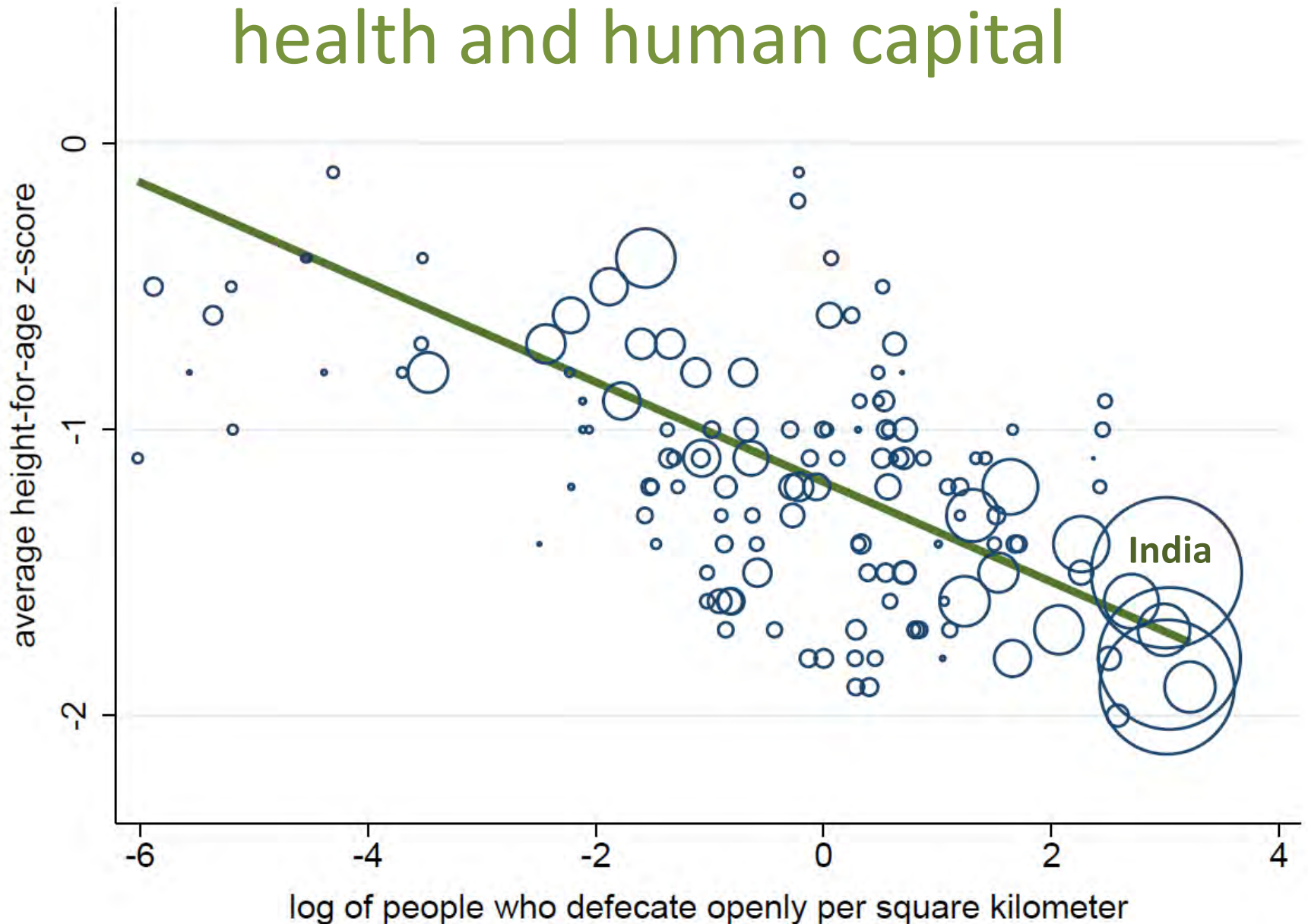


confronting the challenge: latrine use in rural India



UNC Water and Health Conference 2014

open defecation is bad for children's health and human capital

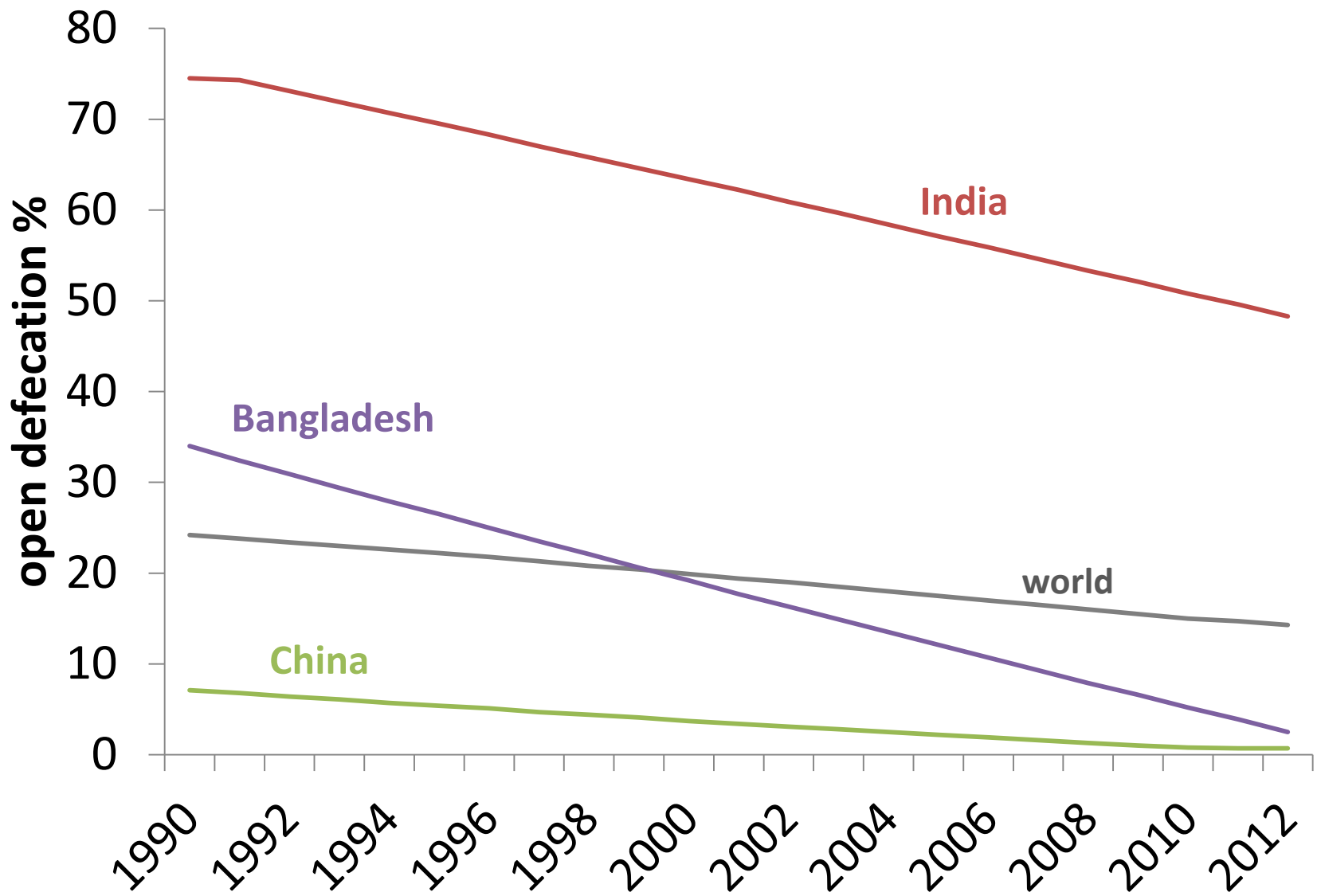


but today is about social science

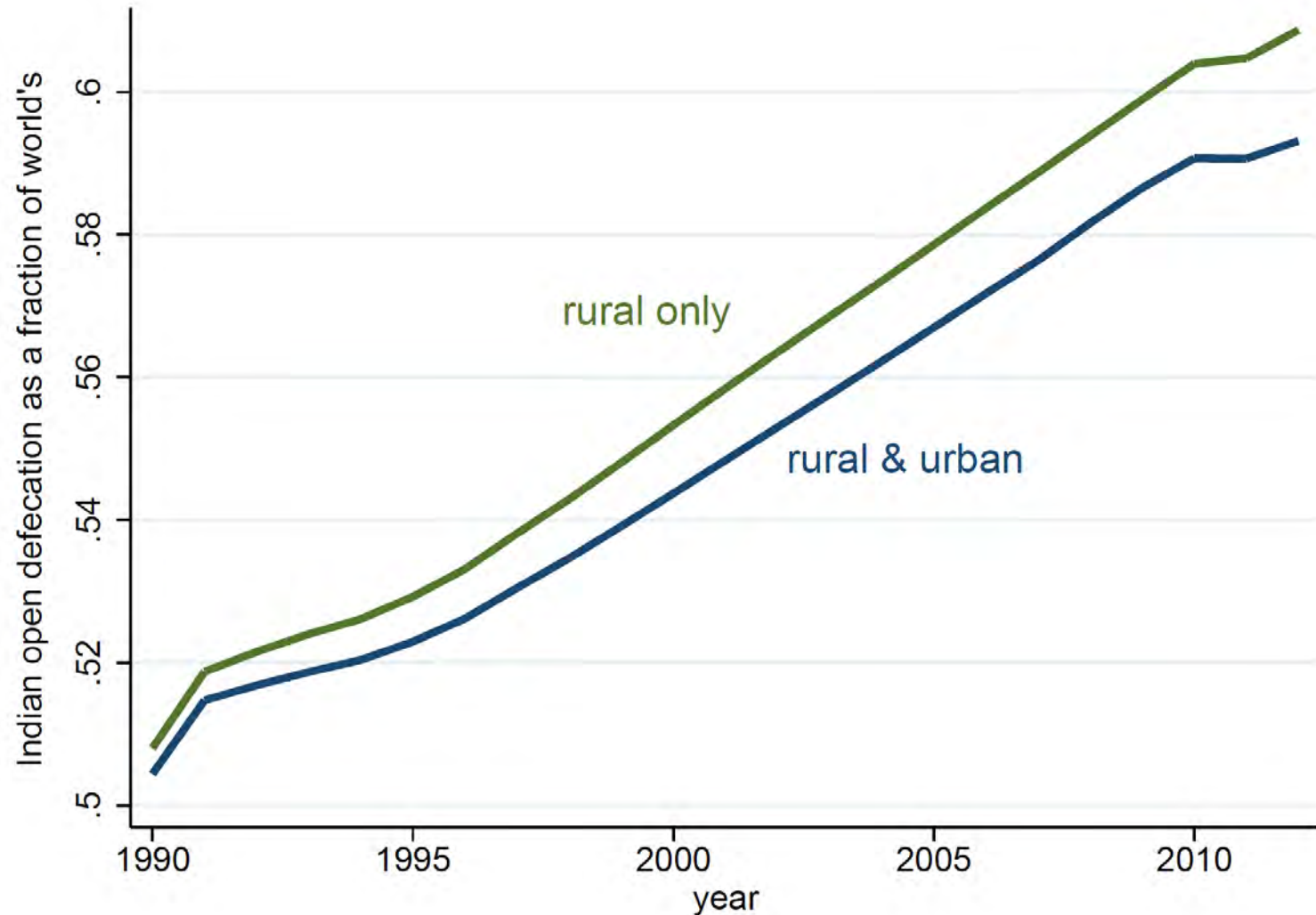
why is open defecation
so persistently common
in rural India?

why has the decline in open
defecation been so slow?

what is different about India?



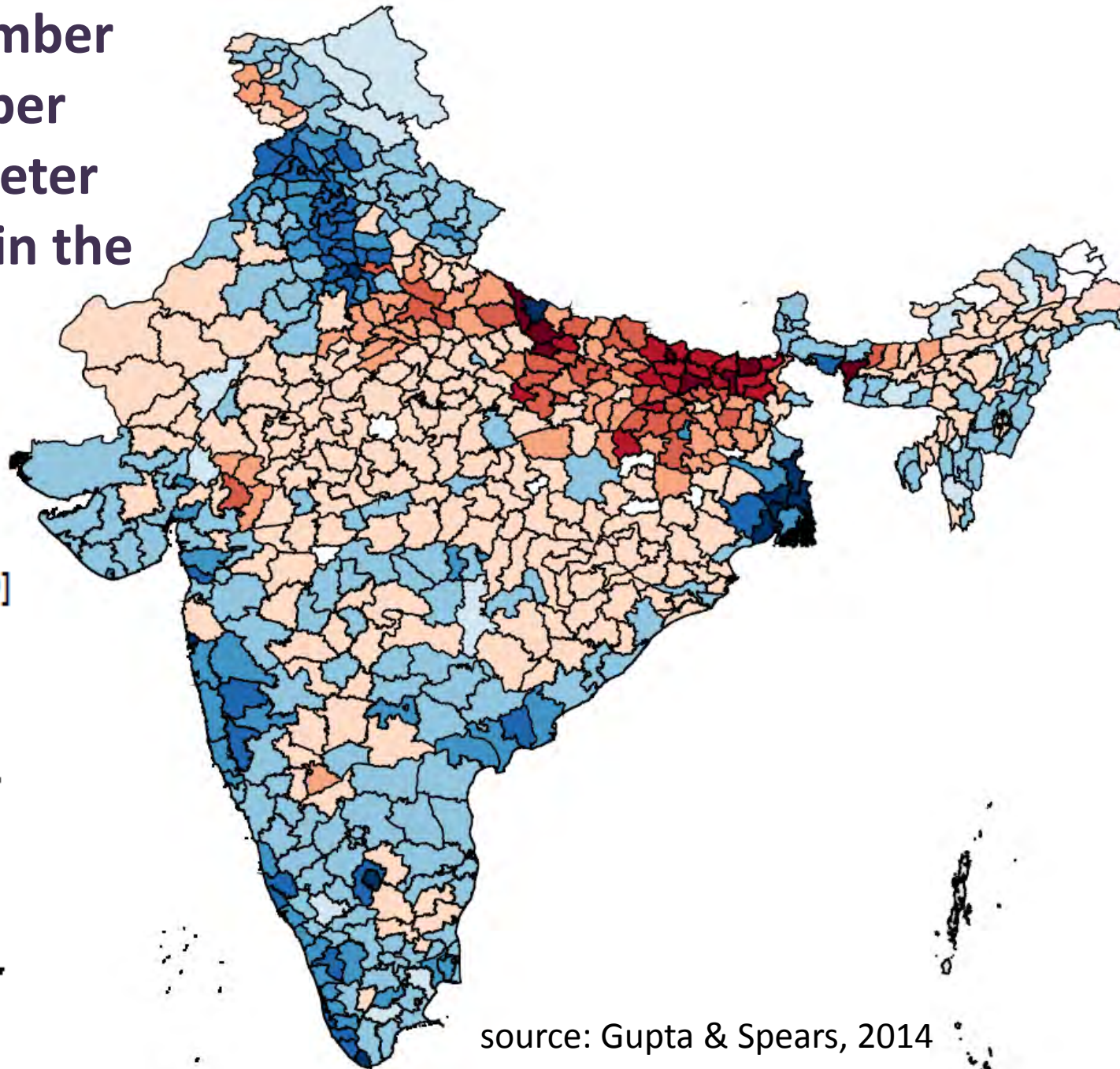
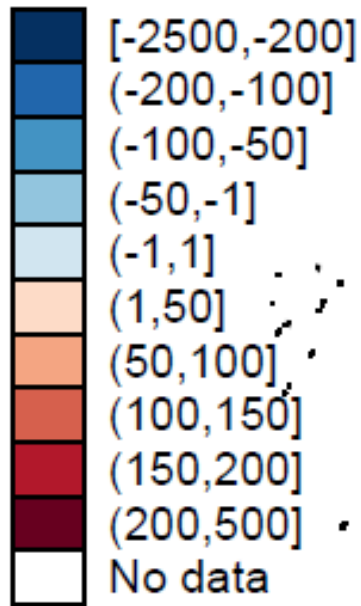
India represents an ever increasing fraction of the world's remaining open defecation



post 2015 goal:
eliminating open defecation by 2030

achieving this depends
principally upon India, and will
require **more than tripling** the
sustained annual rate of decline
in open defecation in India

Change in number of persons per square kilometer who defecate in the open



source: Gupta & Spears, 2014



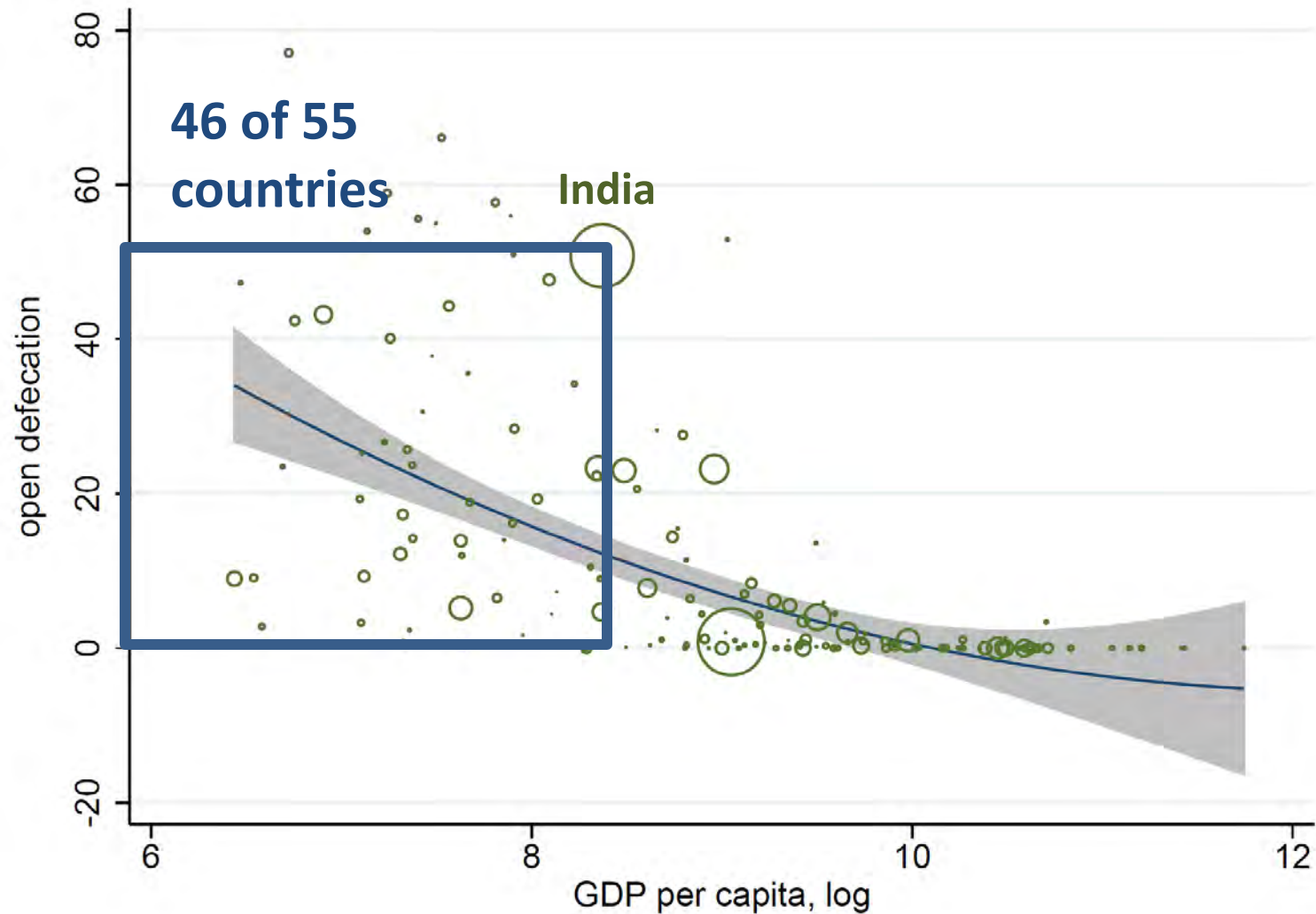
how is India different in international statistics?

sharpening the paradox

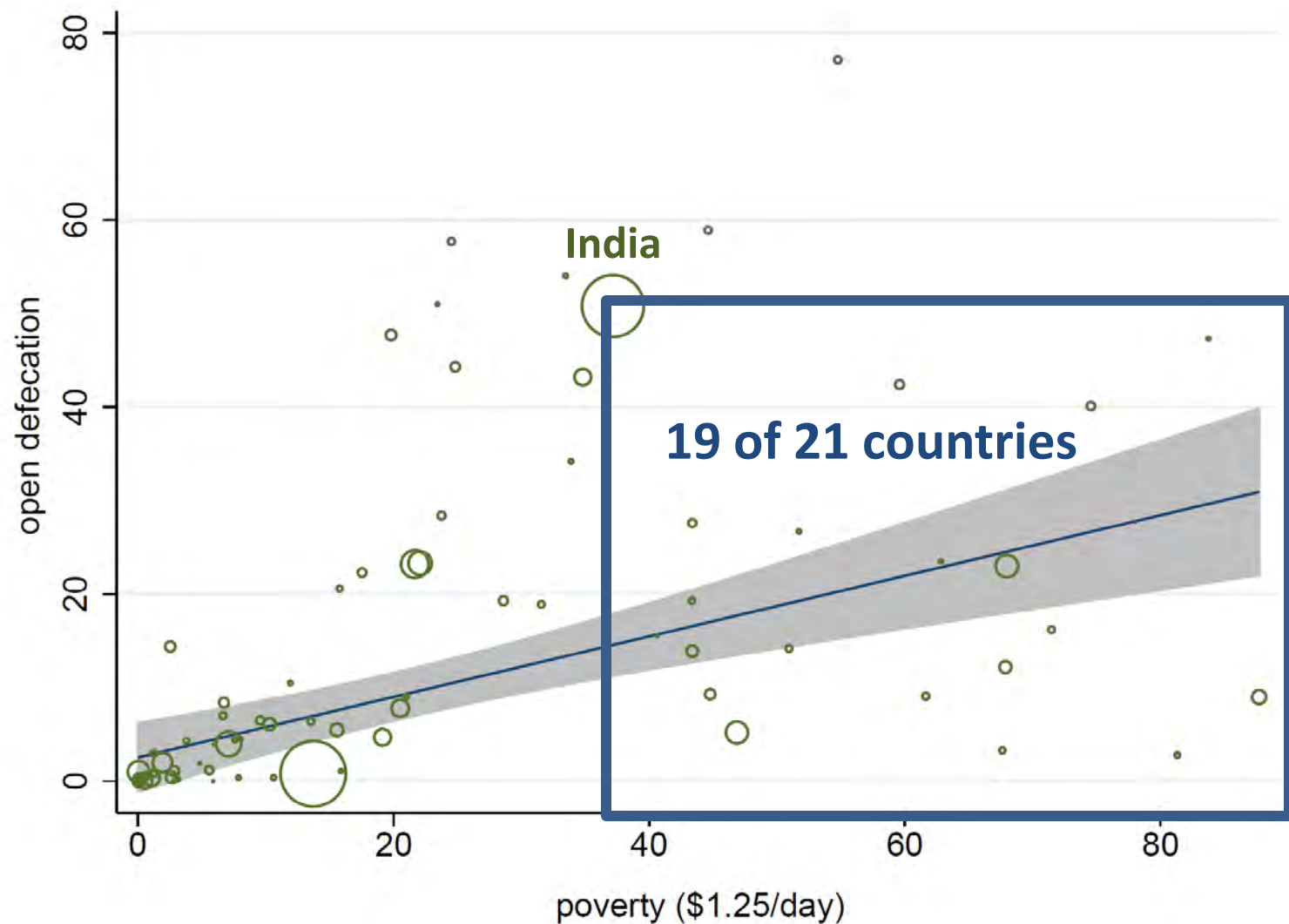
it is not enough to ask what
challenges sanitation faces in India

**we must ask which relevant
challenges are much worse in
India than in other developing
societies**

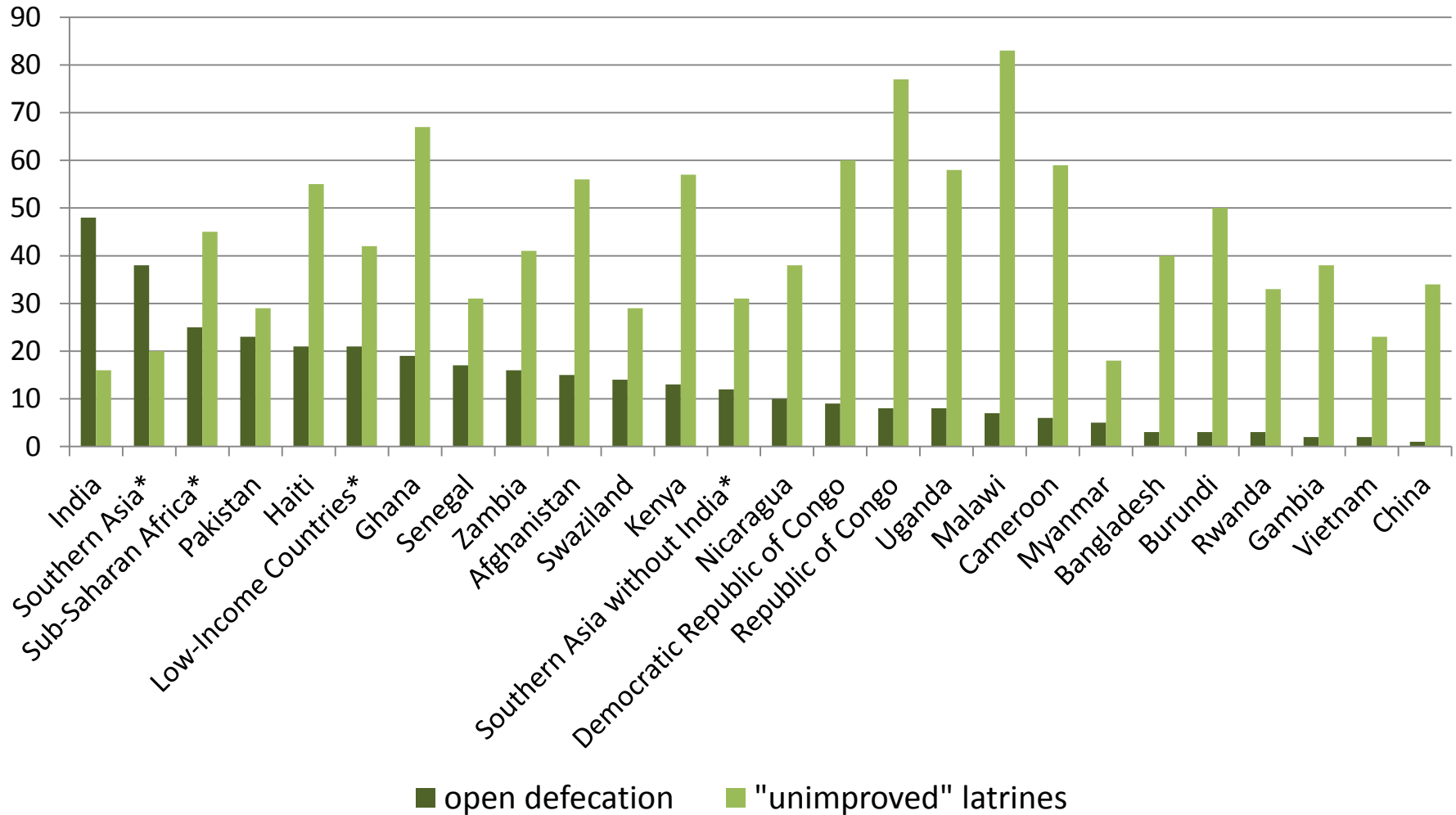
it's not because of income



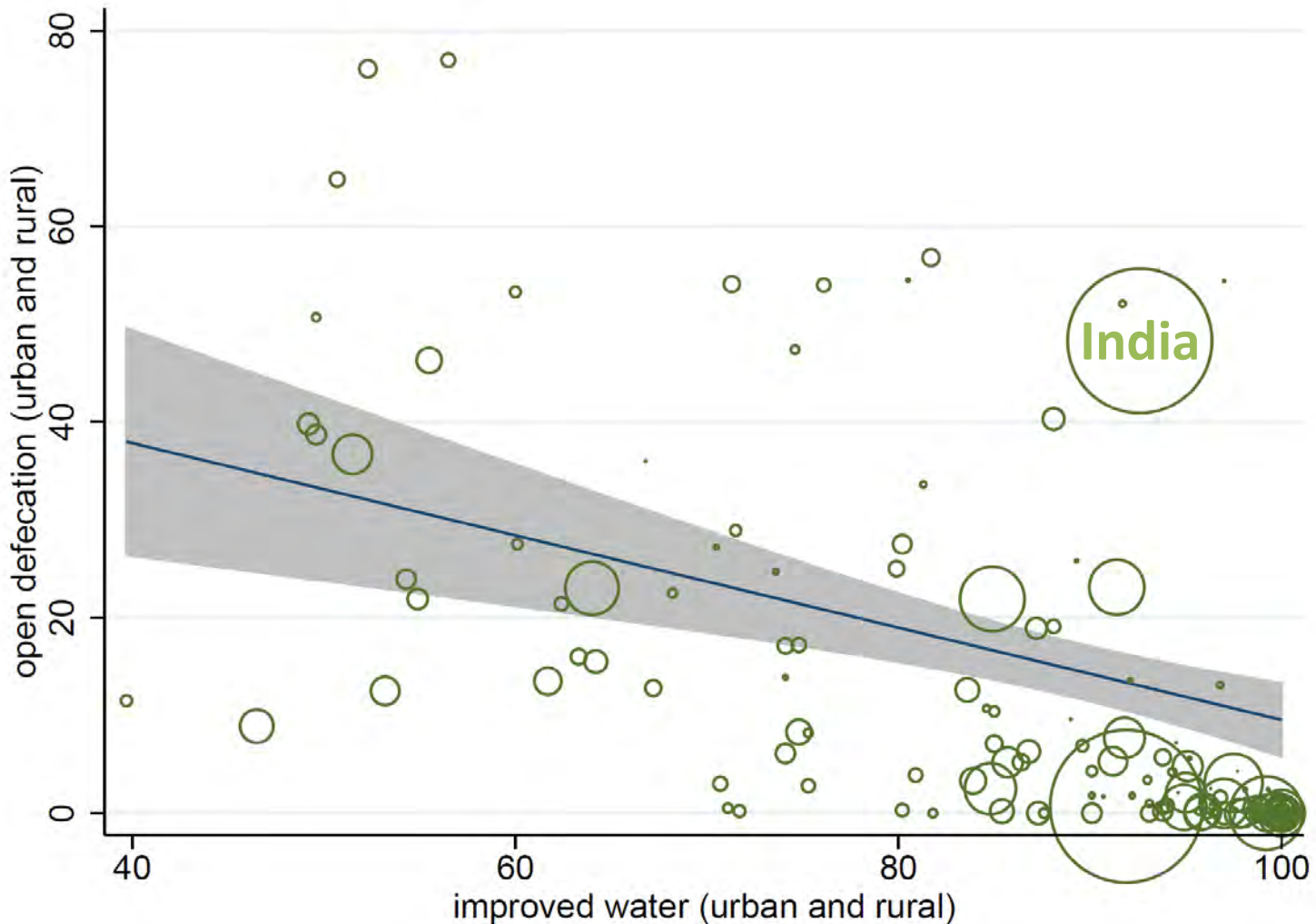
it's not because of poverty



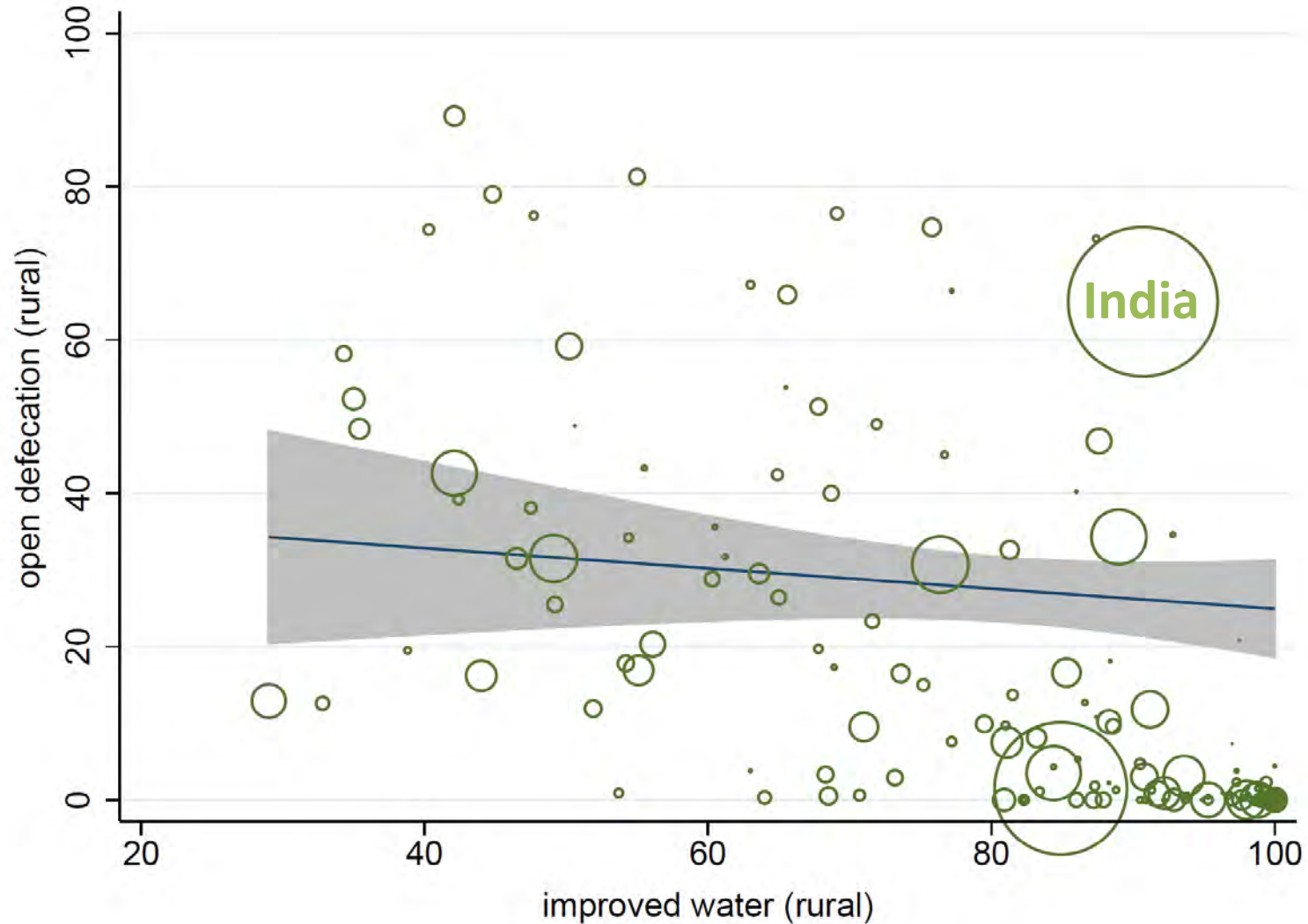
the other Indian exception: little use of simple latrines



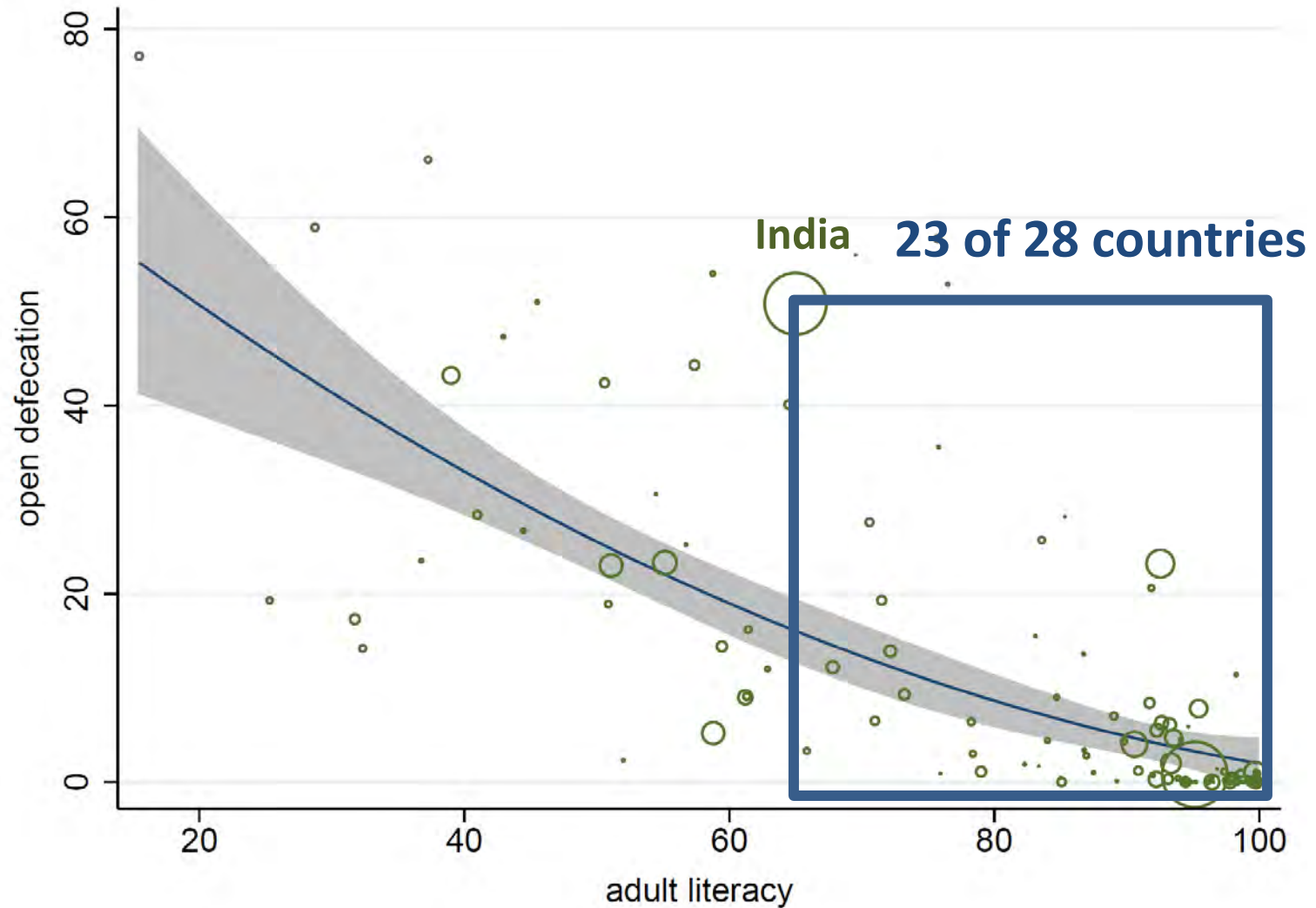
it's not about water i: rural & urban



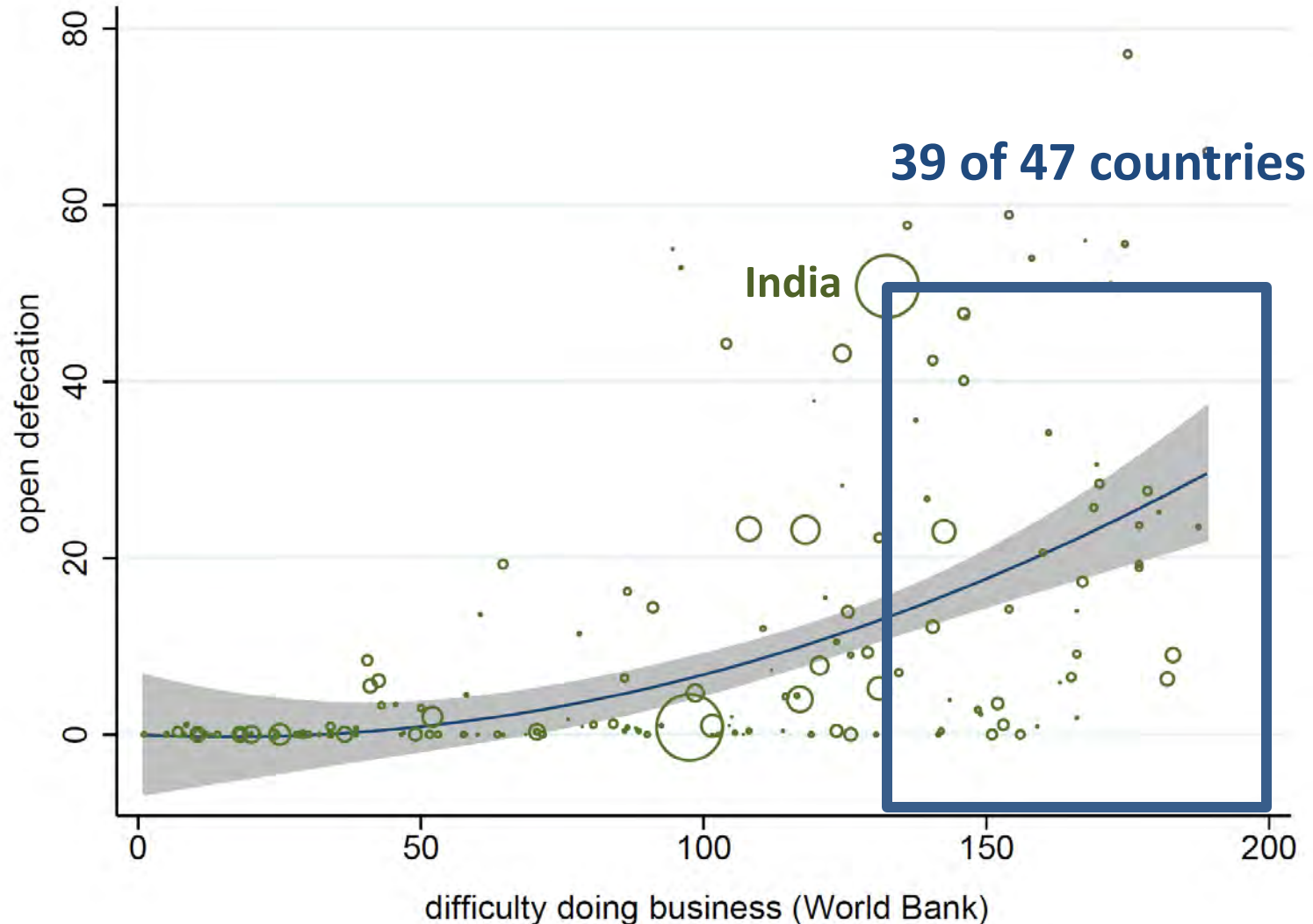
it's not about water ii: rural only



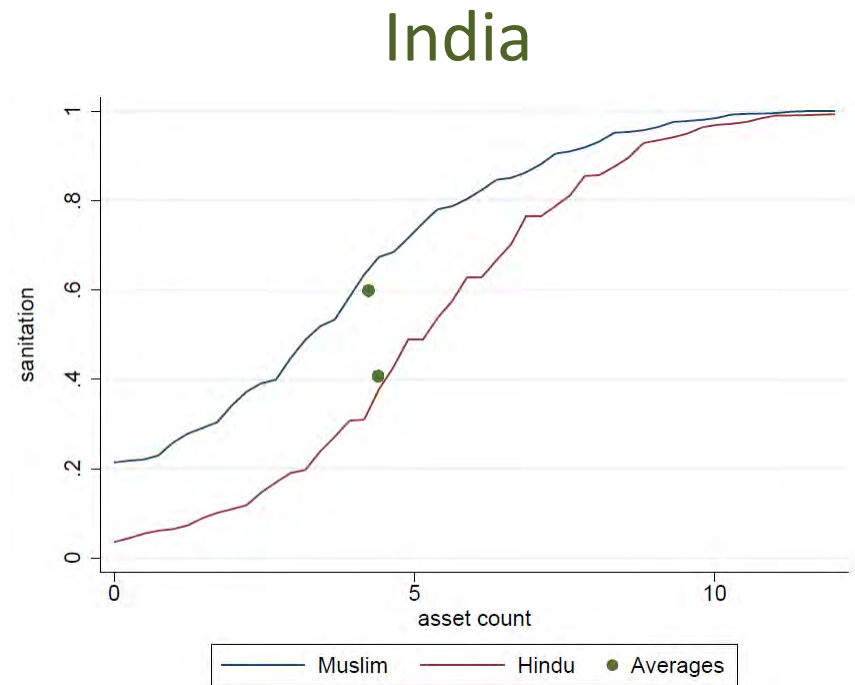
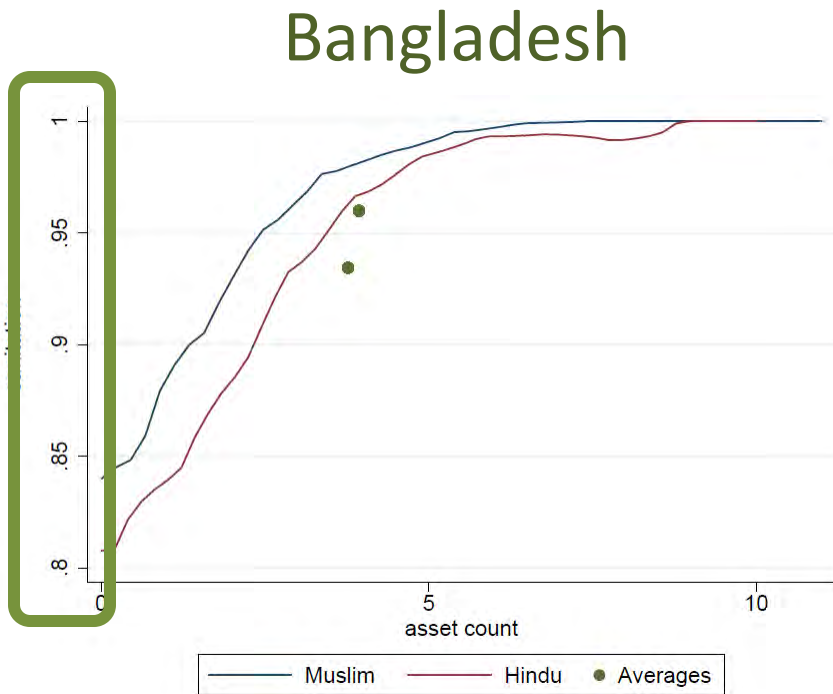
it's not about education



it's not about governance

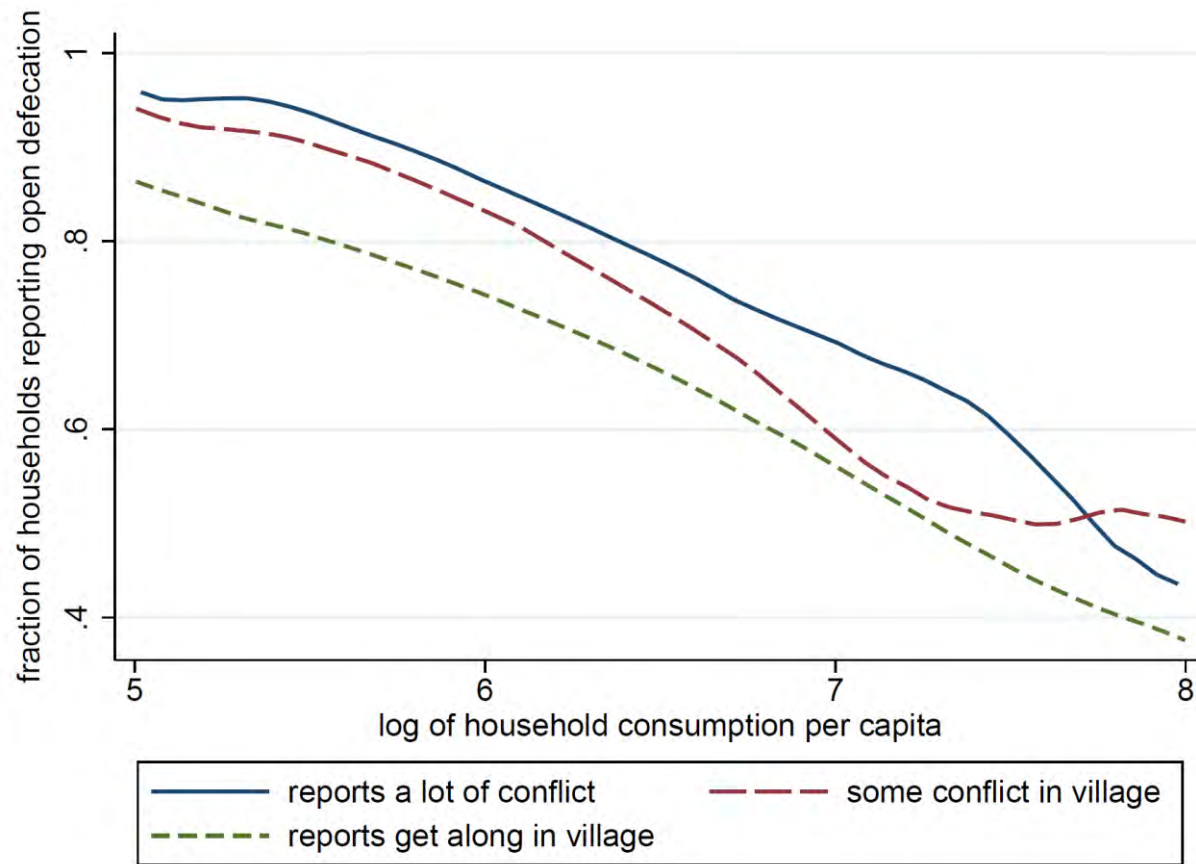


a role for culture? i: religion



In both Bangladesh and India, Muslims are less likely than Hindus to defecate in the open at all levels of rich and poor.

a role for culture? ii: caste



In rural India, at all levels of rich and poor, people are more likely to defecate in the open in villages with more caste conflict.

existing large-scale data sets
can only get us so far

**today's agenda: can newly
collected data from rural India
help us understand the Indian
exception of persistent open
defecation?**

SQUAT: “access” is not the top constraint



experience with an intervention that provided latrine access



SQUAT: beliefs, purity, & pollution



qualitative switching study: culture and the meaning of latrine use



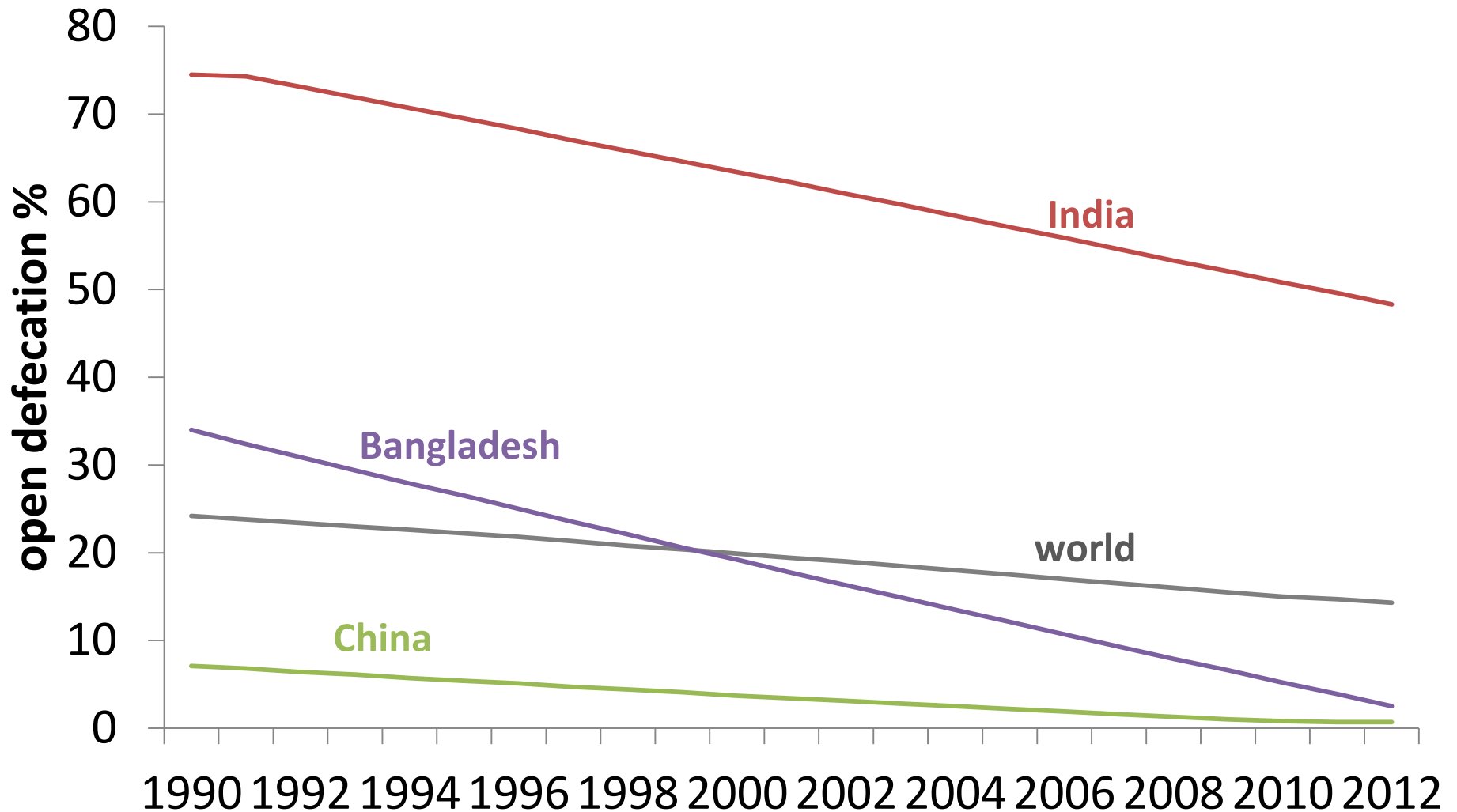
panel discussion of policy implications

confronting the challenges: latrines and latrine use in India



Payal Hathi
Water & Health Conference, UNC
October 14, 2014

slow improvement in Indian sanitation



access is not the main issue in India

- many are unwilling to use simple latrines
- many who have latrines don't use them
- government latrines are least likely to be used



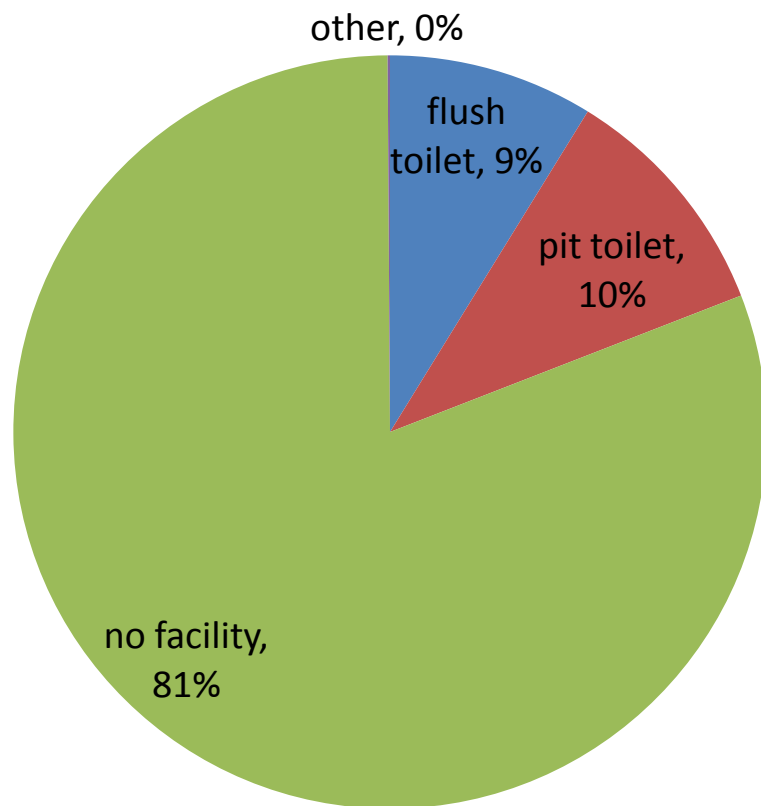


people can already afford simple latrines

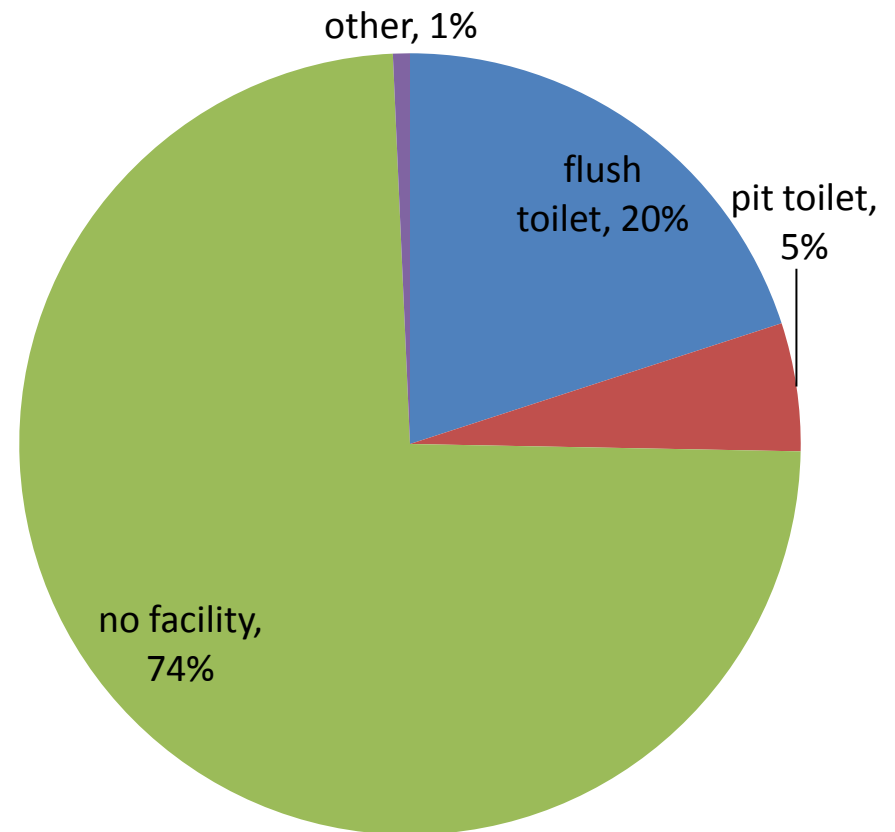
one: notions of acceptability

more flush and less pit latrines in rural India

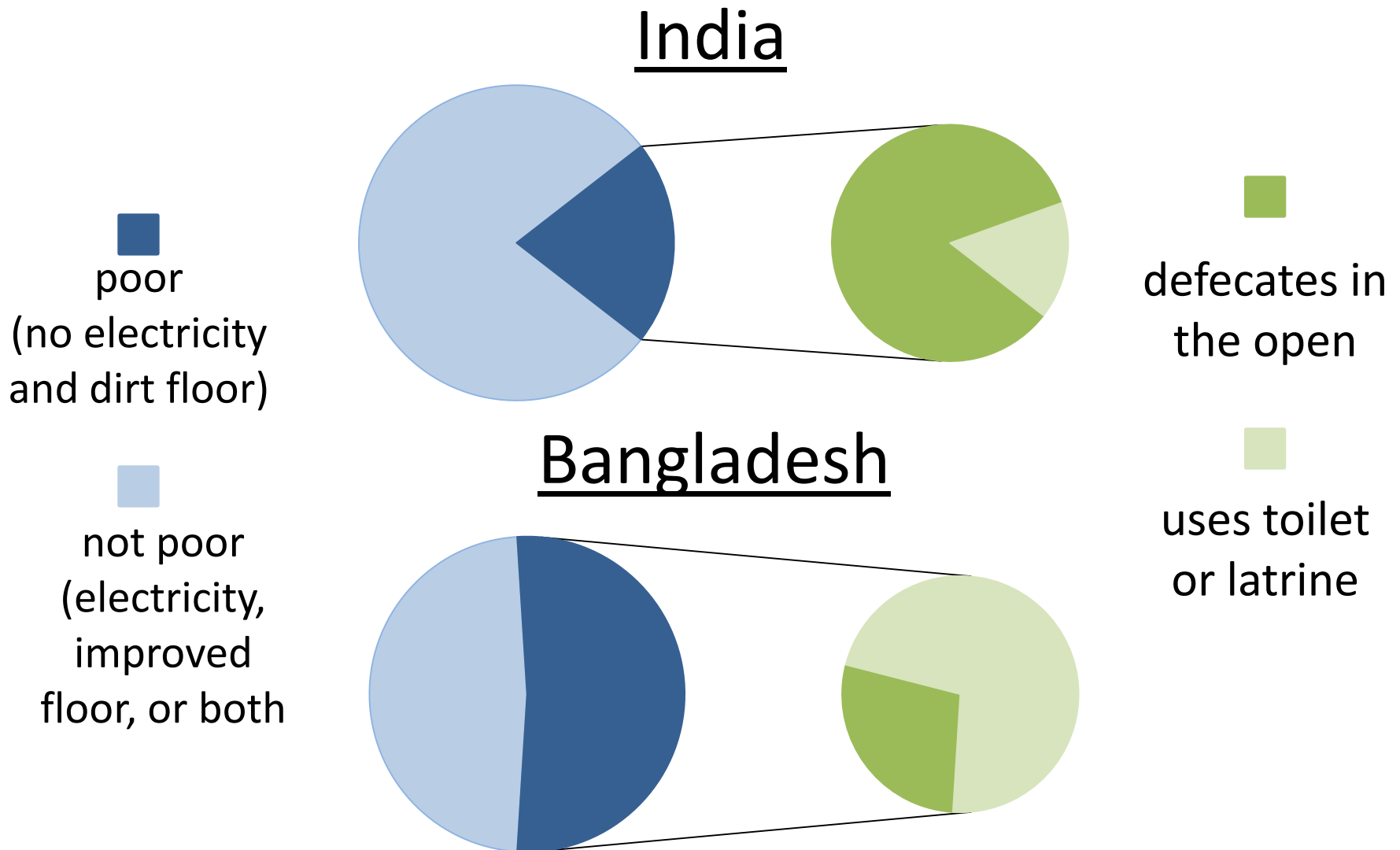
1998-1999



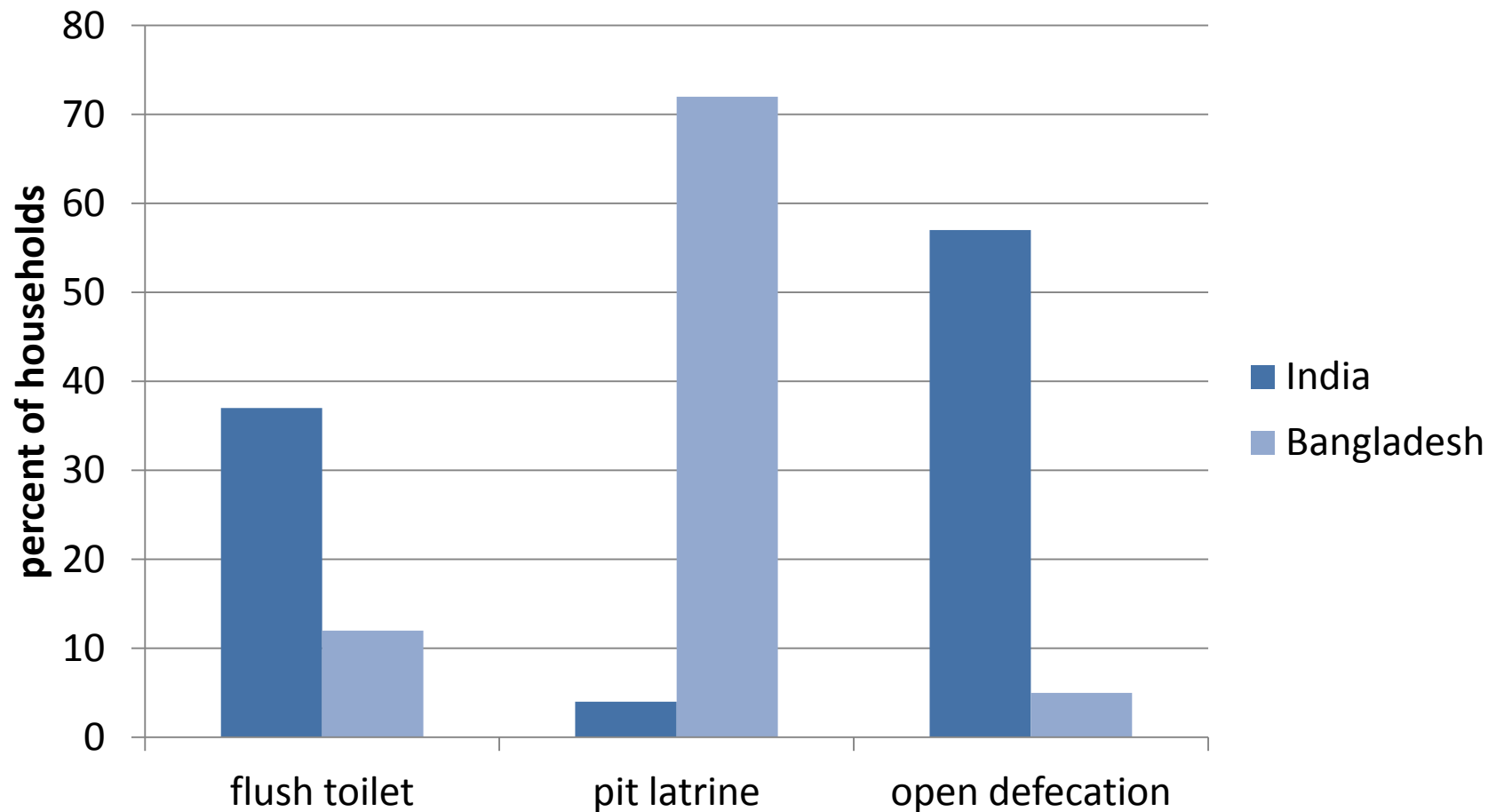
2005-2006



Bangladeshis are poorer, but poor Bangladeshi households use latrines

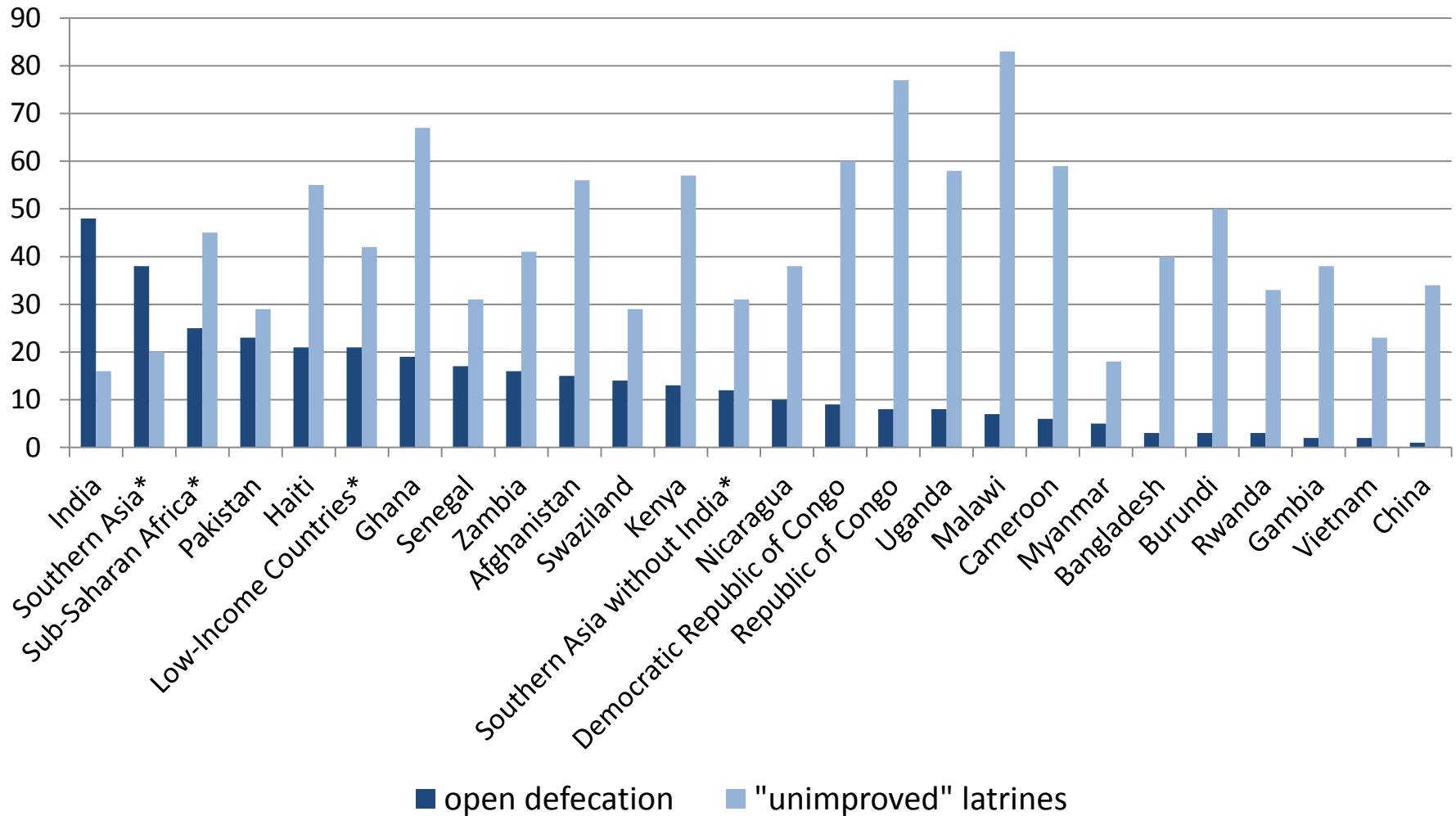


Bangladeshi households are more likely to use a middle sanitation option



source: Demographic and Health Surveys, Bangladesh (2011) and India (2005)

no demand for use of simple latrines



an expensive notion of latrines

- minimal usable latrine in SQUAT: Rs. 21,000 (\$350)
- Bangladesh: Rs. 2,500 (\$42) latrines (and less!) are everywhere
- Indonesia: Rs. 4,500 (\$75) in a similar survey (Cameron, *et al.* WSP, 2013)
- Indian families could already choose to build and use simple latrines, but they don't...

the larger the pit, the better



it's not only about access

people in rural India can afford
to build the simple latrines that
save lives worldwide.

but they choose not to.

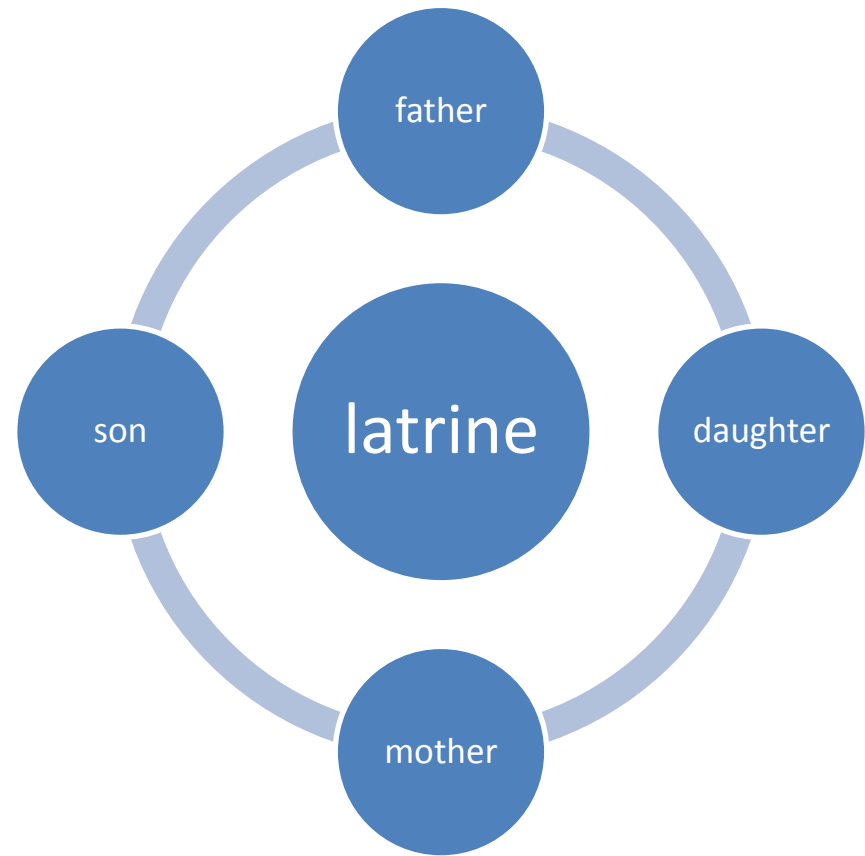
two: many people don't use the latrines they have

SQUAT survey  sanitation quality,
use, access, & trends
www.squatreport.in

a survey designed to learn about **behavior and beliefs**

a latrine is something
households have

open defecation is
something **persons do**



five states

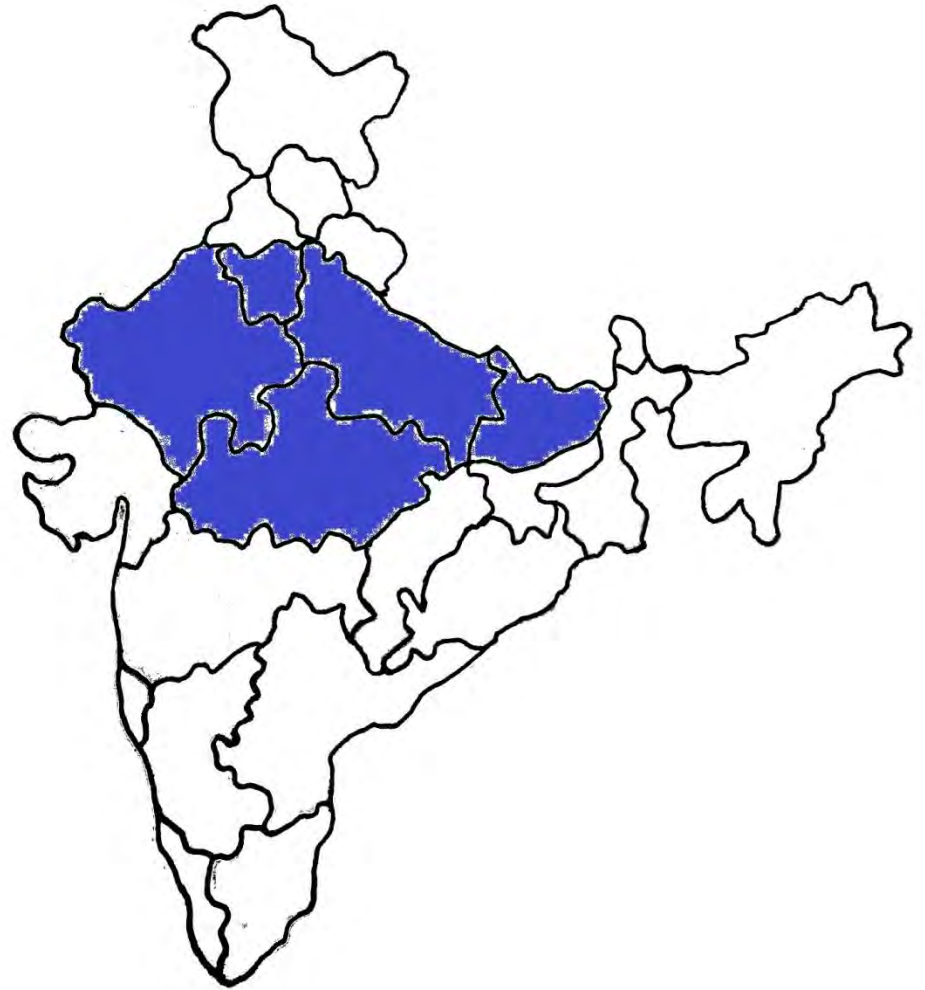
one-third of global open defecation

rural Bihar, Haryana,
Madhya Pradesh,
Rajasthan, and
Uttar Pradesh

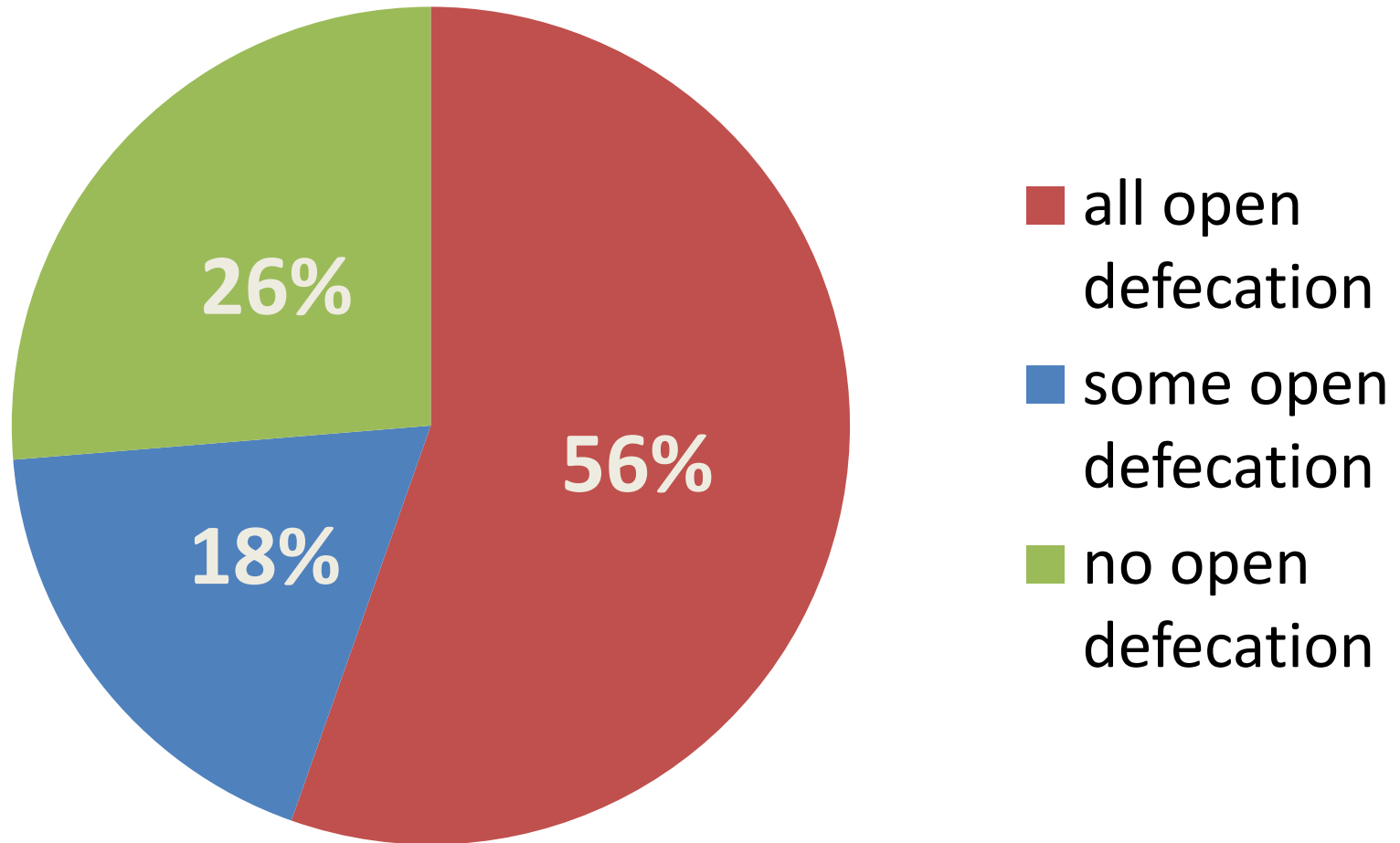
13 districts

3,200 households

22,000 individuals



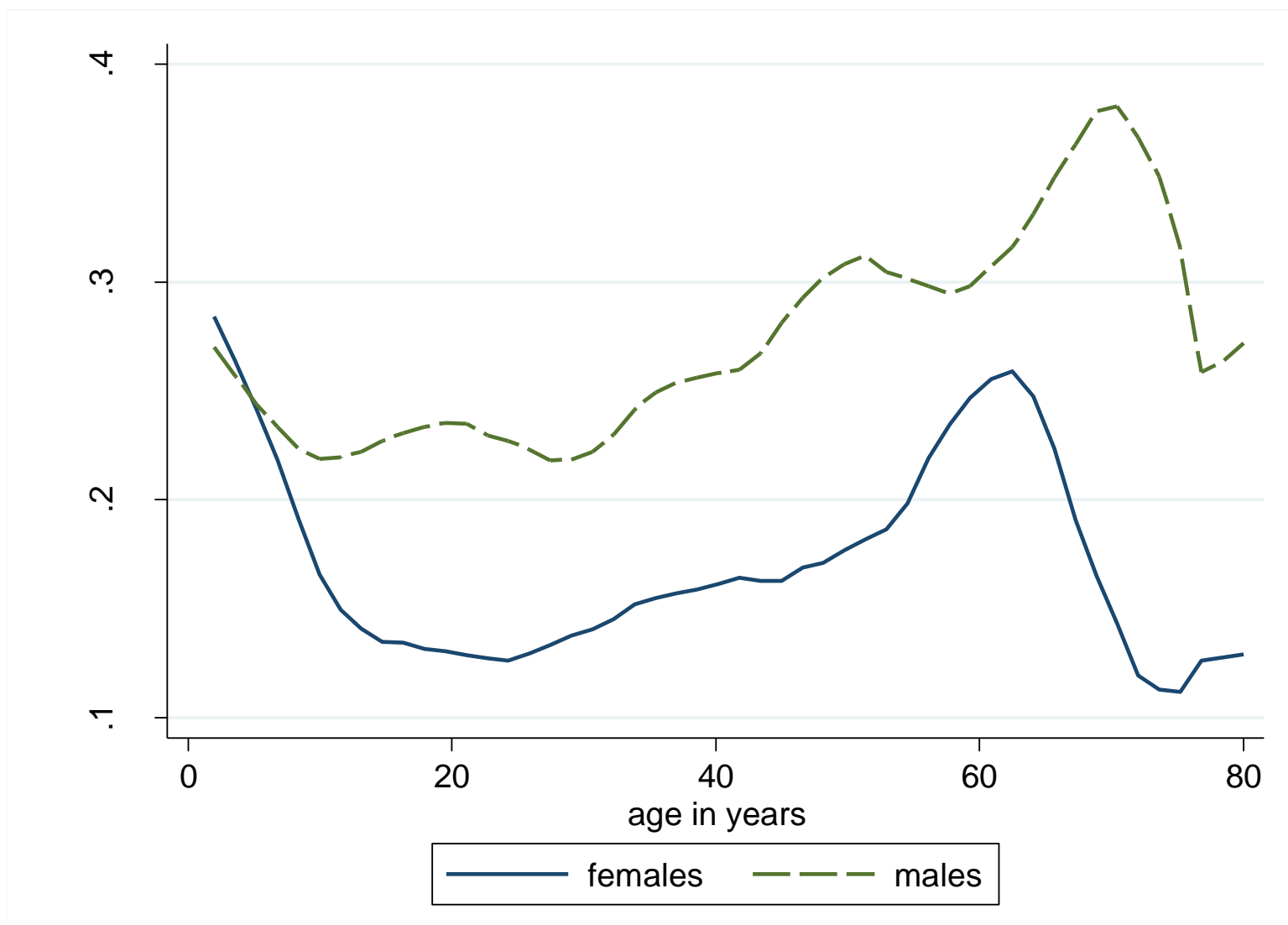
open defecation among all households



latrine access does not equal latrine use

40 percent of households **with a working latrine** had at least one household member who defecates in the open

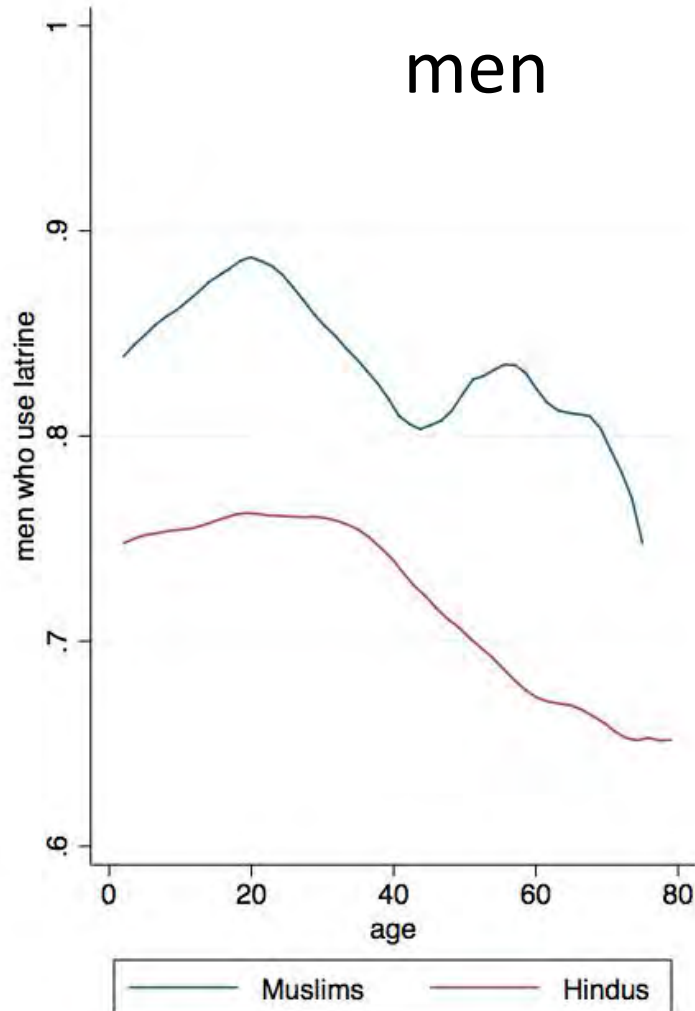
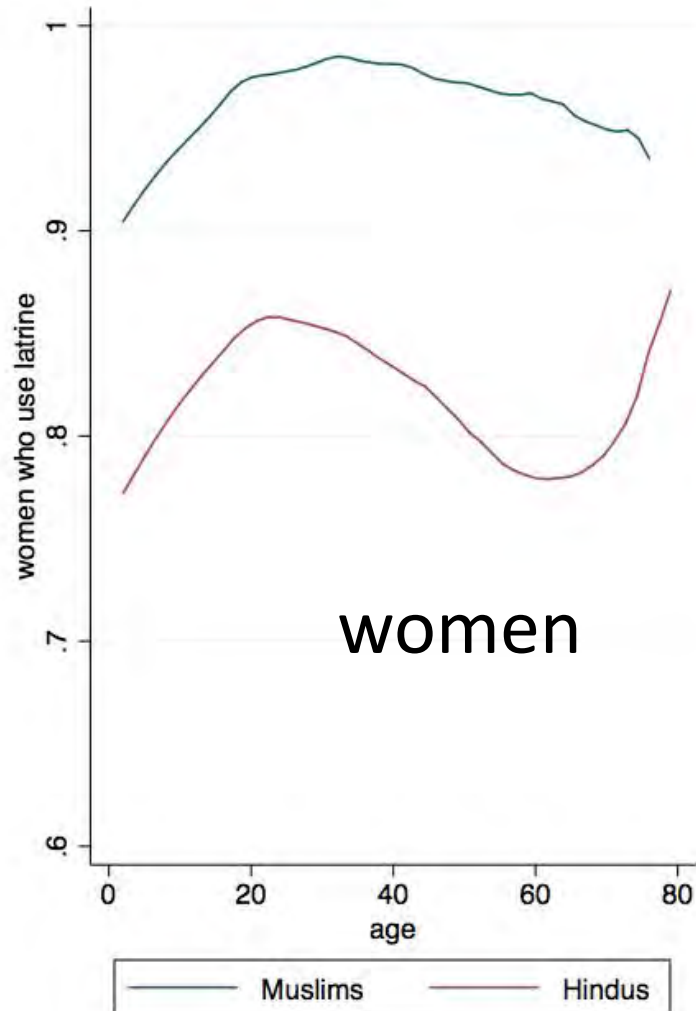
open defecation among toilet owners



the social dynamics of open defecation

- young women and the elderly are most likely to want and use latrines, but they have the least decision making power in the household
- young and middle-aged men, who are generally the economic decision makers, are the least likely to want and use latrines

among owners, Muslims are more likely to use a latrine



it's not just about access

many people in rural India have
working latrines.

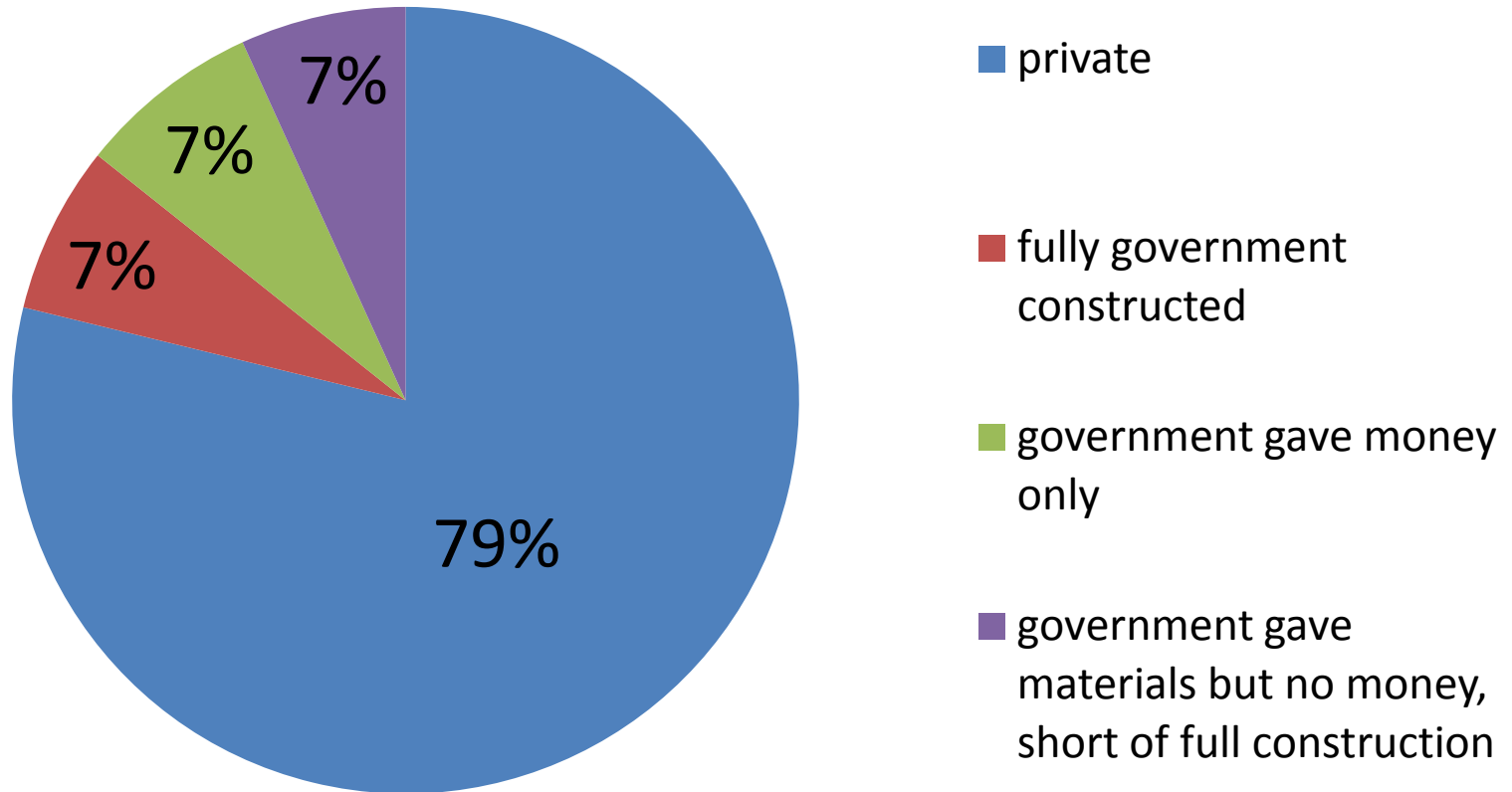
but some choose not to use
them.



giving people latrines won't solve the problem

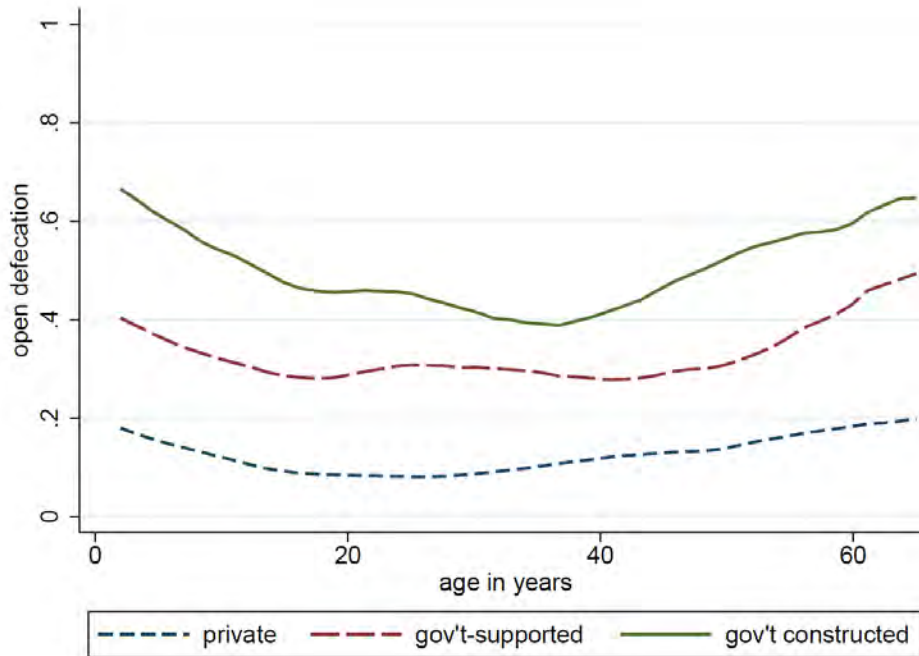
three: government latrines

most latrines are privately constructed

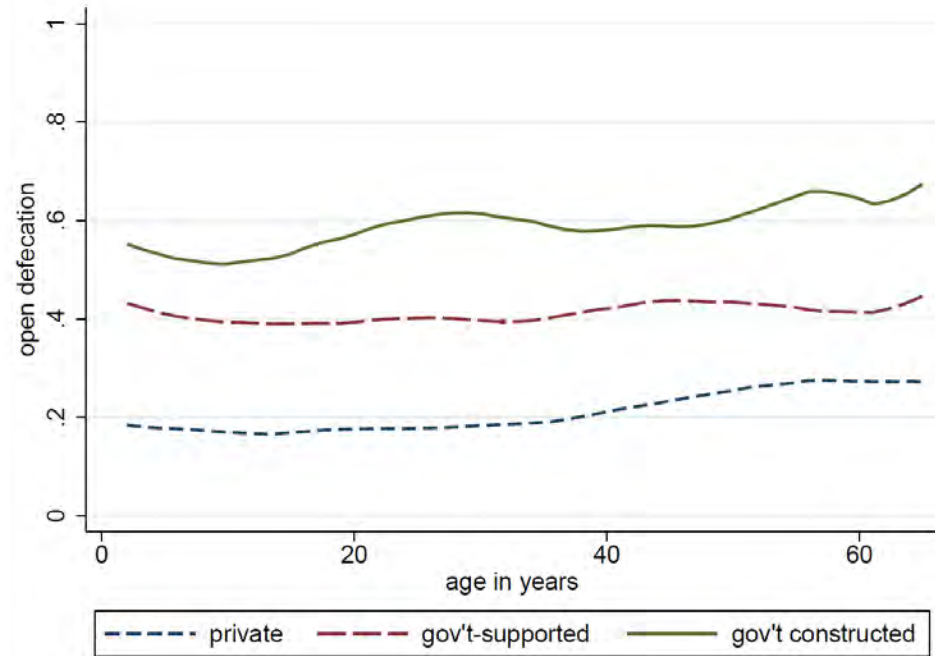


open defecation in households with government latrines

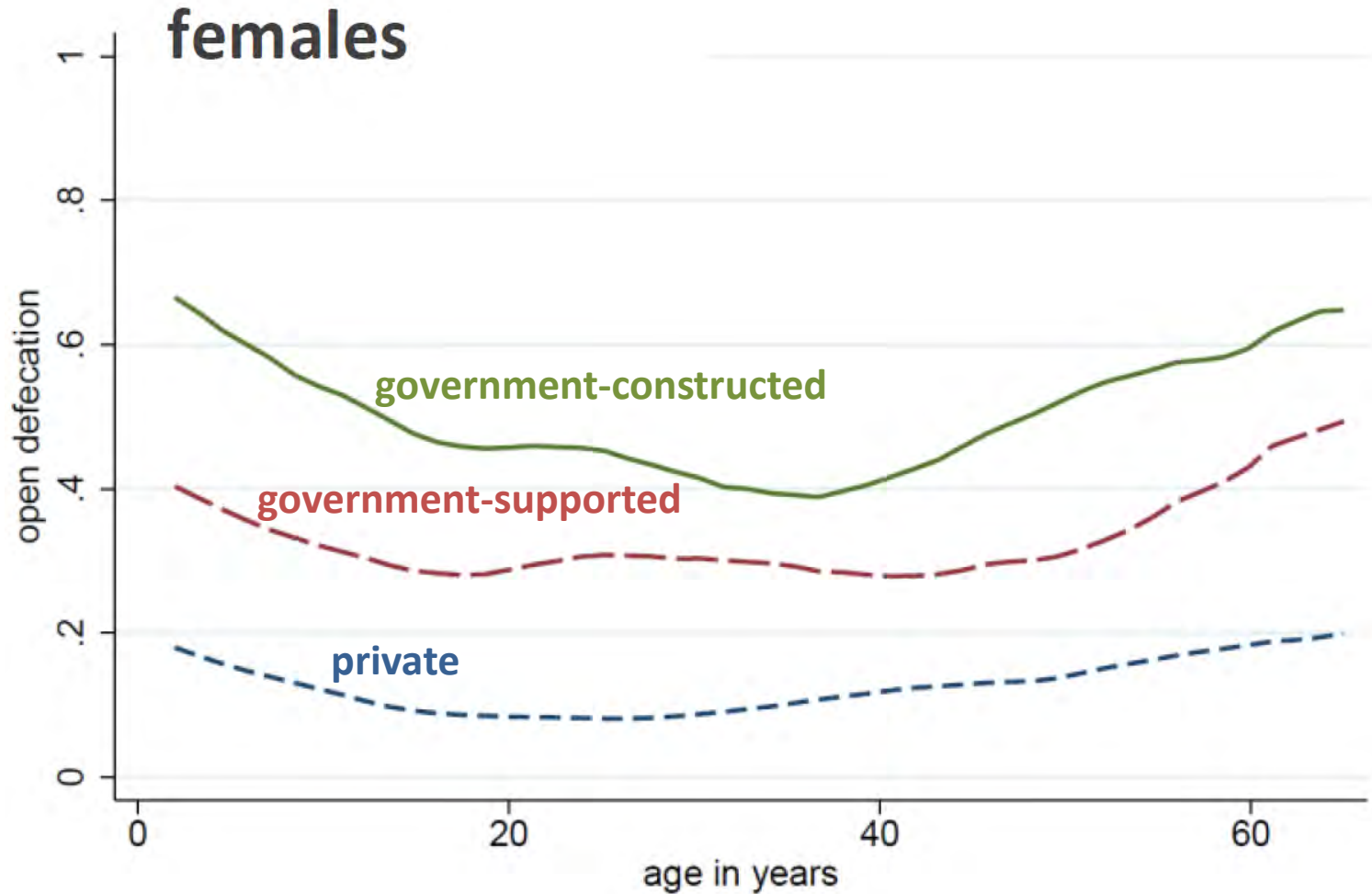
females



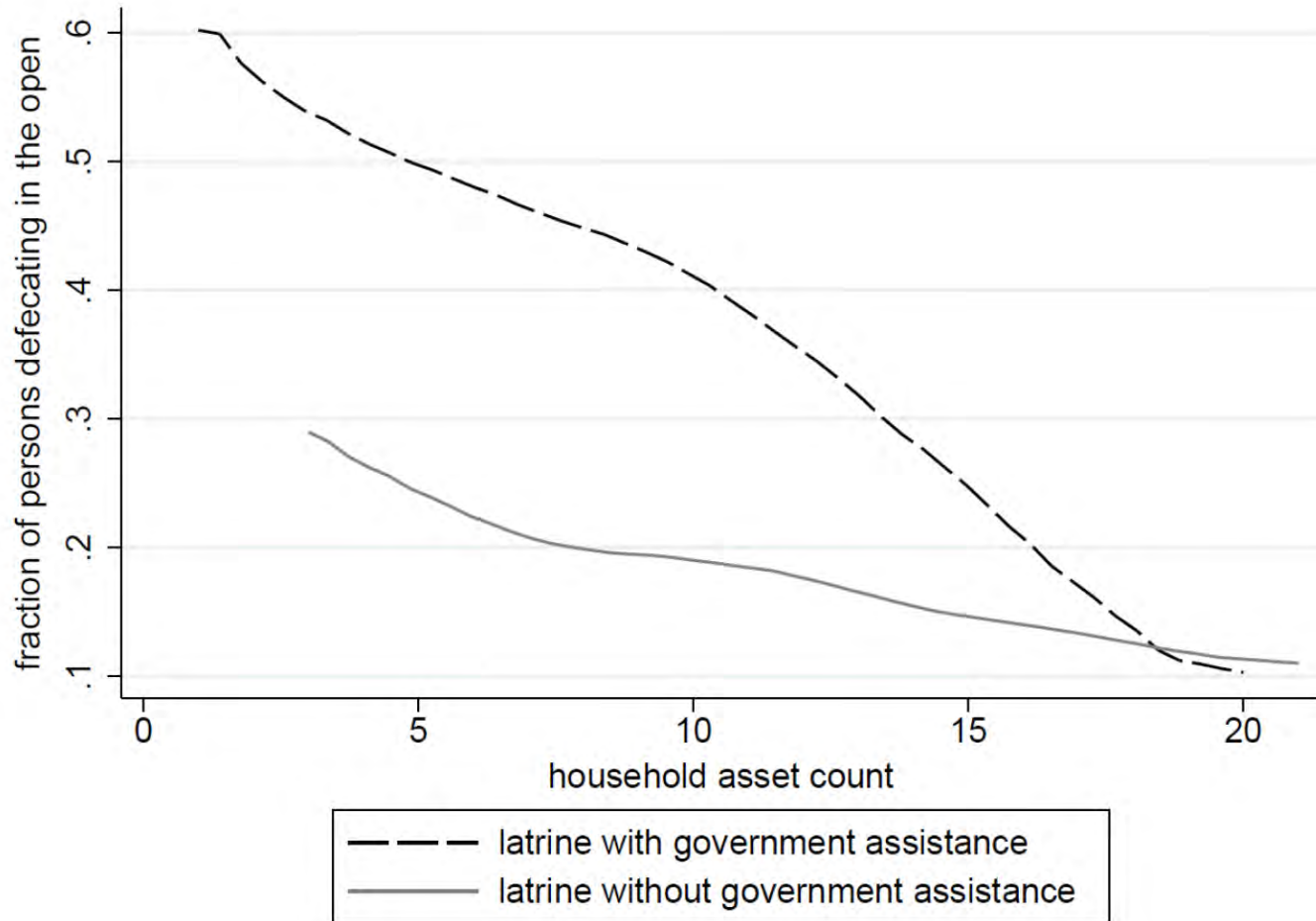
males



government latrines less likely to be used than privately constructed ones



open defecation in households with government latrines, by assets



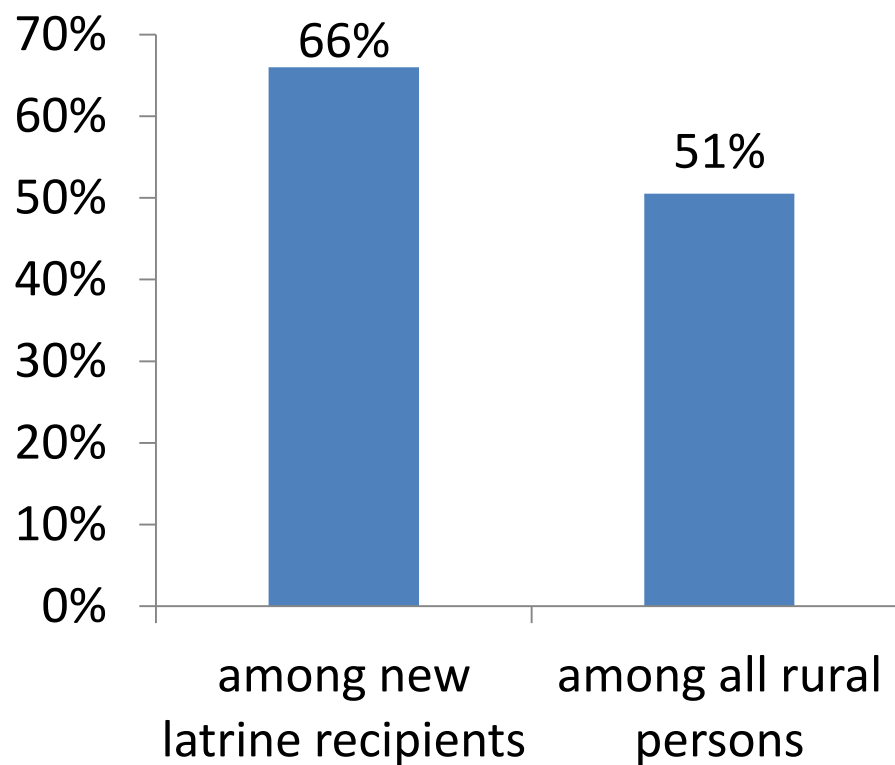
predicting construction policy: **match non-owners to owners**

- 53% of people who own a government latrine don't use it
- use regression to predict latrine use among non-owners using demographically similar owners
 - non-owners poorer, older, ...
 - clearly over-optimistic in many ways
- naturally, this **assumes no change in anybody's preferences over sanitation**

predicting construction policy: latrine construction is not enough

even if the government were to build a latrine for every household, most rural people in these states would still defecate in the open

open defecation,
after construction



it's not just about access

the government could construct
a latrine for every household
without one.

but many are likely to go
unused.



where does this leave us?

four: recap

the next question is why

India is a clear exception: it's not about access

- lack of demand for simple latrines
- many don't use the latrines they have
- giving government latrines has not worked

To find a solution, we need to ask **why**

confronting the challenge: why is India different?

Sangita Vyas

UNC Water and Health Conference
14th October, 2014

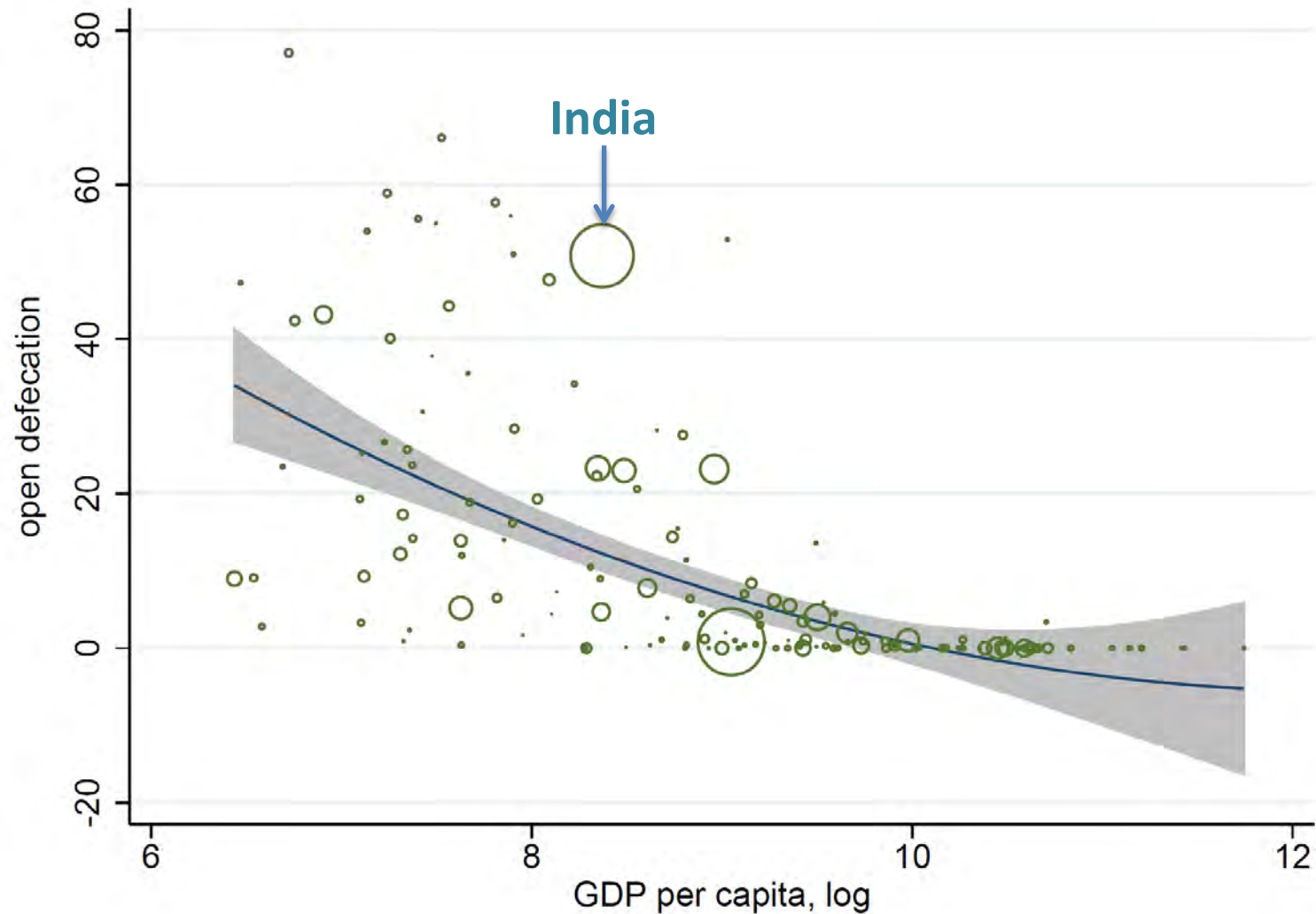




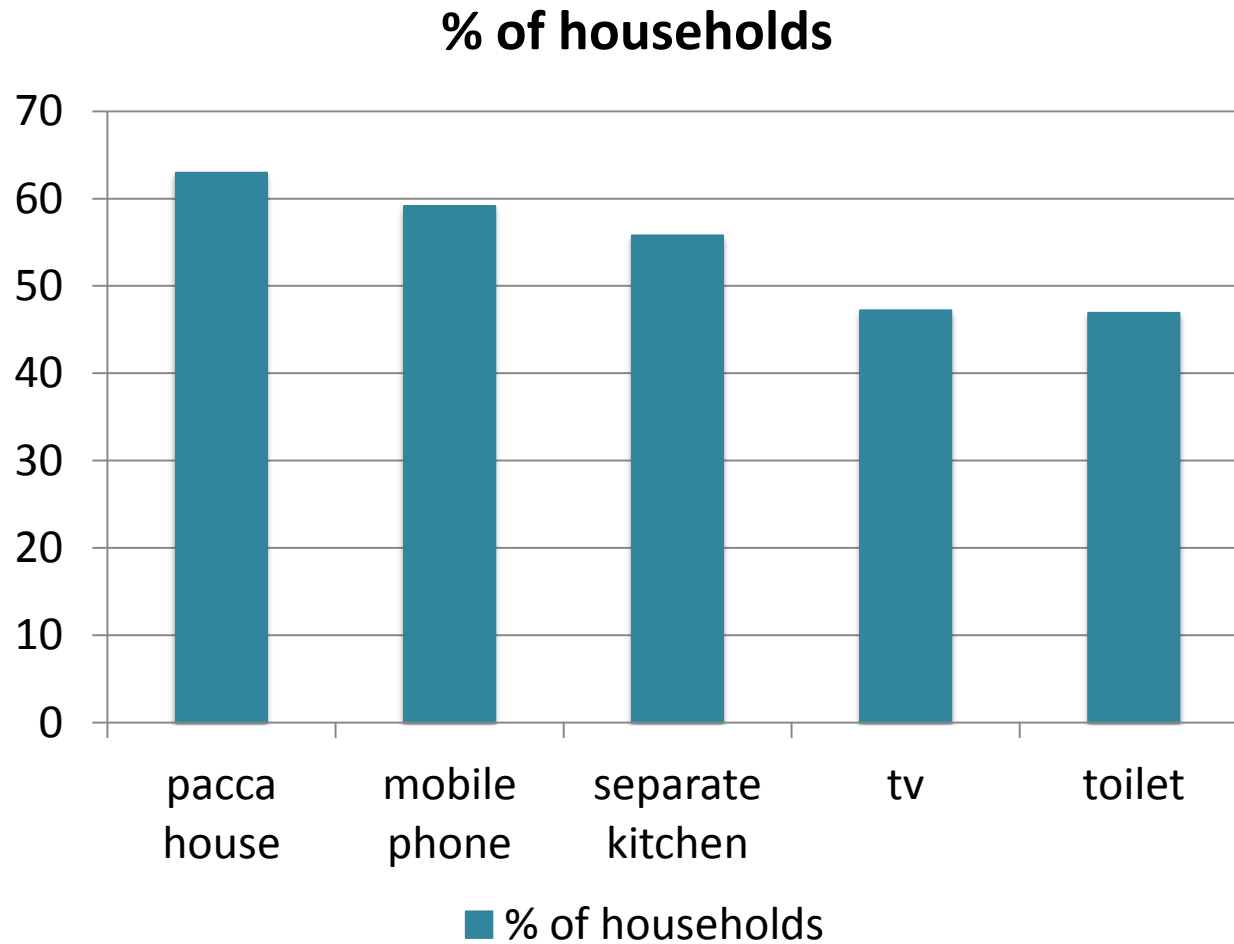
what have we already learned about sanitation in India?

one: recap: it's not about income or access

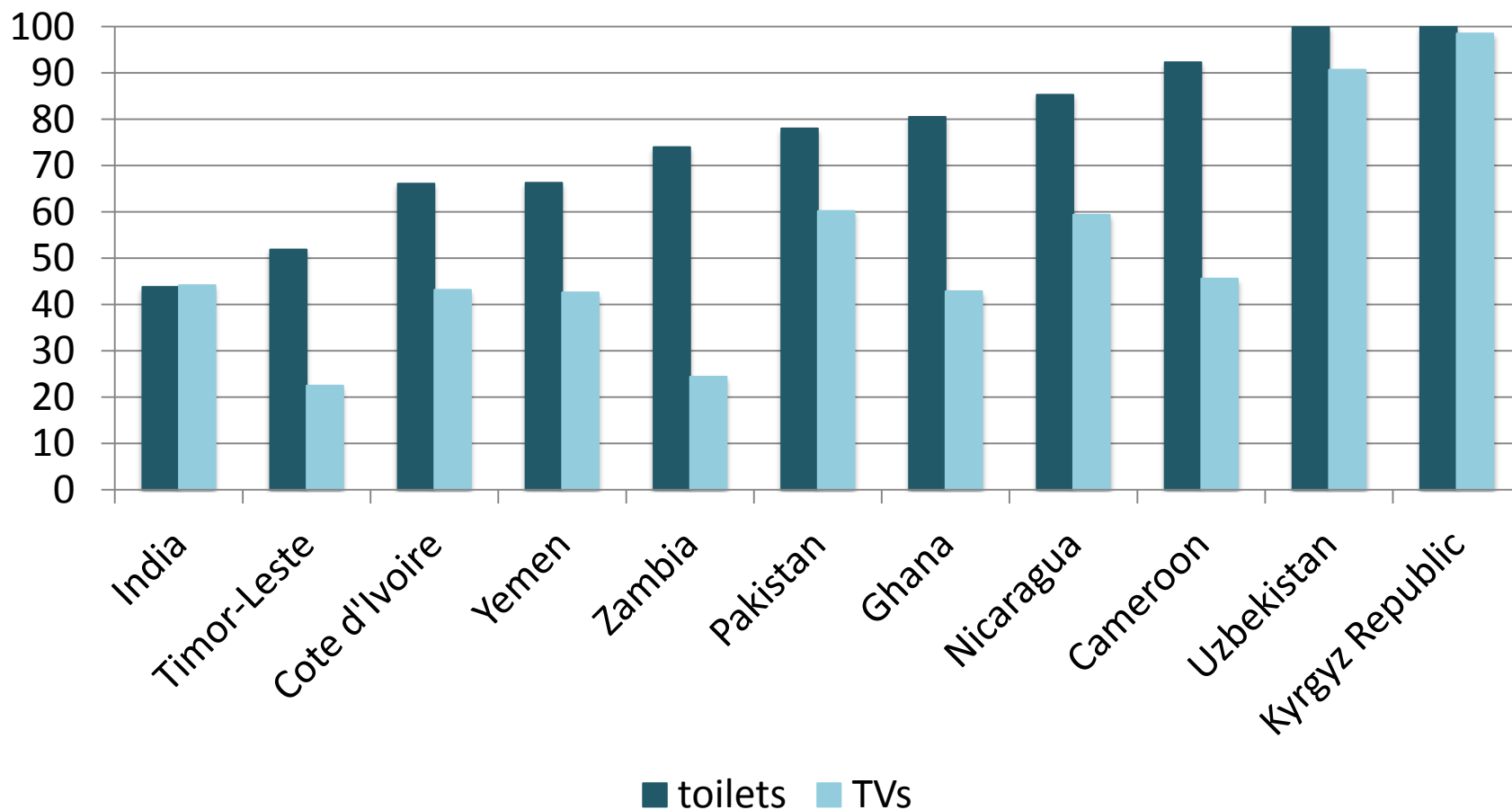
it's not about income



more TVs than toilets in India



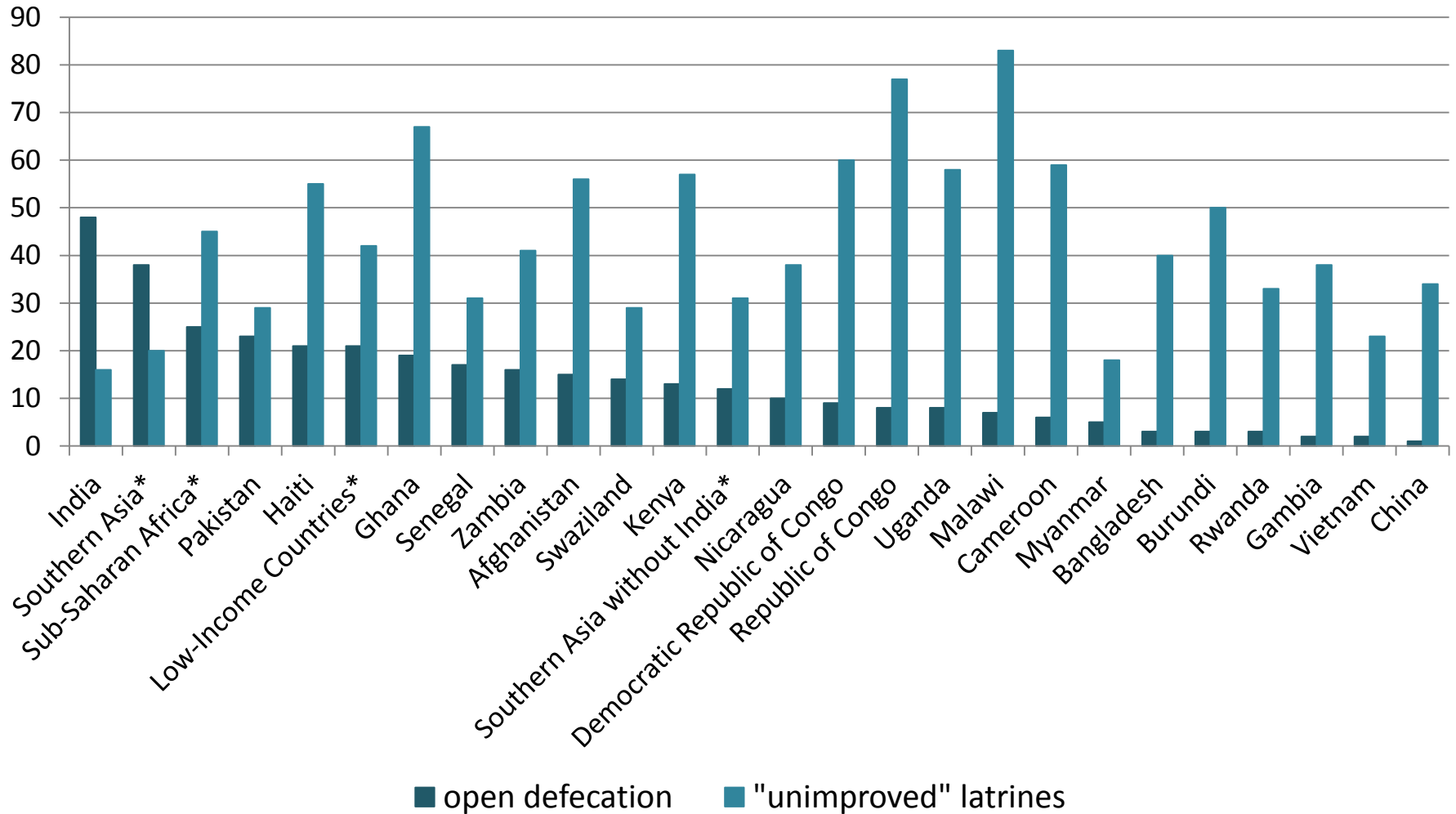
in other countries it's the opposite



country	gdp/capita (current us\$)
Uzbekistan	1,878
Nicaragua	1,851
Ghana	1,850
Zambia	1,540
Cote d'Ivoire	1,521
India	1,499
Yemen	1,473
Timor-Leste	1,371
Cameroon	1,315
Pakistan	1,299
Kyrgyz Republic	1,263

how did I pick
these countries?

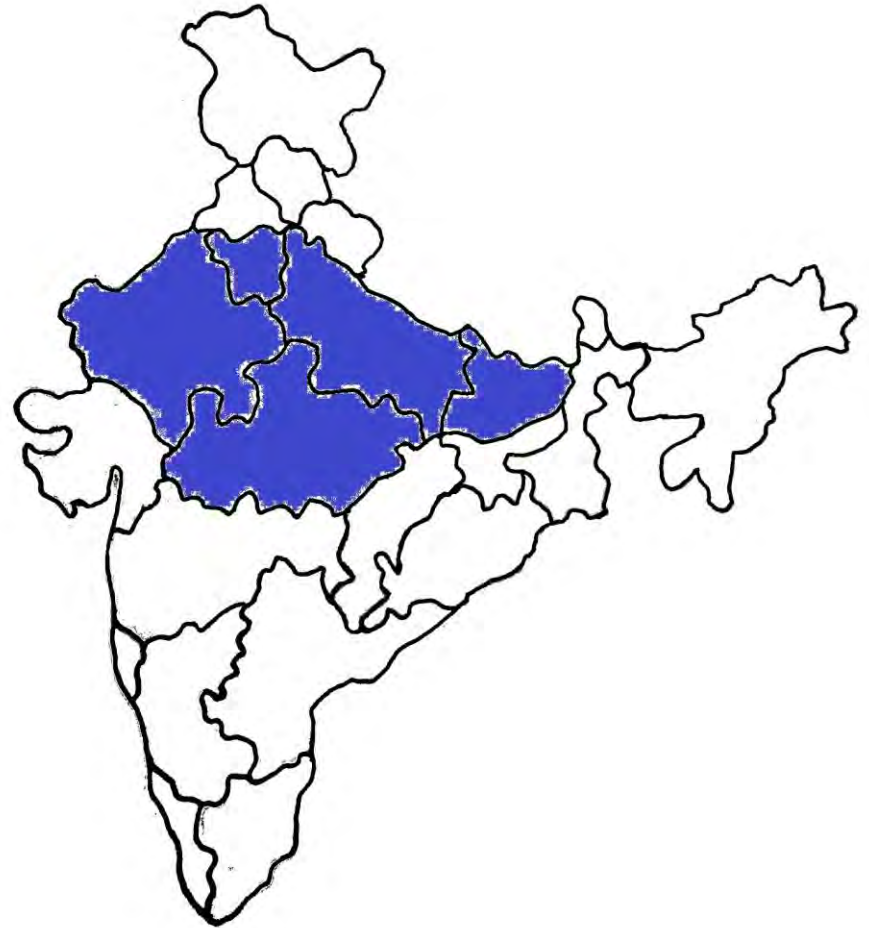
Indians do not use simple latrines



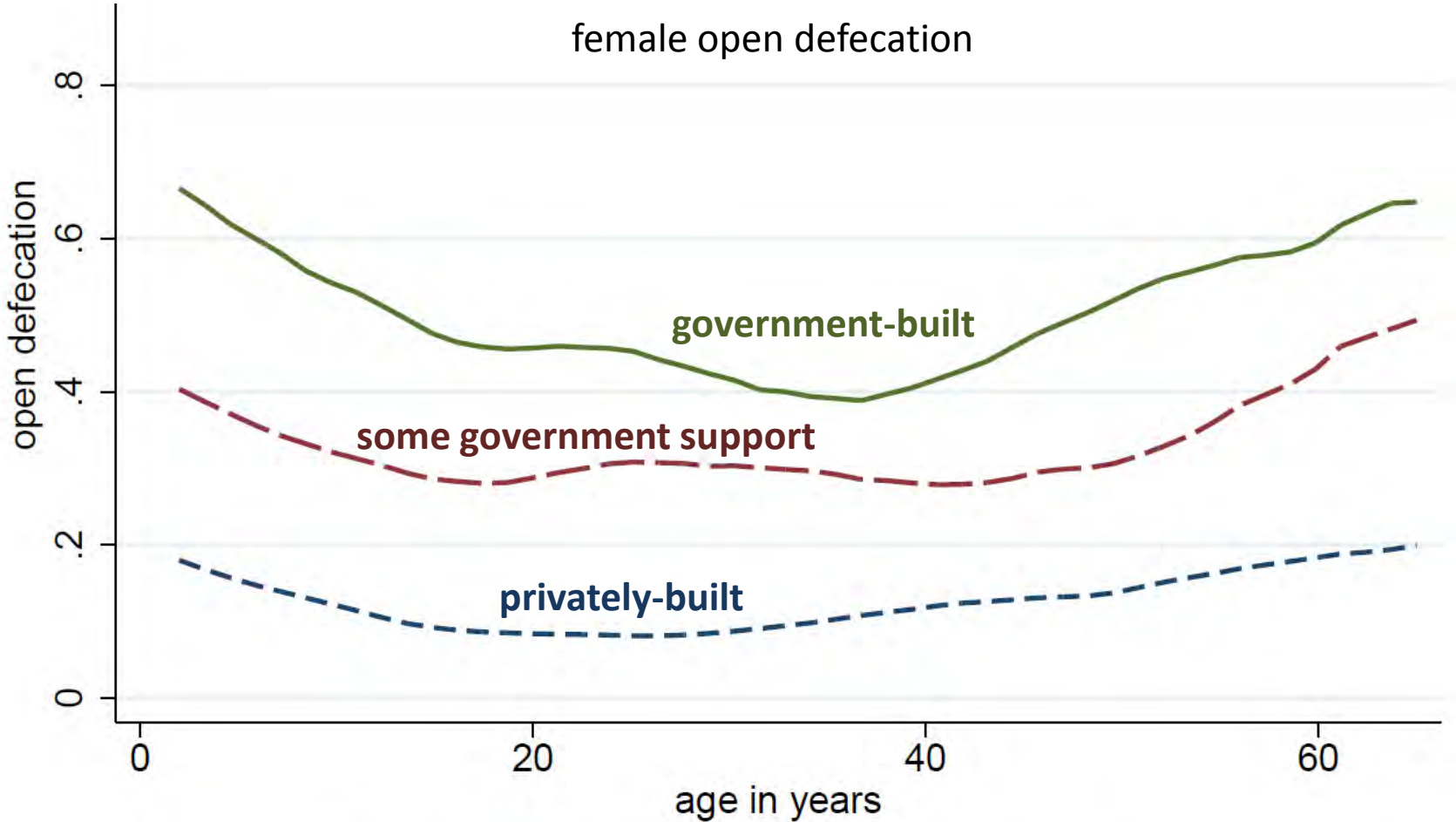
SQUAT Survey: five states one-third of global open defecation

rural Bihar, Haryana,
Madhya Pradesh,
Rajasthan, and
Uttar Pradesh

13 districts
3,200 households
22,000 individuals



open defecation despite having a latrine



India is different

survey of sanitation attitudes and beliefs shows
that it has to do with notions of
purity and pollution



why is India different?

five: beliefs and culture

purity, pollution, and caste

- concepts of purity and pollution often govern behavior
- people are born into a particular caste
- caste governs how people interact with each other
- castes are hierarchically ranked, with people from the highest caste considered to be the purest

“...corpus of beliefs concerning purity and pollution which I shall label herein the **Hindu Pollution Concept**...They define most of the gradations of ritual status between and within caste groups...”

-HNC Stevenson (1953)

feces are polluting

- people in the lowest caste – untouchables – are responsible for handling human waste and other things that are considered “dirty” in Indian society
- untouchables are considered polluted because of their contact with human waste
- people in higher castes consider contact with untouchables to be polluting

“In India...**the handling of human waste is taboo** for many Hindus and has been traditionally designated as a job for so-called **‘Untouchable’ or ‘sweeper’ communities** that have responsibility, under India’s caste system, for disposing of human excreta...the persistence of cultural norms relating to **notions of pollution and purity reinforces such practices.**”

- Jewitt (2011)

purity in public and private spheres

- people are more concerned about purity and pollution in their own homes and for their own bodies than in public spaces
- part of why it's not socially unacceptable to defecate in the open

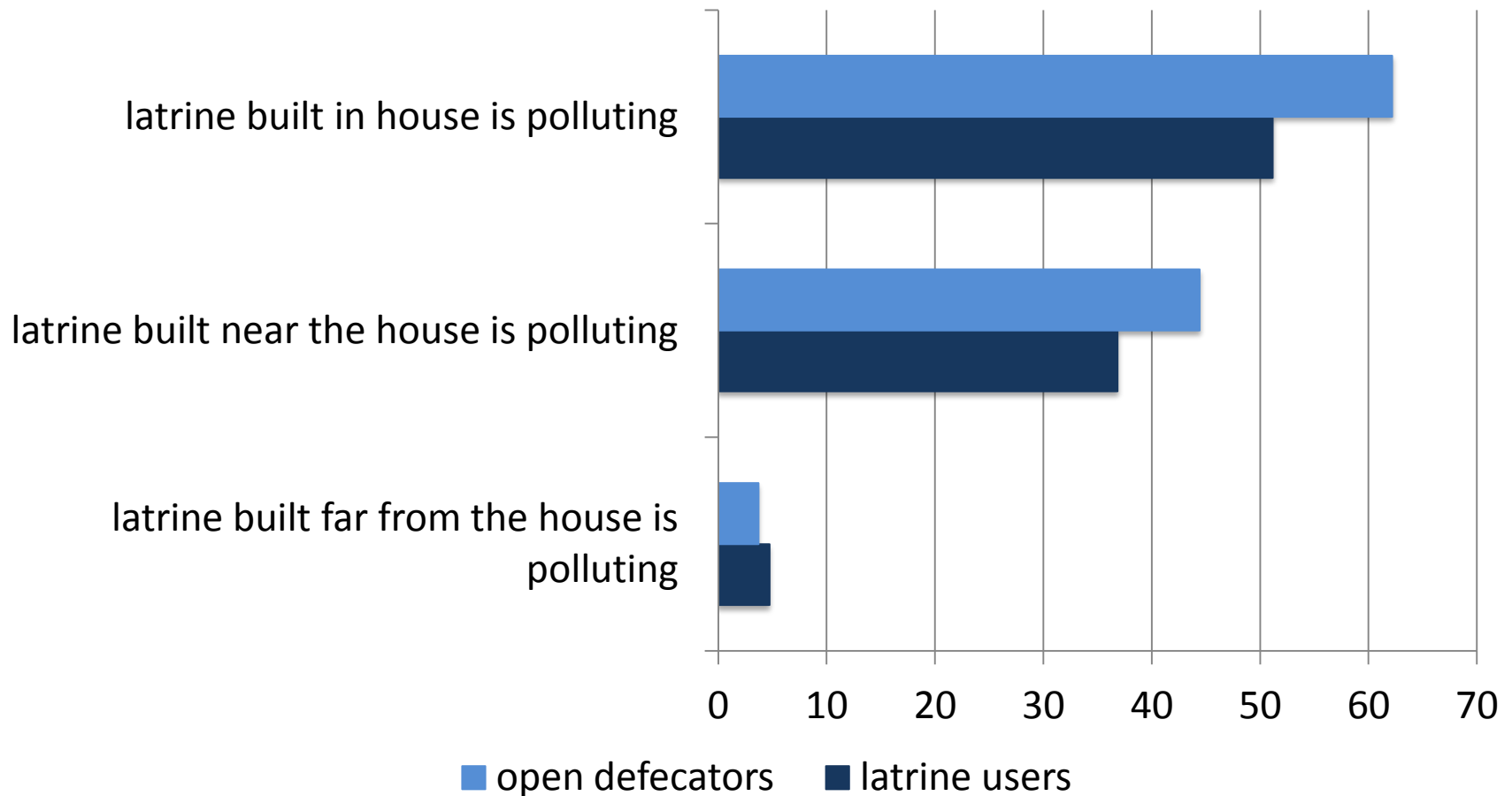
“once waste is pushed out of the physical boundary of the house, it then belongs to the ‘public’ . . . domain . . . and therefore, everybody is **entitled to dump rubbish or even defecate** in it.”

- Mukhopadhyay (2006)

SQUAT Survey questions

- Is a latrine **in** your house pure, polluting, or it doesn't matter?
- Is a latrine **near** your house pure, polluting, or it doesn't matter?
- Is a latrine **far from** your house pure, polluting, or it doesn't matter?

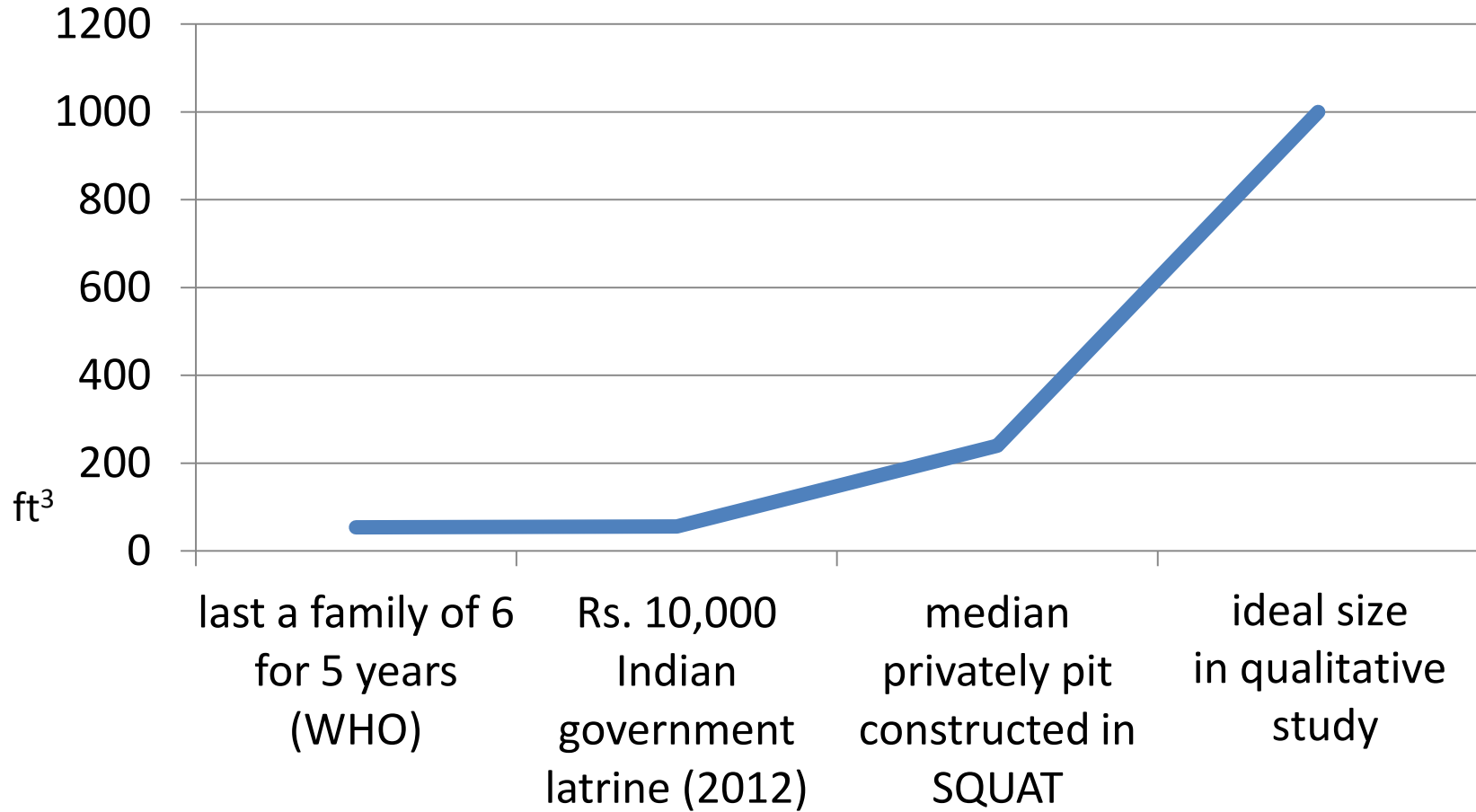
latrines in and near the home are considered **polluting**



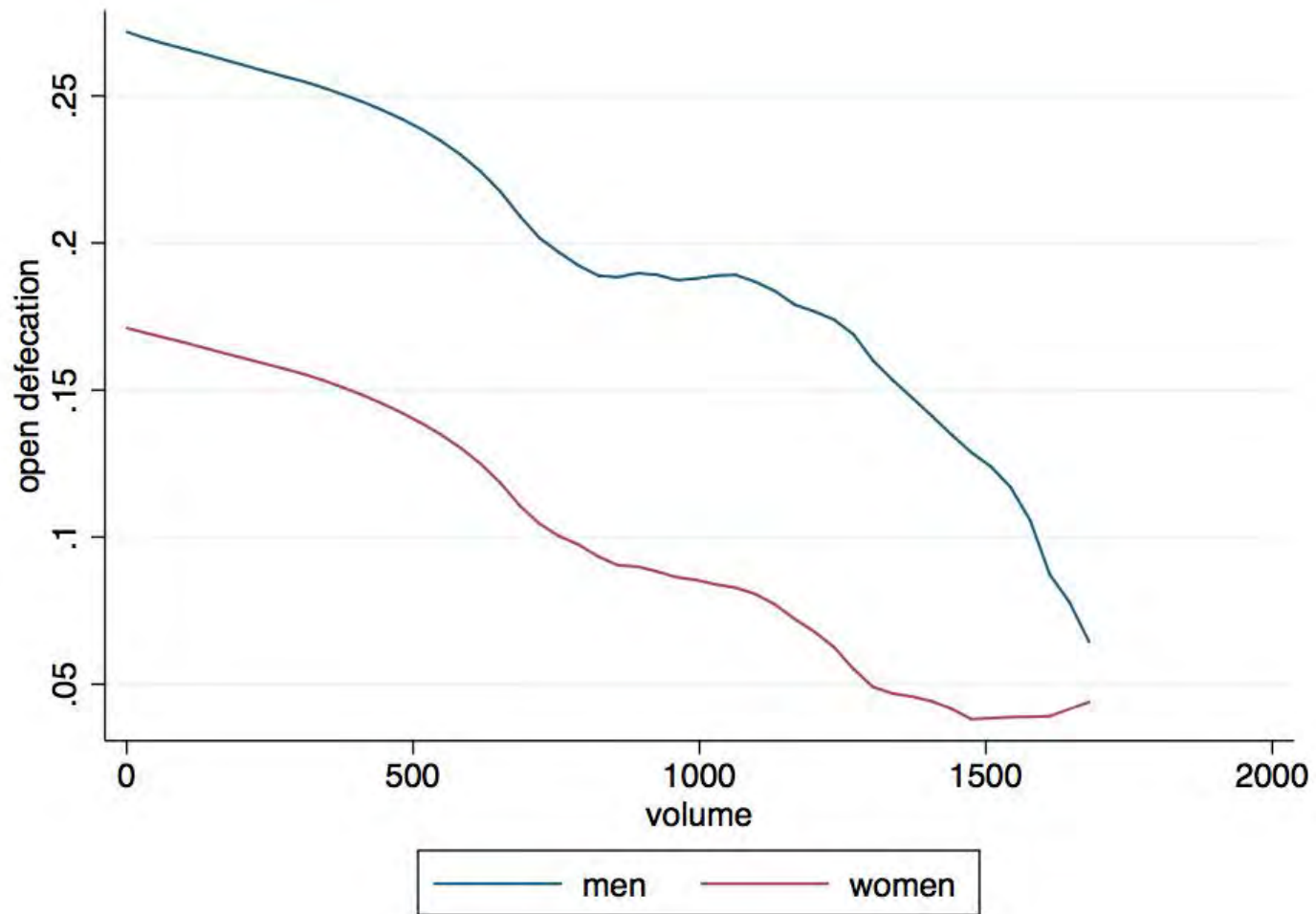
big pits help people avoid pollution

- the **minimum cost** of a latrine worth using is **Rs. 21,000 (\$350)**
- in many other places, people commonly use latrines costing **less than Rs. 5,000 (\$80)**

how big should a pit be?

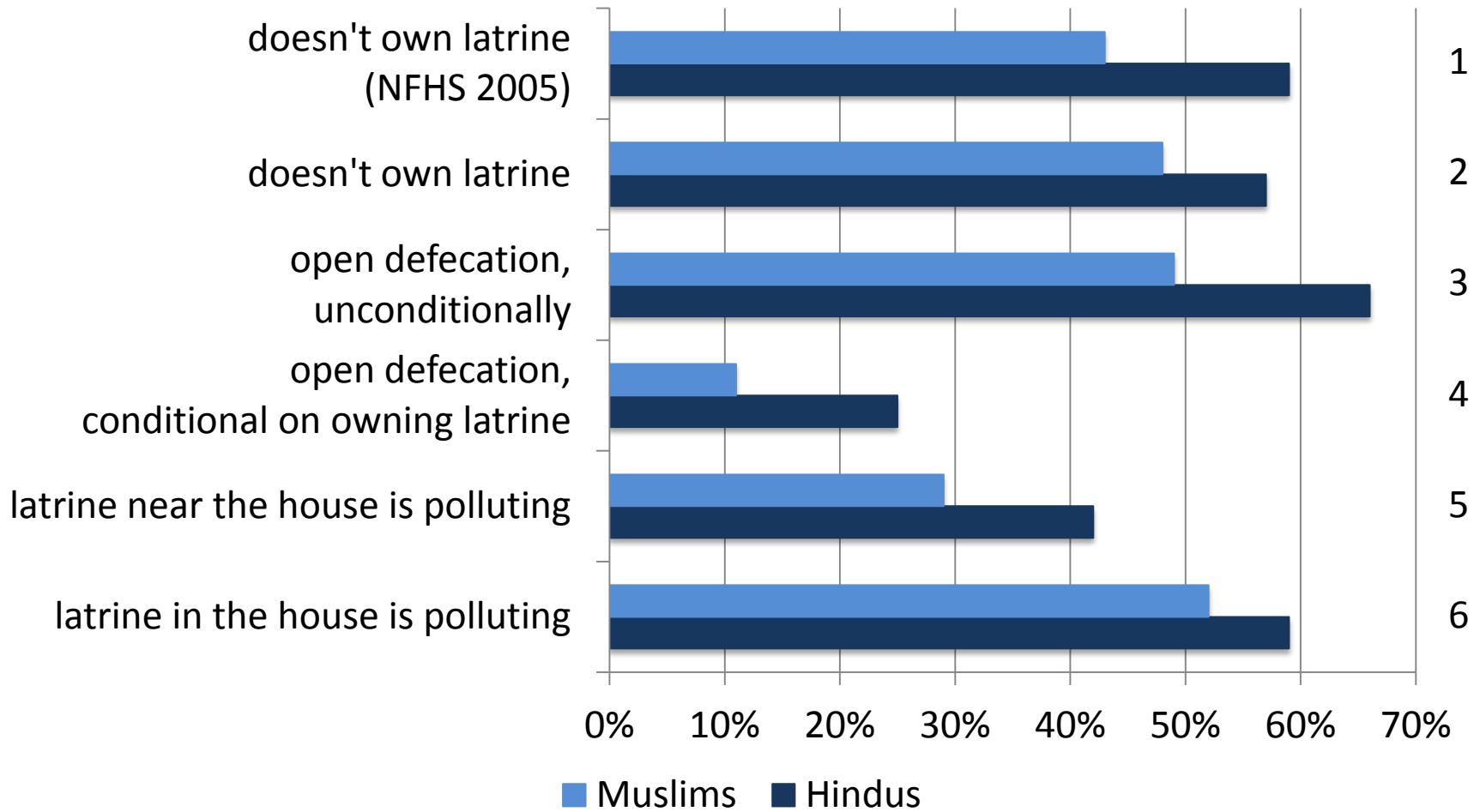


people go in the open less if they have a bigger pit

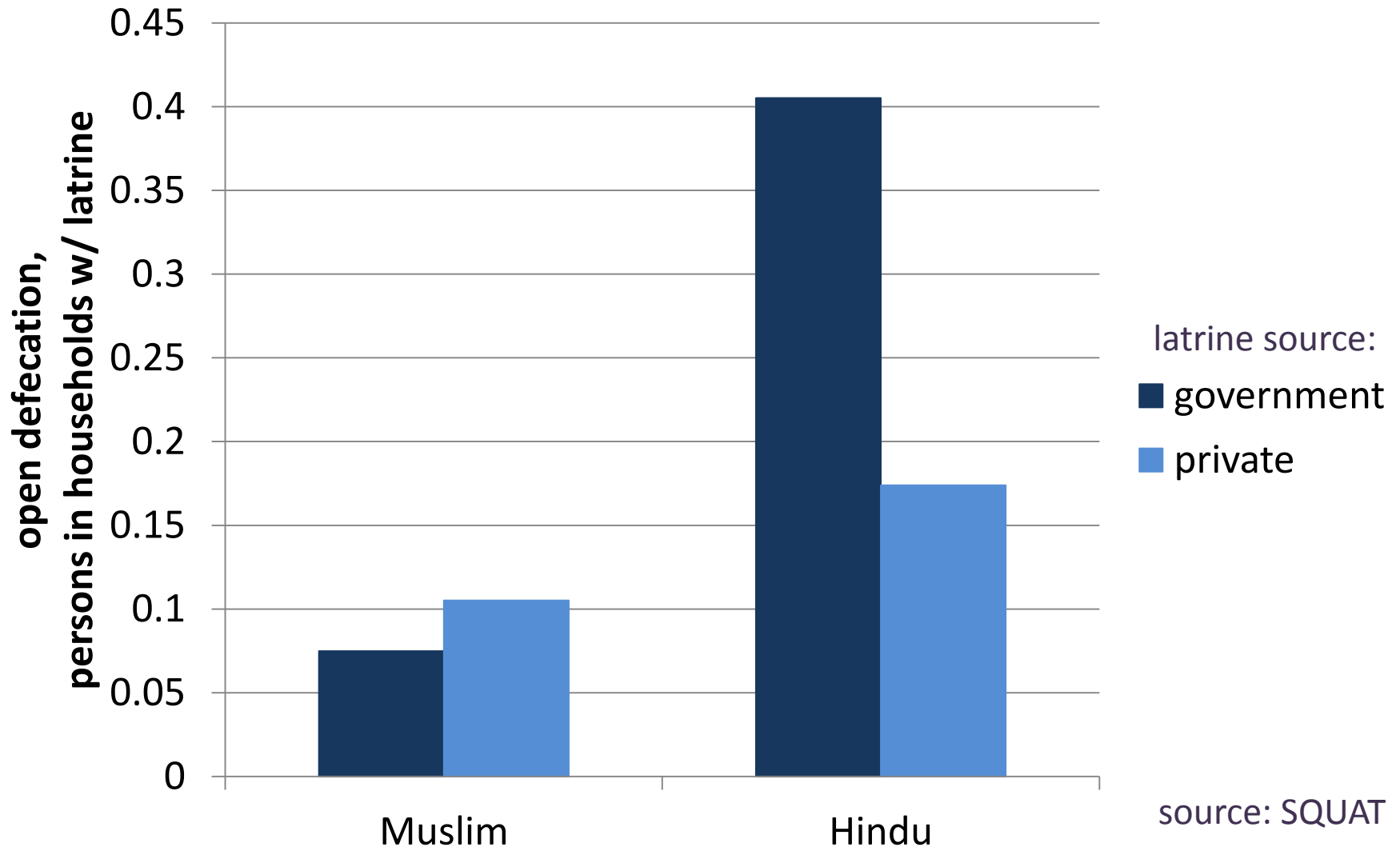


Hindu Pollution Concept

Muslims report and enact less aversion to latrines than Hindus



aversion to government latrines is concentrated among Hindus



Hindu concepts of **purity and pollution** could explain India's sanitation exceptionalism


this points to the role of **culture**

confronting the challenge: culture & sanitation behavior in rural north India

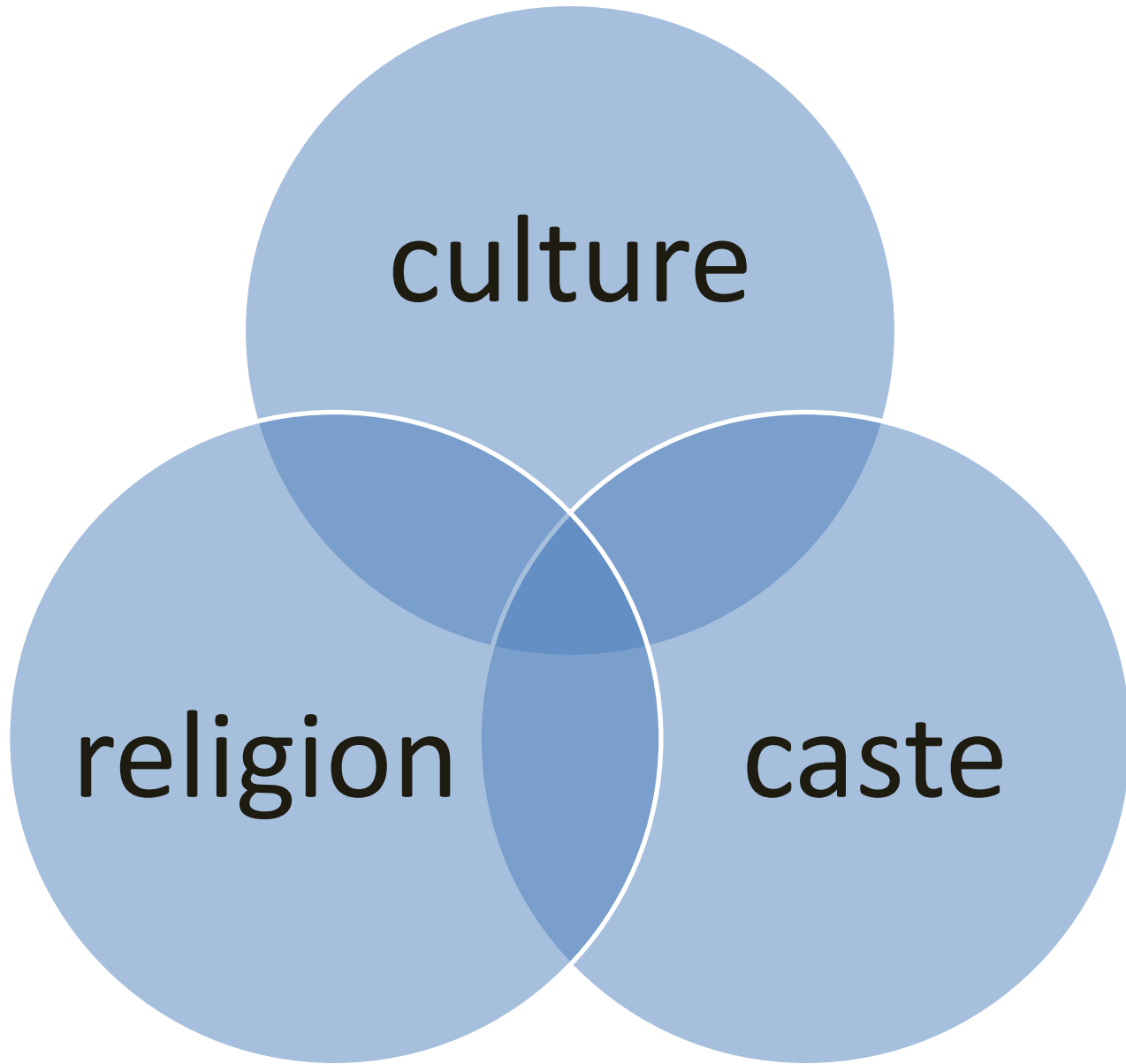
Diane Coffey

prepared for UNC Water and Health Conference
14th October, 2014





**why do 70% of rural
Indian households
defecate in the open?**



culture

religion

caste

purity & pollution in India

- concept of “purity” and “pollution” organize how people think, and are widely acknowledged to motivate behavior
- pollution means “dirtiness” and “badness,” but not always in ways that are obvious to an outsider
 - sweeping is polluting ; taking a bath is purifying
 - mother & baby are polluting for several weeks after birth
 - cow urine and cow dung are purifying
- purity and pollution are especially important in rural areas

caste & untouchability

- about 80% of Indians are Hindu
- Hinduism organizes people into ranked castes, into which people are born
 - higher caste people are seen as more pure than lower caste people
- people from the untouchable castes are seen as **permanently polluted**, and are extremely marginalized and oppressed
 - the lowest ranking castes within the untouchable castes clean up human feces

caste & untouchability

- non-untouchable people believe that they become polluted by contact/association with untouchables or their work



- becoming “polluted” has social consequences, even economic, for middle and high caste people





research methodology

data collection & analysis

- **data:** 100 qualitative interviews
 - purposely sampled villages (about 20) in 4 regions
 - **one third:** every household member defecates in the open
 - **two thirds:** have at least one person who **switched** from open defecation to regular latrine use in the last 10 years
 - 60-90 minute **recorded** interviews in Hindi, Gujarati and Bhojpuri
 - interviews in teams of 2 or 3



Afghanistan

Pakistan

Rewari, Haryana

Parsa, Nepal

Fatehpur, Uttar Pradesh

Valsad, Gujarat

India

Myanmar (Burma)

Arabian Sea

Bay of Bengal

Andaman Sea



pushes from latrine use

latrine use means **accumulating pollution and impurity** near the home

caste & untouchability mean that **pit emptying** presents special challenges that are not similarly present in other societies

“Yes, the *pradhan* wanted to give me a latrine, but I didn’t take it. I don’t have so much space, and as you can see I have Lord Shiva's temple in front of my house, there is also Barhamdev baba’s temple. And so if I get a latrine built here, I would not like it...Brother, I do not like that [having a latrine inside the house] either, **if these things are in the house then they pollute the house.** I really don’t like that...I am the kind of person who lives in a clean and pure place, I feel polluted in having a latrine. It gives off bad smells, the smell of dirtiness [feces] will come.”

45 year old man, high caste Hindu, Uttar Pradesh
defecates in the open
was offered a government latrine and refused

“[By defecating in the open] one can stretch the body, one can go out for a walk. You can also prevent yourself from getting diseases. If a latrine is in the house, bad smells will come, germs will grow.

Latrines in the house are like...hell. The environment becomes completely polluted.

There is no benefit of lighting a *diya*, no benefit at all.”



22 year old man, high caste Hindu, Haryana
defecates in the open



**caste,
pollution,
and cleaning
feces**

pit size & pit emptying in rural north India

- people believe latrine pits recommended by WHO and constructed by government will fill much more quickly than is the case
 - such latrine pits are equated to manual scavenging
- it would be inconceivable for Hindus, other than untouchables, to empty their own or others' pits
- untouchability means laws of supply & demand don't apply to pit emptying in the same ways they might in other places:
 - no one other than untouchables would take the job
 - untouchables try to distance themselves from such work, even if it were remunerative

summary: pushes from latrine use

- accumulating feces near one's home is seen as importantly polluting
- in rural north India, many people reject latrines and latrine use – especially government latrines with internationally recommended pit sizes
- pit emptying is associated with ritual pollution of the socially worst kind

pulls to open defecation

open defecation is part of a **wholesome**
healthy rural life





Photo credit:
Gaurawa Kumar

“People here do not use latrines. They said that we’ll go early in the morning...there are orchards, there are mango trees all around. When they go there early in the morning before sunrise, when they go to defecate early in the morning, at four in the morning, waking up at four in the morning, at four...then getting up while it is still dark everyone gets some **fresh air** as well. This is the culture in the villages that **people should at least wake up early in the morning**, before sunrise, and having woken early, we should then go for a walk and then go in the fields there itself...”

“Some five to ten people in the village have latrines but they do not use it because people only use latrines who are **sick** and so are **not able to go out and defecate** in the open. Only in such a condition does a man use a latrine. Otherwise you should comfortably go, comfortably go and take in the **clean** outdoor environment, take in some **fresh air**, and then return home. Village men are **strong** because they work in the fields and because there they also get fresh air. If you have a latrine, and a place for bathing, and you defecate in your house, and you do not take a walk anywhere, you do not get out, then you will have pains in your body.”

22 year old man, middle caste, Nepali terai defecates in the open, has no latrine

“I do not want to go inside the latrine... one benefit of going out in open is that one can have some exercise and the second is that all the impurities of one’s breath get out... but if one eats and drinks and goes to the latrine in the house one would not live long.... this is the reason why people in the villages live long—for 100 years—and the people in the cities live only 60, 70, 80 or 85 years.”



72 year old man, lower caste, Haryana
defecates in the open
owns a latrine, is a retired army officer

summary: pulls to open defecation

- open defecation is seen to be part of a wholesome rural life
- open defecation signifies strength and good health
- many people regret being too old or weak to defecate in the open

what about the few latrines that are built and used in rural north India?

latrines that are “worth using” are **expensive** – most of the extra cost is due to **globally large pits**

latrine use is concentrated among “**weak**” people

the latrines that exist & patterns of use **reinforce the beliefs** that lead to open defecation among “regular” villagers

how do **big pits** reinforce open defecation?

Imagine you're a "regular guy" in an Indian village, deciding whether to build a latrine for your household.



photo: Peter Ginter

how do **big pits** reinforce open defecation?

Latrines are **impure** and **polluting**...

... some wealthy & educated people build expensive latrines with large septic tanks that will not have to be cleaned, and thus avoid pollution...

... “regular” men like you see this effort and expense, and conclude that affordable latrines **really are inferior** and **polluting**...

... since you can't afford such a large septic tank, you conclude that latrine use is not for you.



“The *pradhan* made this [latrine]. If we’d made it, we’d have made it the way we wanted. All of this *Indira Vikas* money has come, so the *pradhan* has made it. But he only got a very little pit dug.

If we made it the way we wanted, then wouldn’t we have used a whole room full of bricks? How can a poor man...? It costs 20 or 25 thousand rupees [make a latrine].”

30 year old woman, low caste, Uttar Pradesh
has government latrine
children use it, she does not, will seal it when they are older

“The [latrines] that you get from the government are no use, they are so small...their pits are so small that in two or three months they will fill up. There will be bad smells and filth in the surroundings. For Adivasi people, who don't have much land, wouldn't they make a house rather than a latrine? [If they made latrines] it would be dirty.”

34 year old man, middle caste, Gujarat
has two latrines with large pits, uses a latrine

latrine use in the switching study

- 56% of households with a latrine have at least one person who defecates in open
- use is concentrated among “**weak**” people: the elderly, the disabled, and young women
- **working aged men**, who make household decisions, are least likely to use available latrines

“[I built a latrine] because of my boy. He has polio, from childhood, it was bothersome. It was a problem, going, coming back here, going far. He couldn’t walk.”

50 year old woman, low caste, Uttar Pradesh
has a latrine, does not use it

“For the old people, like this old lady [signaling her mother-in-law] she couldn’t walk, so we made [the latrine] for her. Tell me brother, where would this old lady go? And for little kids, or if a woman has given birth and she can’t go outside. After a baby is born she will defecate inside the house.”

53 year old woman, low caste, Haryana
has a latrine, sometimes uses it

how do **patterns of use**
reinforce open defecation, considering
that **working-aged men** make decisions?

Latrines are for the **weak** (OD is for the strong)...

... some wealthy people can afford to build latrines
that ward off pollution and make life more
convenient for the weak members of their family
& the women who clean up after them...

... “regular” men can’t afford such luxuries...

... the weak people in your family must put up with
open defecation, much as they do other
inconveniences & indignities of rural life.

summary

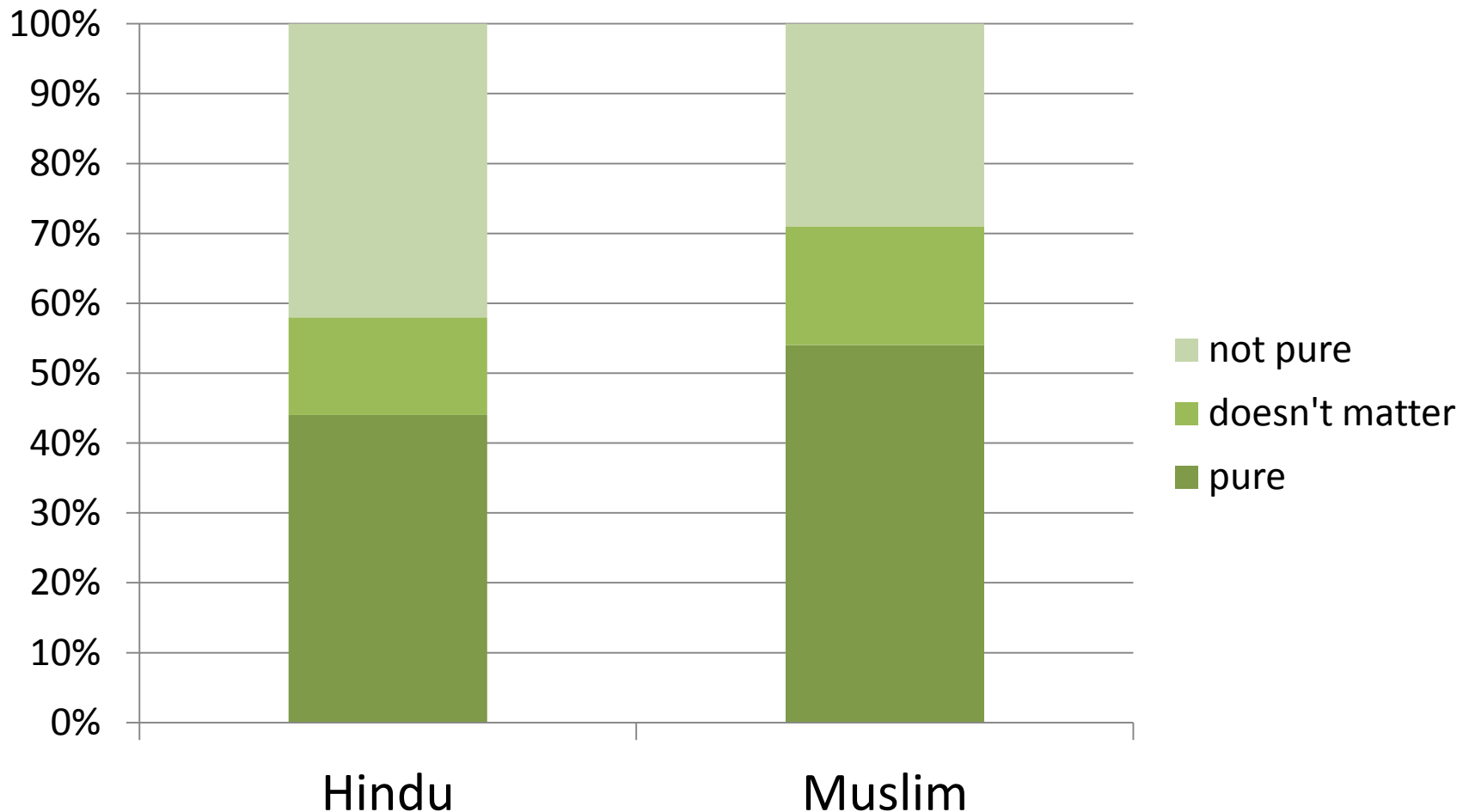
1. explicit rejection of latrines & latrine use
 - affordable latrines with internationally recommended (& government provided) pits are seen as **polluting**
 - pit emptying is associated with social pollution of the worst kind
2. strong pro-open defecation social norms
 - people believe open defecation is part of a healthy, **wholesome** rural life
3. the toilets people in rural India demand, and the way they are used, are reflective of and reinforce the very beliefs that lead to widespread open defecation

open defecation and latrine use have
unique, culturally influenced
meanings in rural north India

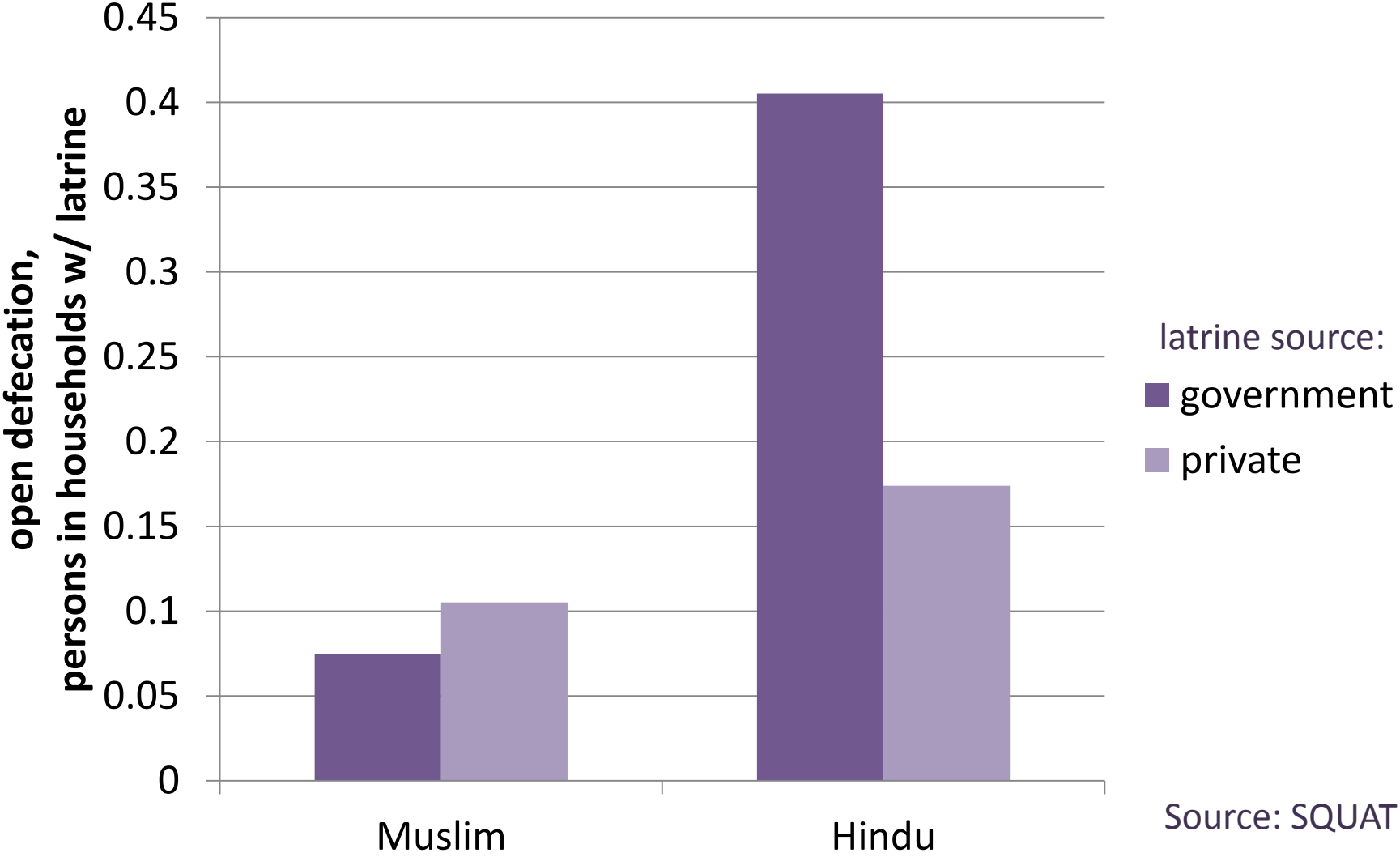
what can be done to change what it
means to use a simple, affordable
latrine in rural north India?

extra slides

Hindus are more likely to consider a latrine near the house to be impure than Muslims



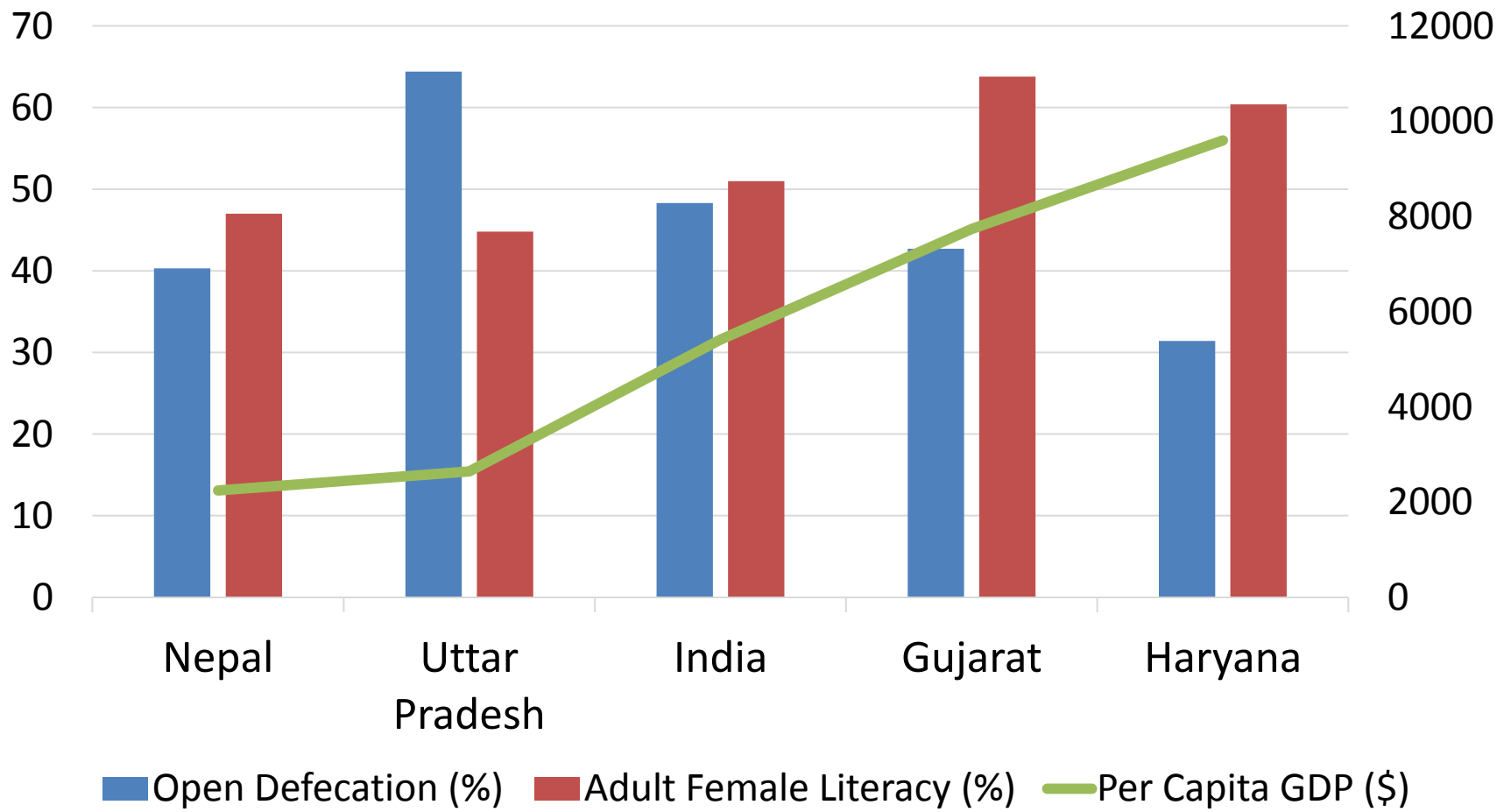
aversion to government latrines is concentrated among Hindus



purposive sampling

- **region:** chose 4 regions for socioeconomic and sanitation diversity
- **district:** chose 1 district per region in which the change in rural OD best matched the state change from 2001-2011
- **village:** chose 4-5 villages per district in which the DLHS 2 sanitation was closest to the 2011 sanitation for the state (randomly in Nepal)
- **household:** chose 4-6 households per village using field randomization as in the ASER survey

context: four study regions



prior work recognizes cultural roots of rural India's open defecation problem

- O'Reilly, 2014; Ahmed et al., 2010; Srinivas, 1976
- V.S. Naipaul: *An Area of Darkness*
- Gandhi
- we believe that we are the first to do a **rigorous qualitative study** advancing culture as an explanation for sanitation behavior in this region

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what can't explain it?

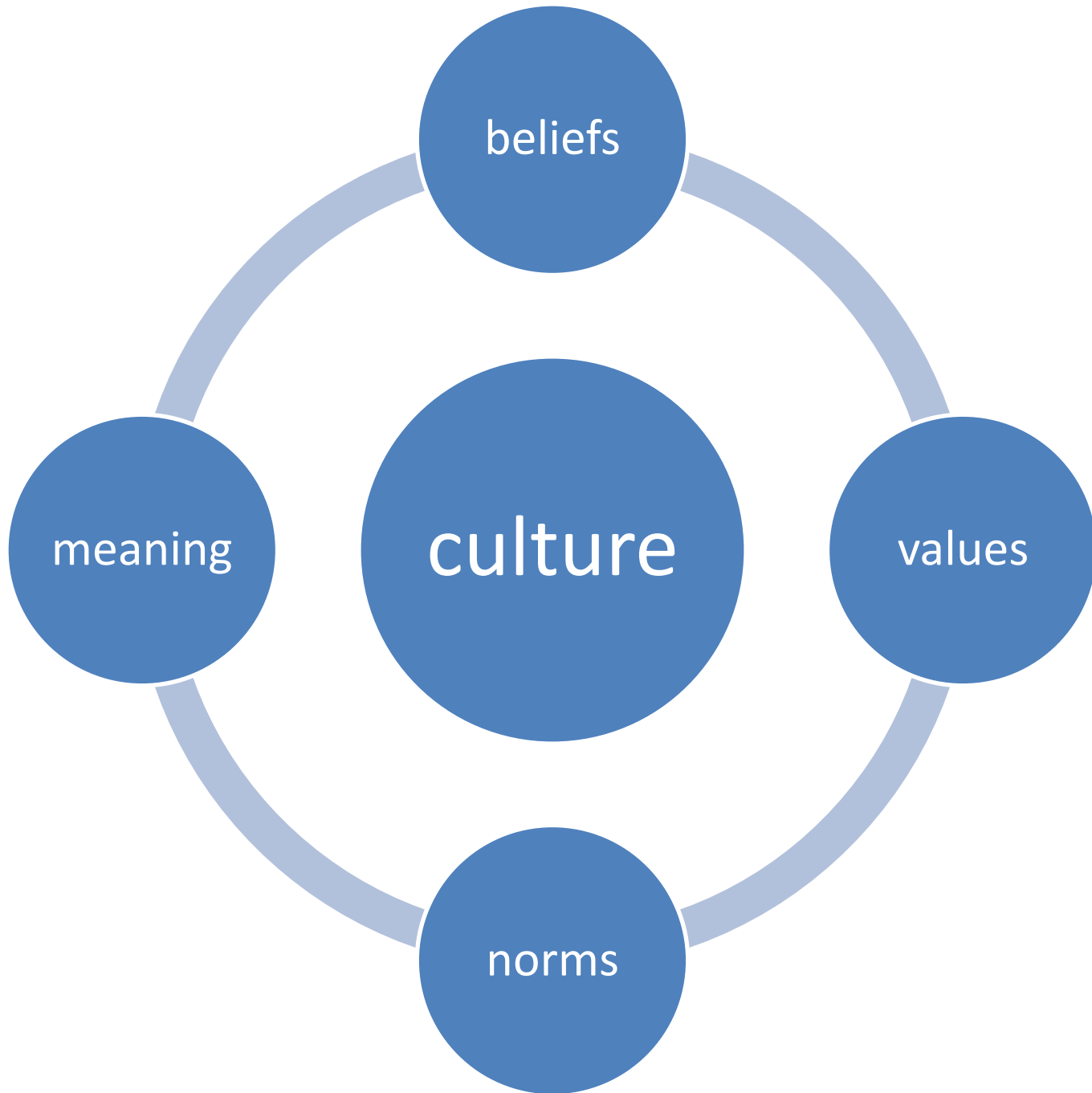
poverty

education

water access

what we have seen this morning about open defecation in rural India

- open defecation **despite latrine access**
- the other Indian sanitation exception:
missing “middle rungs” on the sanitation ladder
- **pit size** predicts latrine use



beliefs

culture

values

norms

meaning