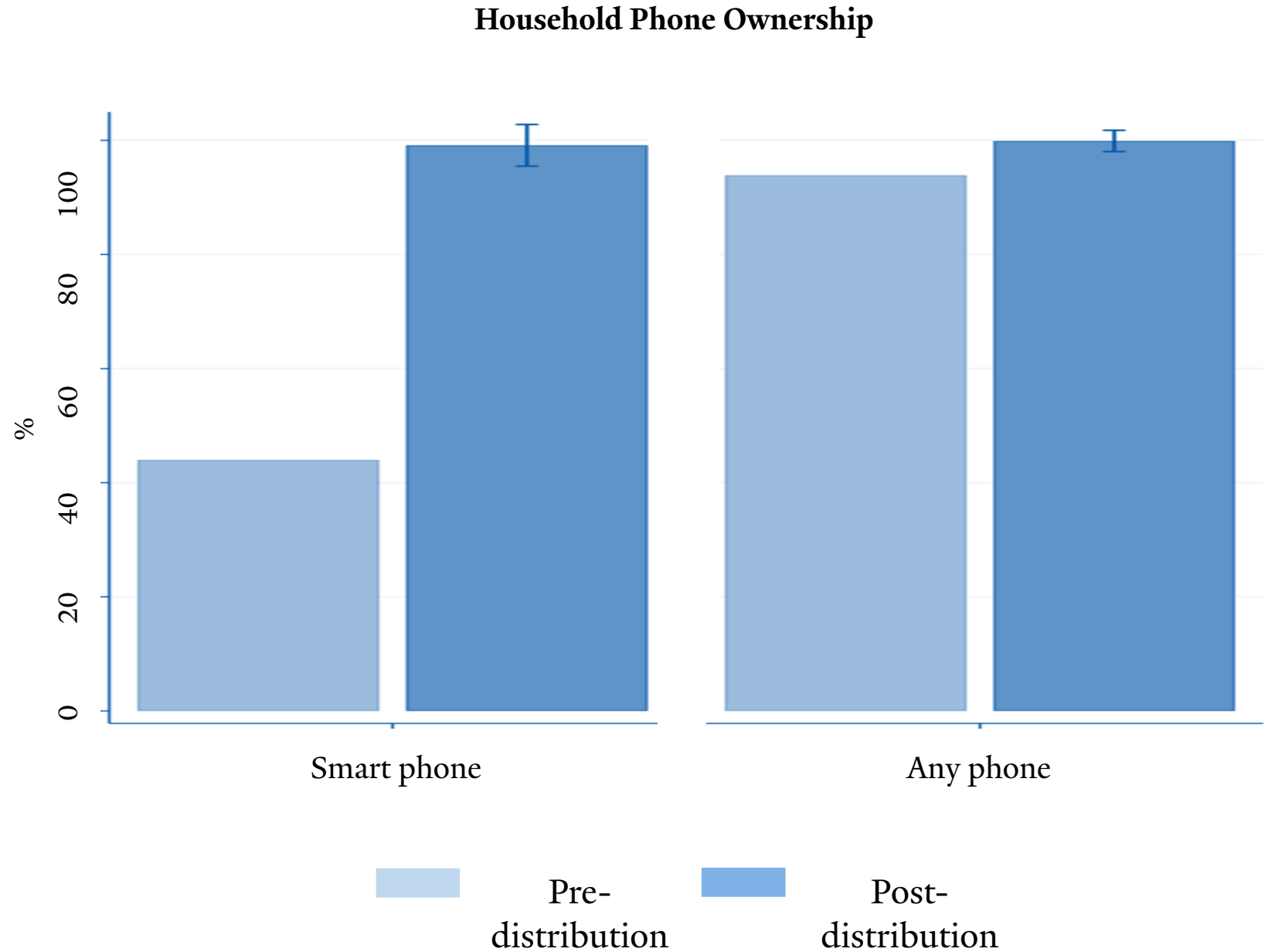


29% completed 8th grade

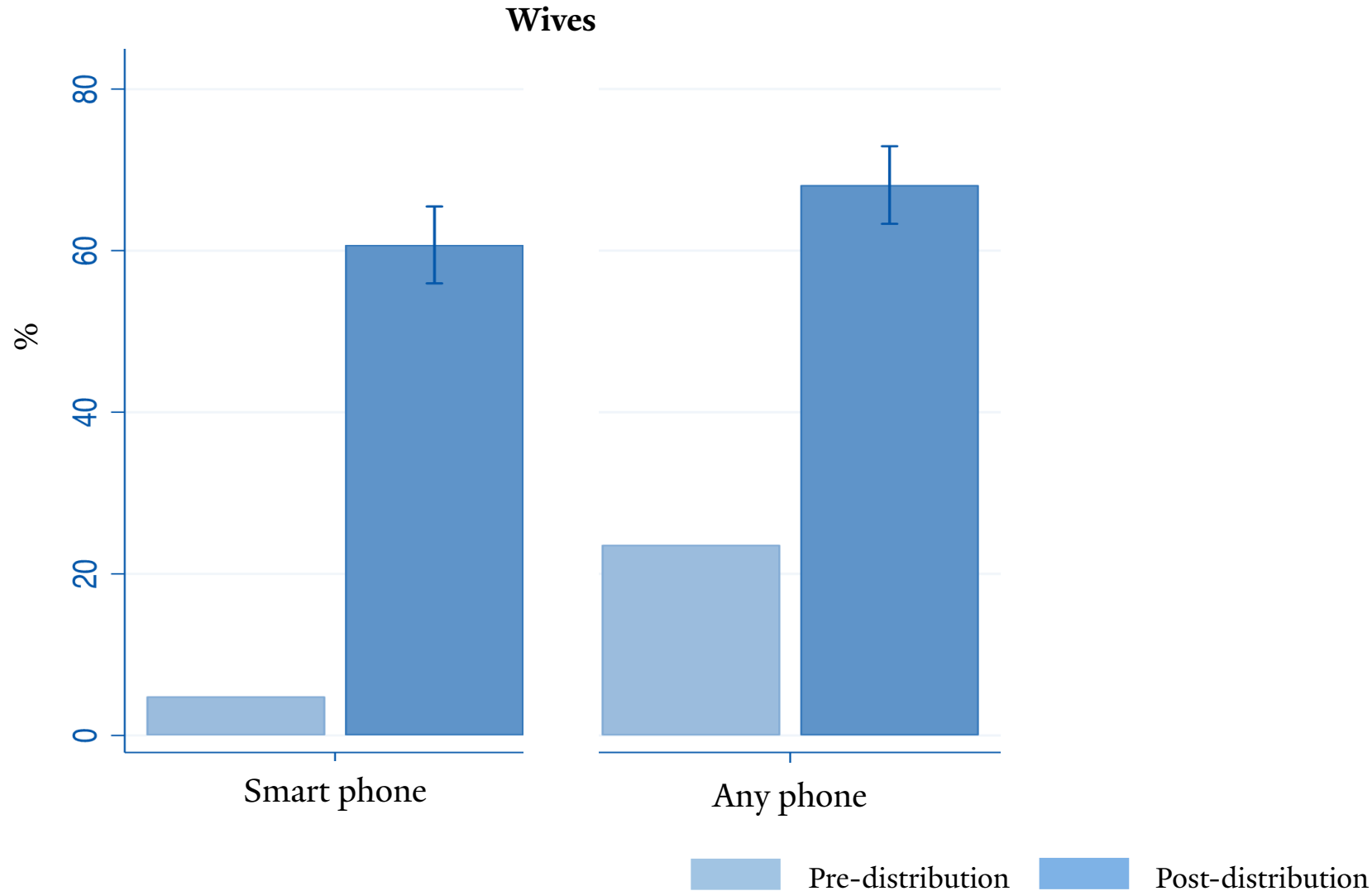


44% own land

Phone
distribution was
successful

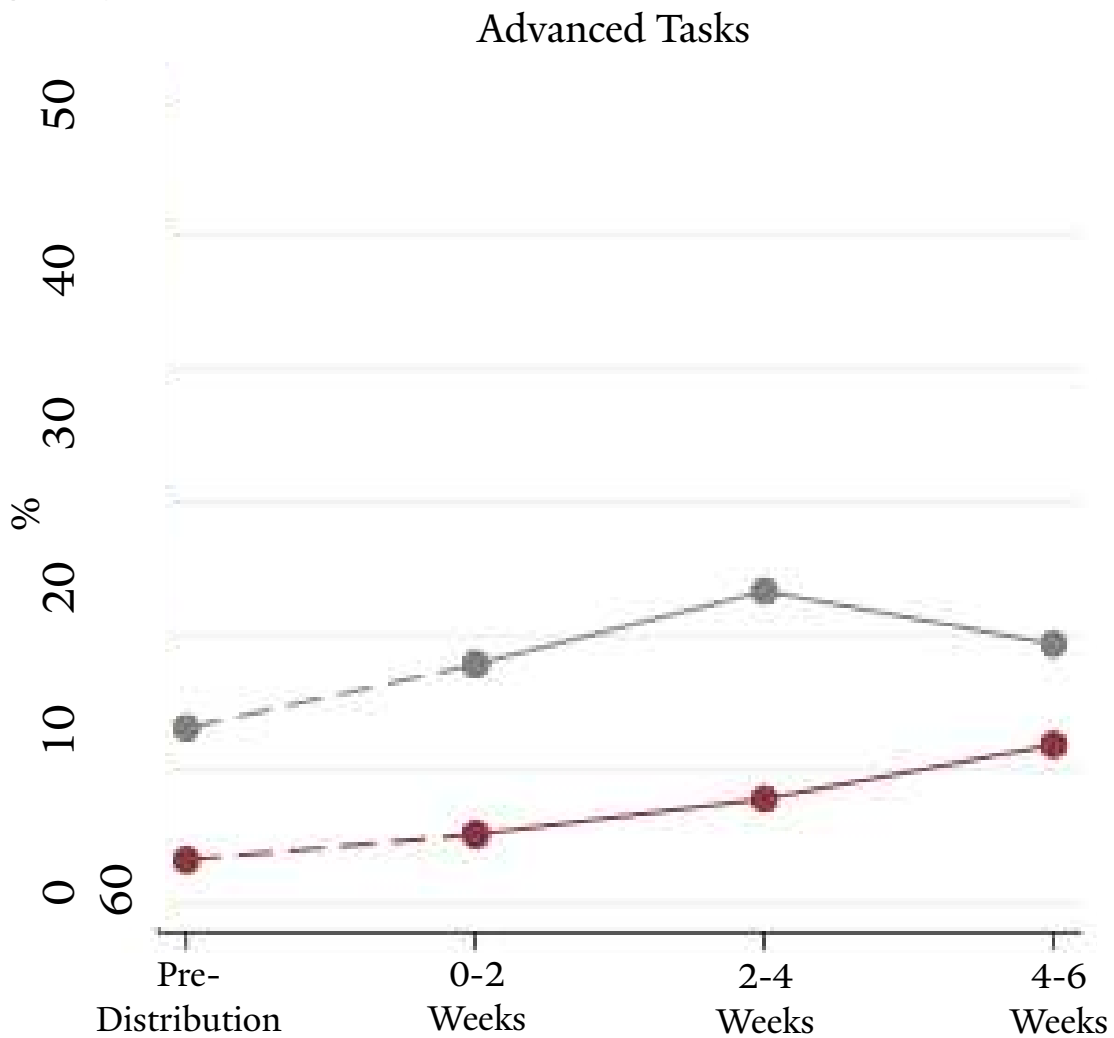
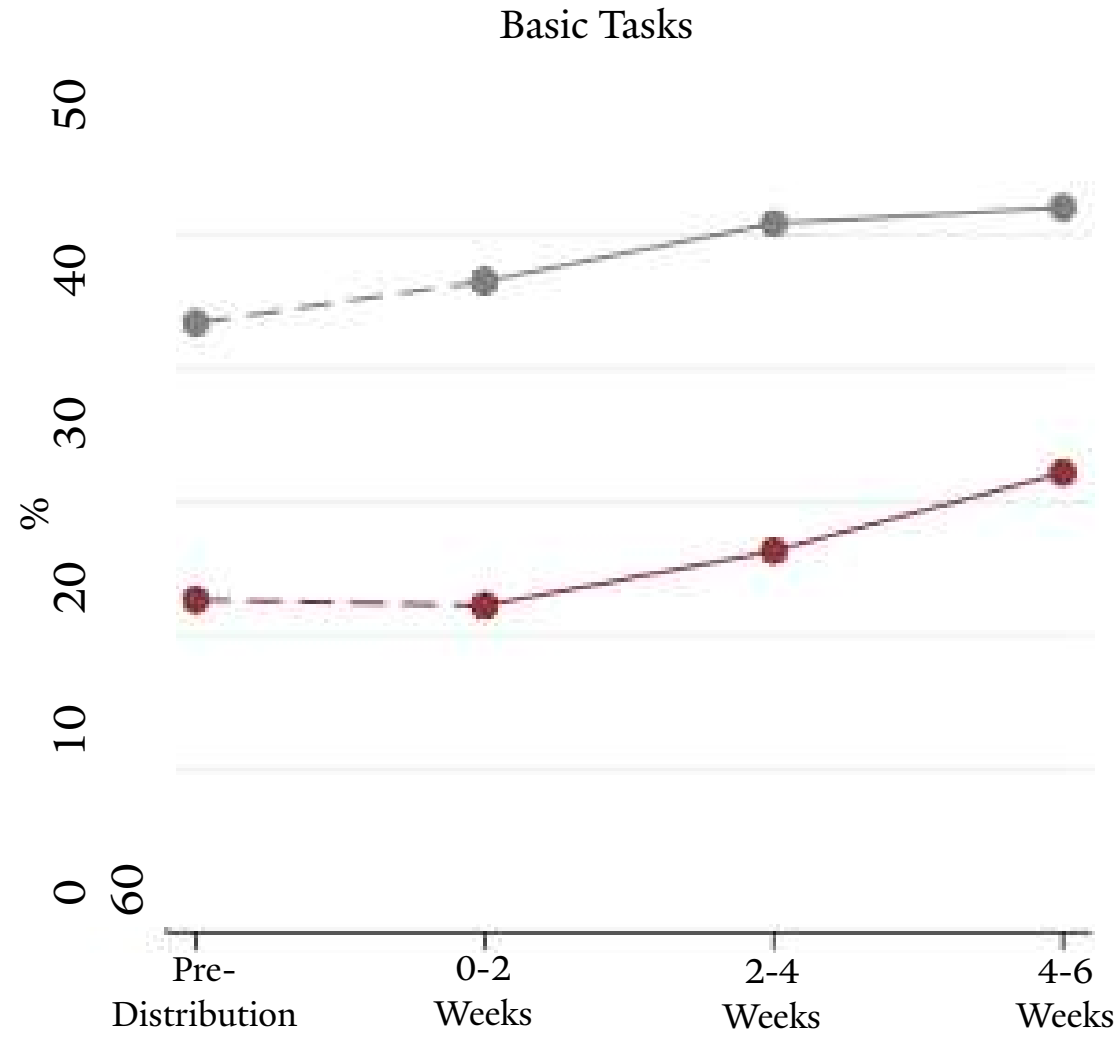


But some men appropriate phones



Key Challenge: Use Lags Ownership

Recent Phone Use Over Time



Outcomes are fraction of activities done a few times a week or more



A slow uptick in phone use for men and women



Will engagement ramp up over time?

Measuring Norms



First Order Beliefs

“In **your own opinion** do
you think it is appropriate for...”



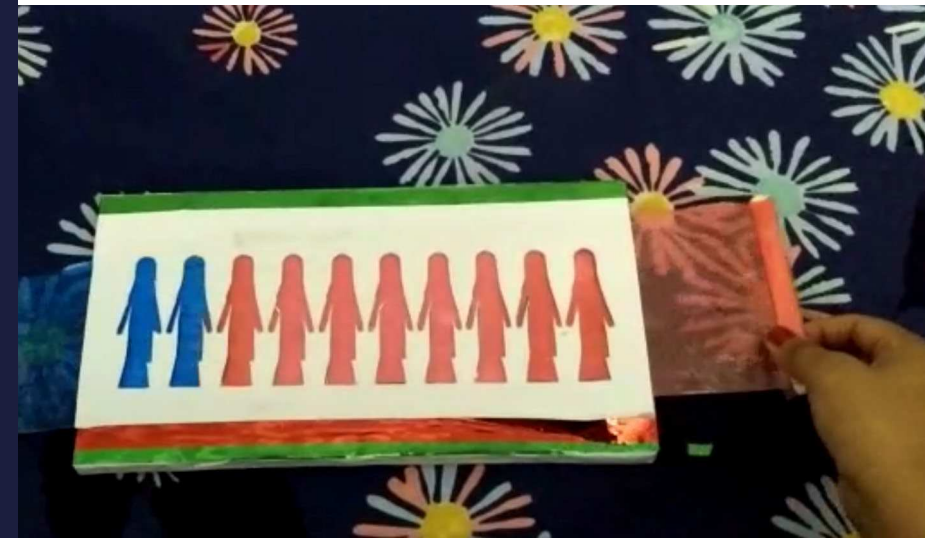
Second Order Beliefs

“How many **women** in your
village think it is appropriate for...”

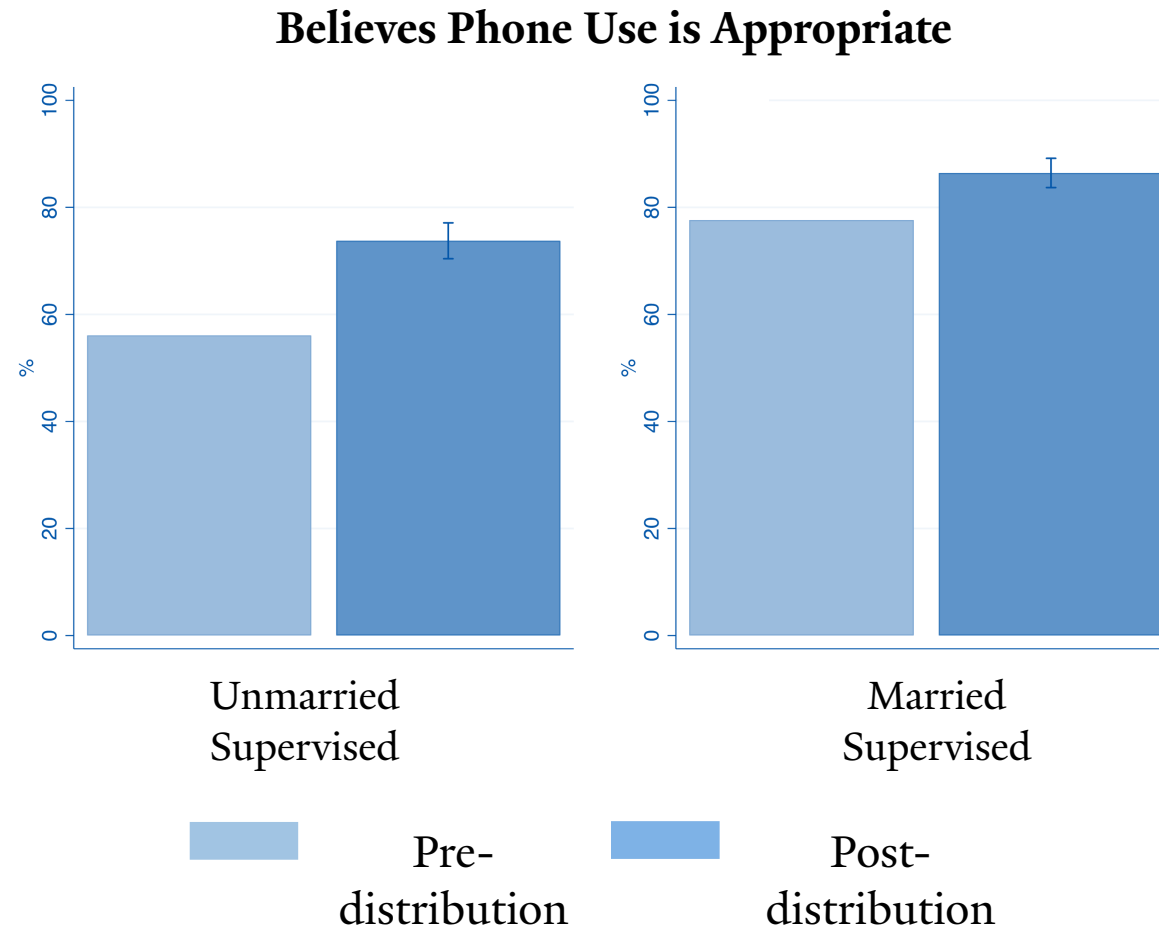
“How many **men** in your
village think it is appropriate for...”

Scenarios

Married/unmarried women
to own their own phone and
use it **with/without**
supervision of their family

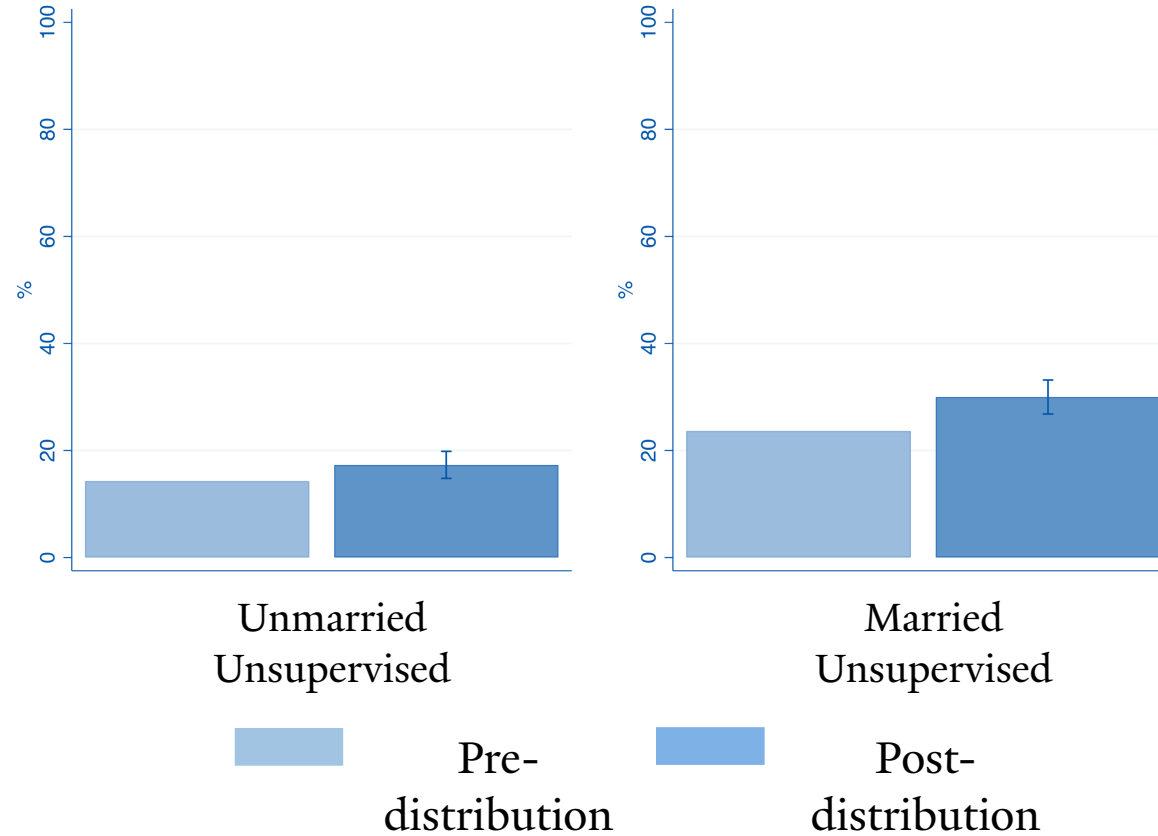


Norms Liberalize...



Norms Liberalize...

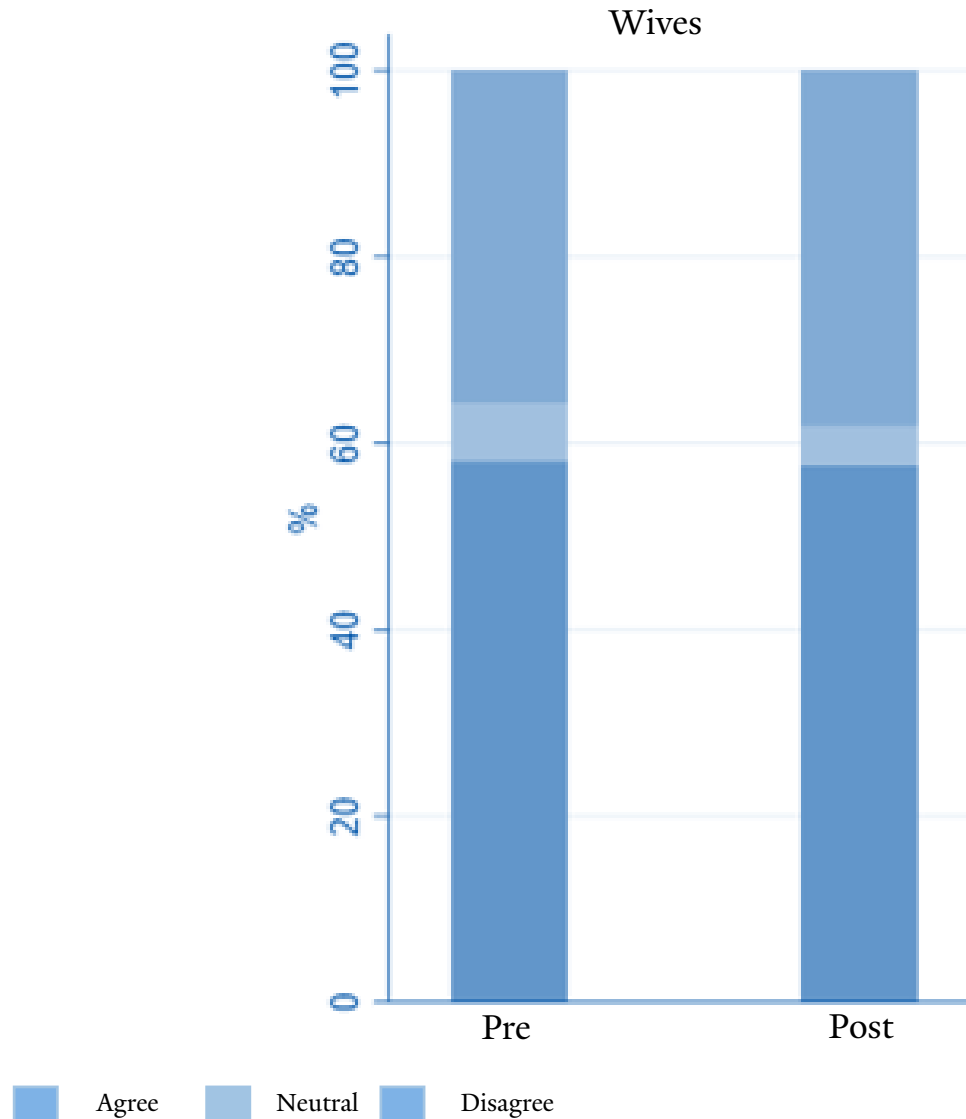
Believes Phone Use is Appropriate



...But moving more conservative beliefs might require higher-powered interventions

Risk of Deepening Other Gendered Beliefs

Beliefs: Men Have More Uses for a Phone



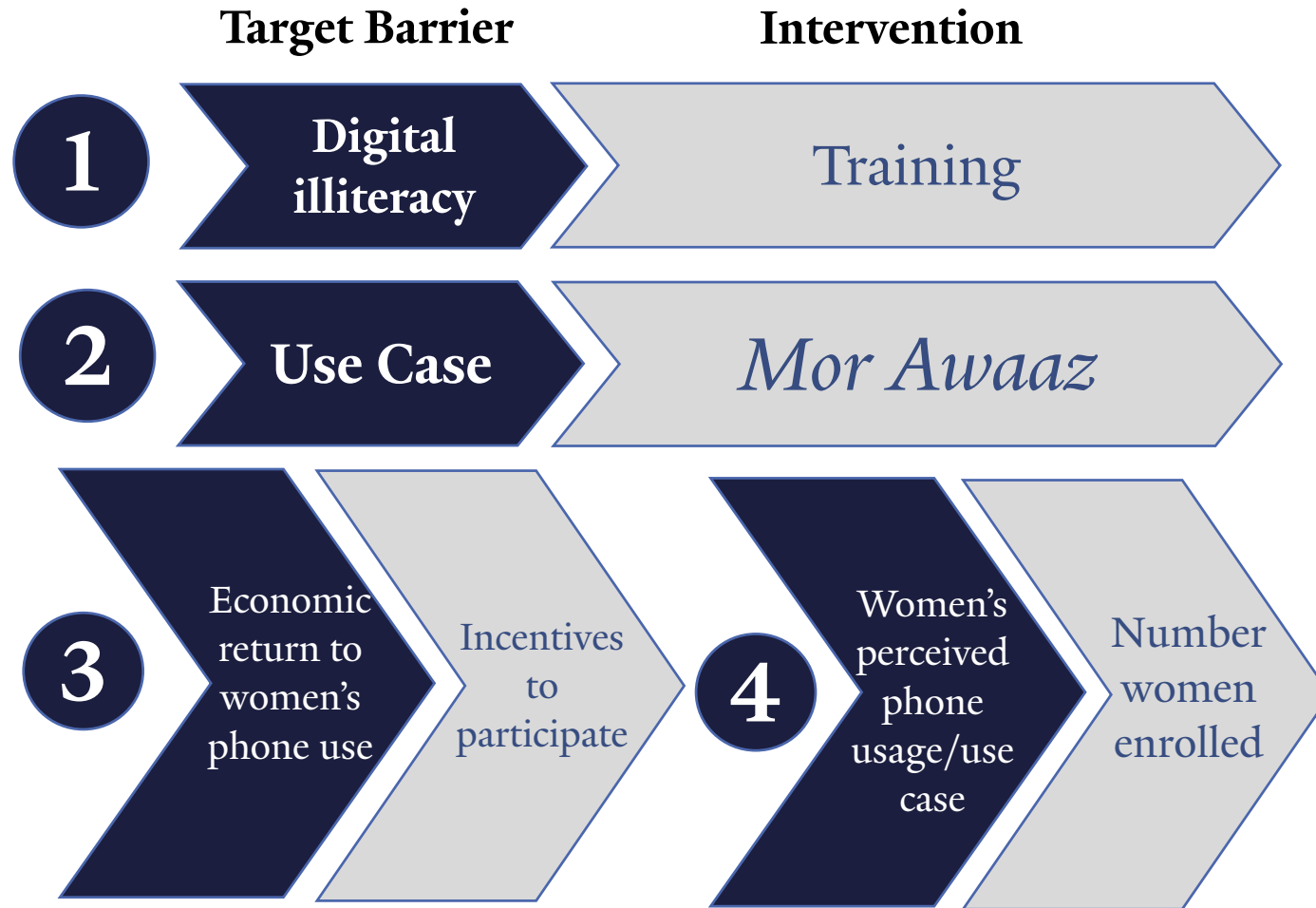
Post distribution, men more likely to believe *“men have more uses for a phone than women do”*

Do women need a stronger use case?



Testing New Tools to Boost Women's Mobile Engagement

Tackling Barriers to Women's Mobile Engagement



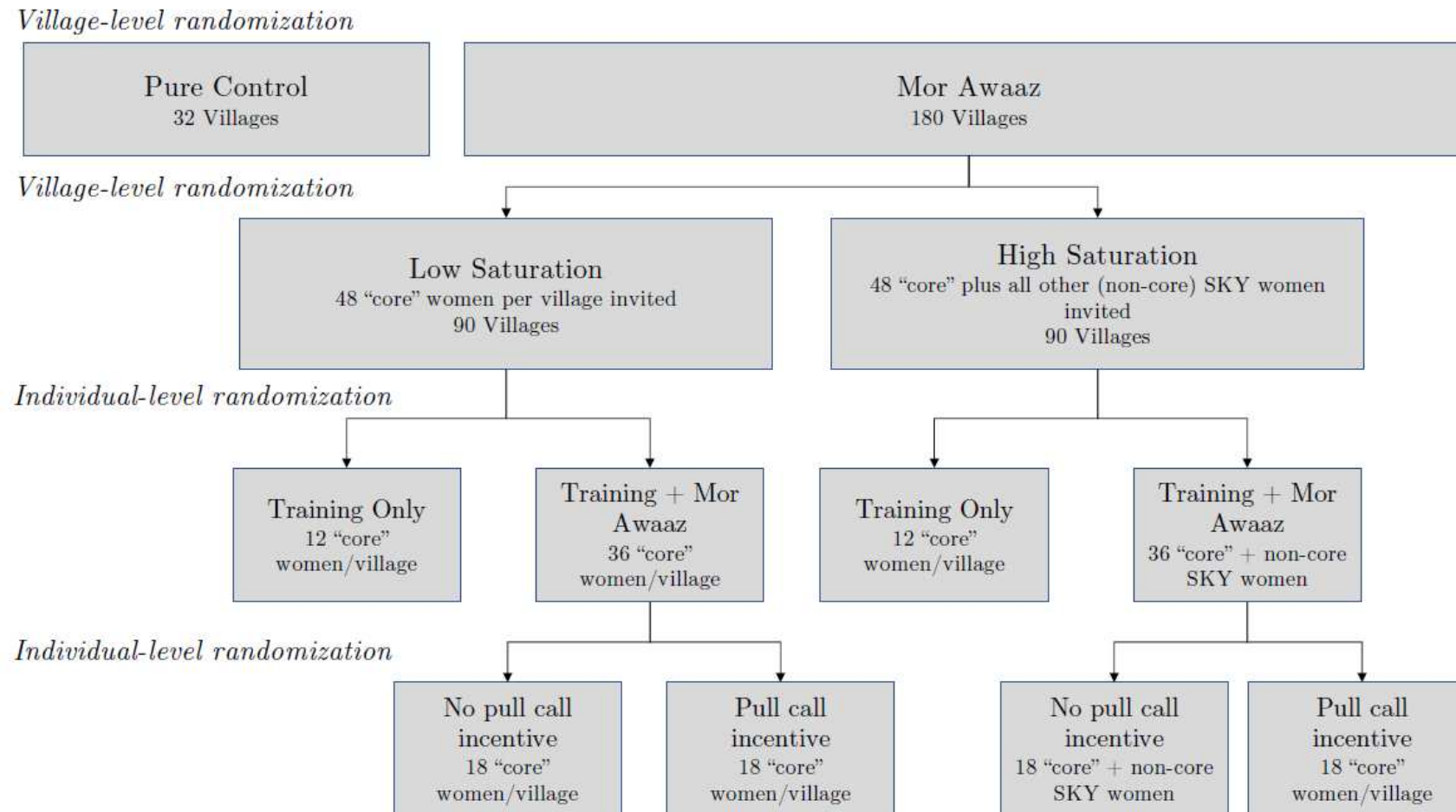
Design evaluation to identify the **highest-return**, most **cost-effective** package

Learning About Underlying Questions through a More Complex RCT Design

1. Can providing women with a **use case** for phones that is compatible with existing gender norms **encourage deeper mobile engagement**?
2. Do interventions designed to deepen mobile engagement **reshape women's social connections, agency and well being**?
3. Do interventions that shift behavior **change social norms**? And does norms change **require a critical mass** of adopters within the community?
4. Does women's **mobile engagement increase** when social norms **liberalize**?

Learning About Underlying Questions through a More Complex RCT Design

Figure 1: Experimental Design



Foundational Training: Digital Literacy

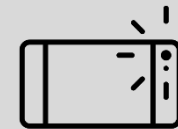


Group-Based, Interactive Digital Literacy Training with Other Women from Their Communities

Pilot Results: Good material retention with rates over **70%** 1 month after training across a variety of uses:



Dialing



Taking a Photo



Receiving



Internet voice search

A group of smiling women and a child in a rural setting. The background shows a simple building with a corrugated metal roof and a tree. The women are wearing colorful saris in shades of pink, yellow, and red. A young girl is also visible in the foreground.

Mor Awaaz: OUR VISION

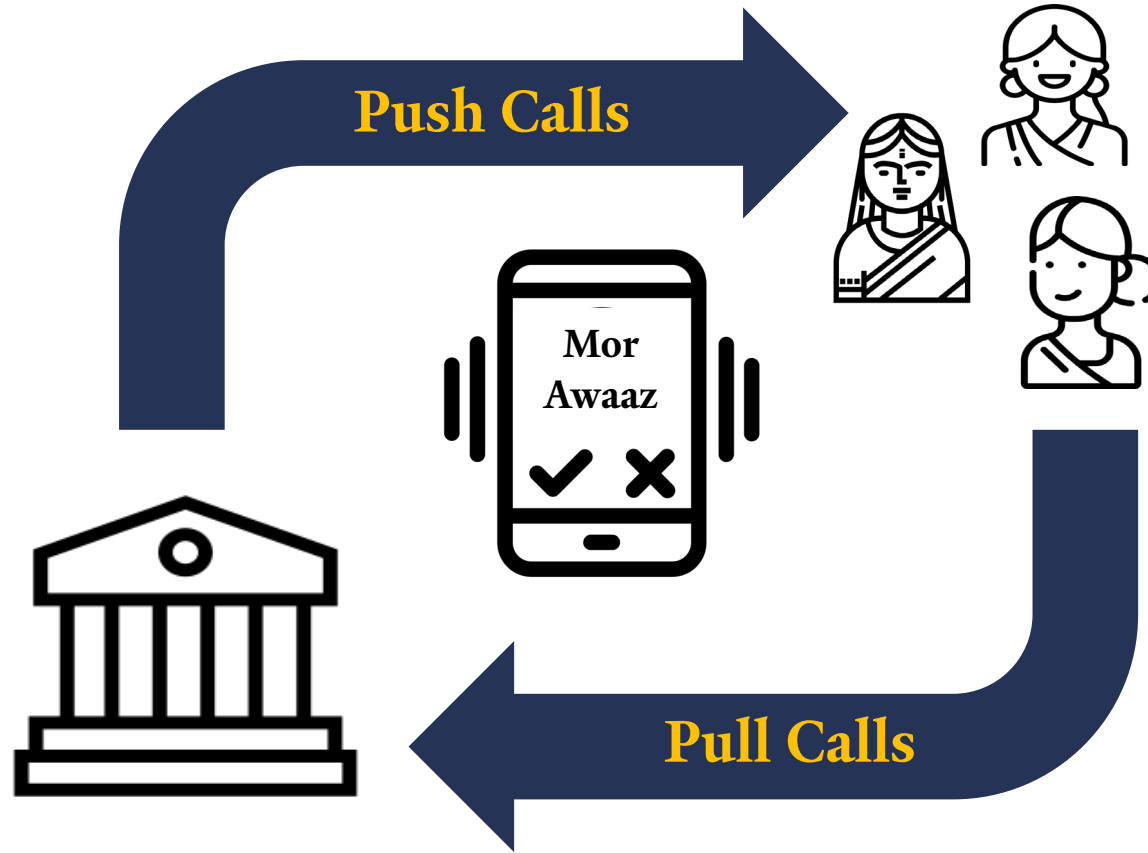
A World Where Government Connects Women to
Vital Information that Empowers and Lifts up Entire
Communities

Mor Awaaz Vision:

We Connect Women to Vital
Information that Empowers
and Lifts up Entire
Communities



Mor Awaaz: Empowering Rural Women



Mor Awaaz: A Use Case for Women



“Namaste Didi, how are you, all good?”

“I am your health consultant
Neetu didi from the Mor Awaaz
service!”

Savitri: Namaste Neetu Didi, I’m okay. I have heard you say many times that women of all ages need to get enough iron and eating green leafy vegetables helps. I have been eating dark green leafy vegetables with my meals, but I am still anemic. What could I be doing wrong?

Neetu Didi: And do you take tea right after your meals?



Mor Awaaz: A Use Case for Women



Pilot Results

- **210** women across **4** villages
- Over **70%** IVR call pick-up rate
- Nearly **80%** pull call pick-up rate



Mor Awaaz and Covid-19: Close information gaps in Chhattisgarh



67,313
push calls
9,372
rural women

2 rounds Covid-19
pull calls
fact sheets for
policy partners

Call topics:

- Covid-19 symptoms
- Asymptomatic transmission
- Handwashing
- Social distancing
- PMJDY transfers
- Access to free rations
- Government helplines

5 facts on COVID-19 knowledge in rural Raipur, Chhattisgarh



We reached out to 2675 enrollees of **Mor Awaaz** across 179 GPs in rural Raipur about their awareness of COVID-19 from 14th April to 11th May. This is what we discovered:

IN OUR SAMPLE...

Average age: **41**

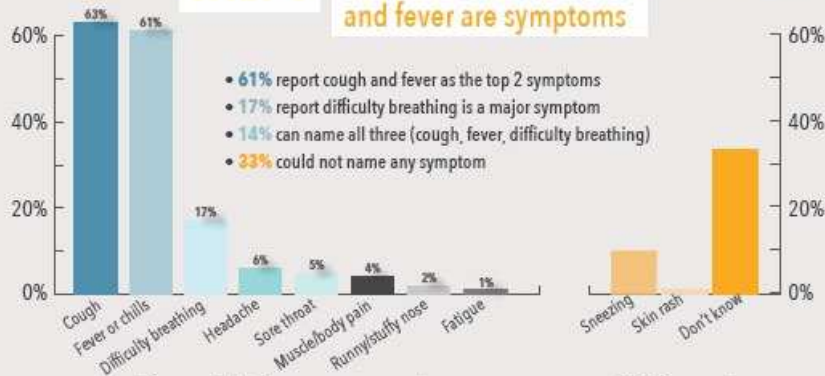
60% completed at least 1 year of schooling

61% worked for NREGA between July 2018 - October 2019

62% are members of SHGs

33% have a child under 6 years in the household

FACT 1 Just over 60% of women know cough and fever are symptoms



- **61%** report cough and fever as the top 2 symptoms
- **17%** report difficulty breathing is a major symptom
- **14%** can name all three (cough, fever, difficulty breathing)
- **33%** could not name any symptom

Responses from 2675 women across 179 GPs. All responses are unprompted.

FACT 2 Just over one-third are unaware of any symptoms

FACT 3 Misinformation rates are low at 5%

Well informed: virus spreads through contact with infected people and surfaces.

Misinformed: virus spreads through living in the infected's community or through air, insect bites, meat, animals.

Uninformed: could not name any reason for the spread of the virus.

Awareness of reasons for COVID-19 spread



Responses from 2675 women across 179 GPs. All responses unprompted.

FACT 4 Most women get their COVID-19 information from the media and friends/family

Source of COVID-19 related information



Responses from 2675 women across 179 GPs. All responses are unprompted.

FACT 5 Women who do not watch television are less aware



Mor Awaaz is a phone-based service for women, developed by a team of researchers from Yale University, Harvard University, University of Warwick, University of Southern California and Duke University, as well as EPOD India at LEAD.



Its mission is to *empower women as change-makers in their homes and communities* by creating a dynamic information-sharing loop between women and the state government. To learn more, please contact morawaaz@gmail.com.

Building Tools for Policy Partners: Mor Awaaz fact sheets to share survey results

Data Collection Through the Pandemic

Beyond Mor Awaaz

What impacts did SKY program have beyond the immediate ones we see in our survey?

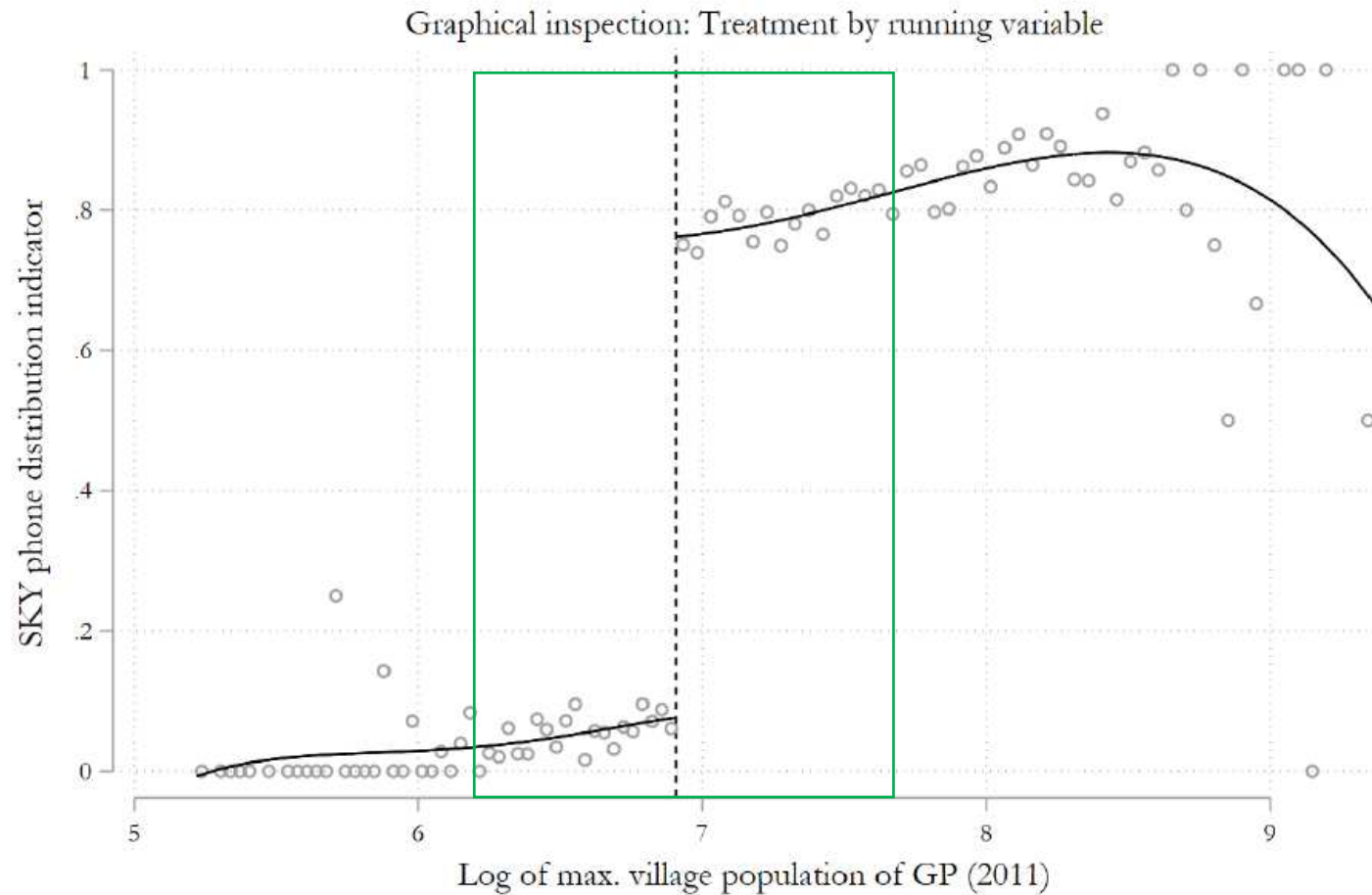
- Longer-term impacts on **economic** and **norms-linked** outcomes
- Impacts on **women**, their **households**, and **communities**
- Impacts in other less connected areas **beyond Raipur**

Evaluating SKY: Regression Discontinuity Design

- RDD: Quasi-experimental evaluation approach that takes advantage of how a cut-off is used to determine whether units are eligible to receive treatment
 - In this case, treatment = villages where women received SKY smartphones
 - Eligibility threshold: smartphones were distributed in all villages with $> 1,000$ people (based on earlier census variables)
- Idea behind the RDD here: Villages just *above* the eligibility threshold (received SKY phones) are statistically indistinguishable from those just *below* the eligibility threshold
- Compare average outcomes across those villages just eligible for phones with those just ineligible (our counterfactual)

Assessing RDD Quality

Figure 1: SKY phone distribution dummy against log of max village pop of GP (2011)



RDD Plans

- We will survey husbands and wives in 500 villages just above and just below the SKY eligibility threshold
- Use survey and administrative data to compare outcomes related to economy and women's economic engagement, phone use, norms related to phones, etc., above and below the eligibility threshold
- One common challenge of RDD designs: requires large sample of eligible/ineligible units right around the eligibility cut-off/threshold

Roadmap for Future Sessions

Session #7 (May 28):
Research Team Consultations

Session #8 (June 4):
Paul Schultz: Progresa