EVIDENCE BRIEF

Measuring Digital Inclusion among Self-Help Groups in Bihar

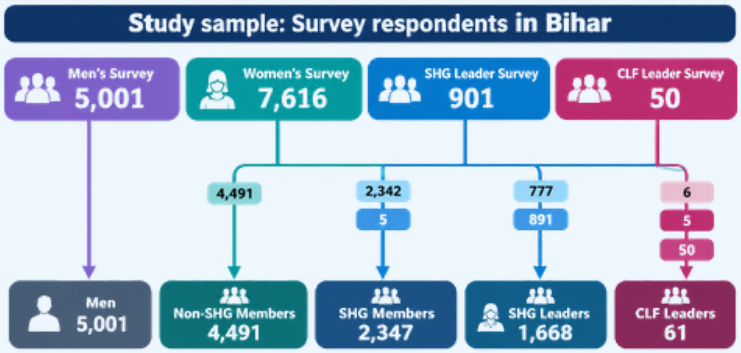
The central message

Phone ownership alone does not ensure meaningful digital inclusion. Women in rural Bihar face overlapping barriers involving device quality, affordability, digital competency, household norms and limited autonomy. Self-Help Groups (SHGs) provide a promising platform for inclusive digital programmes, but membership alone has not closed these gaps.

Study at a glance

10	300	7,616	5,001
DISTRICTS	VILLAGES	WOMEN	MEN





Multistage survey of rural households, with additional SHG leadership surveys and follow-up qualitative research. The study examined access, connectivity, affordability, digital skills, norms, agency, safety and high-impact use.

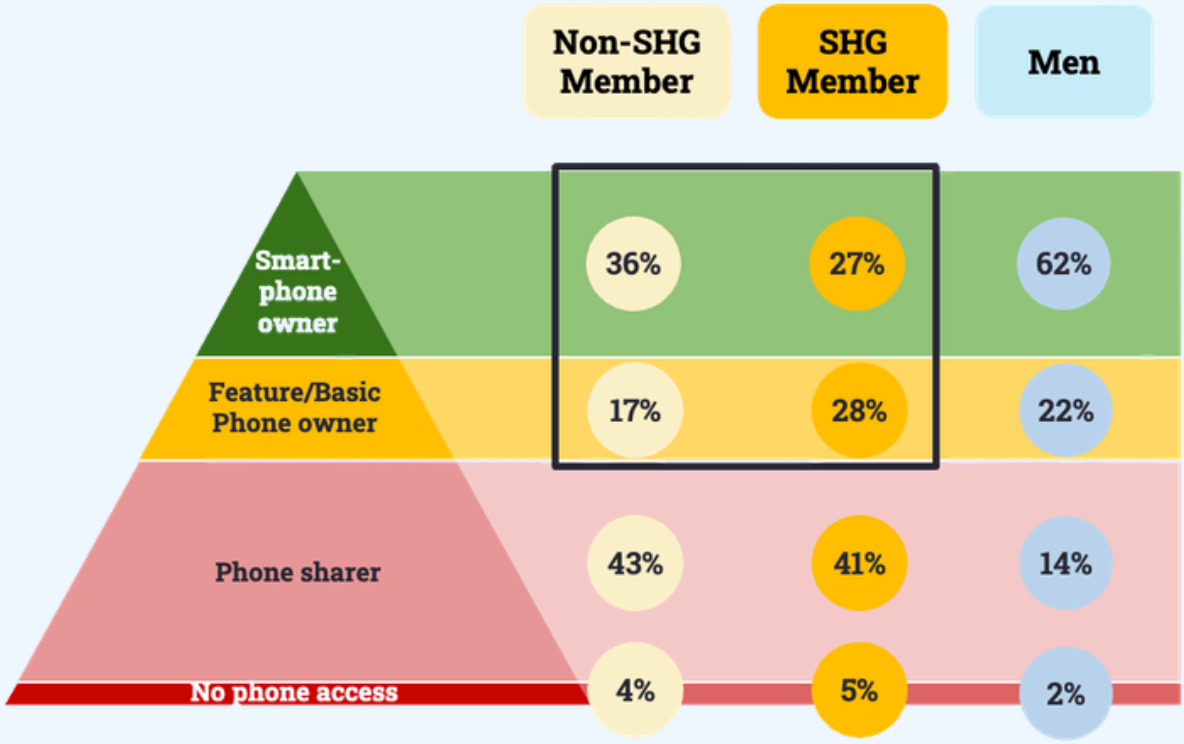
Digital access and use survey: Items measured in Bihar

Access	Connectivity	• Network access, quality • SIM cards • Electricity	
	Physical access	• Ownership • Sharing • Phone type	• Phone Condition • Time, duration, periodicity of access
	Affordability	Device and connectivity expenditure	
Use	Digital competency	• Information and data literacy • Communication and collaboration • Digital content creation • Safety	• Problem solving • Device, software operation • Digital financial, economic skills
	Safety and security	• Data protection and privacy • Fraud	
	Social norms, attitudes	Social norms and attitudes towards phone, internet use, use of phones for financial transactions	
	Digital agency	• Decision-making • Permissions • Restrictions / constraints	
	Relevance	• Education • Health	• Agriculture • Economic empowerment

Five findings that matter

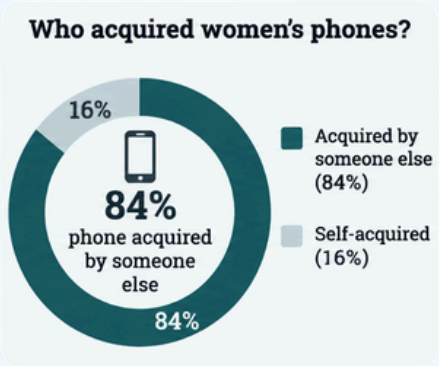
1 Ownership is not equal to access

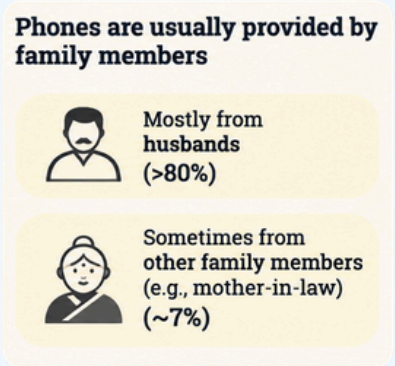
55% of SHG women and 53% of non-SHG women own a phone, but smartphone ownership is 27% among SHG women versus 62% among men. More than 30% of women have phones with at least one non-functioning component

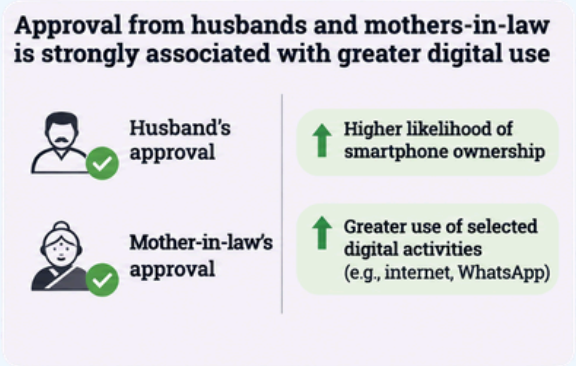


2 Household dynamics shape access

84% of women reported that someone else acquired their phone. Husbands' and mothers-in-law's approval is strongly associated with smartphone ownership and selected digital activities.





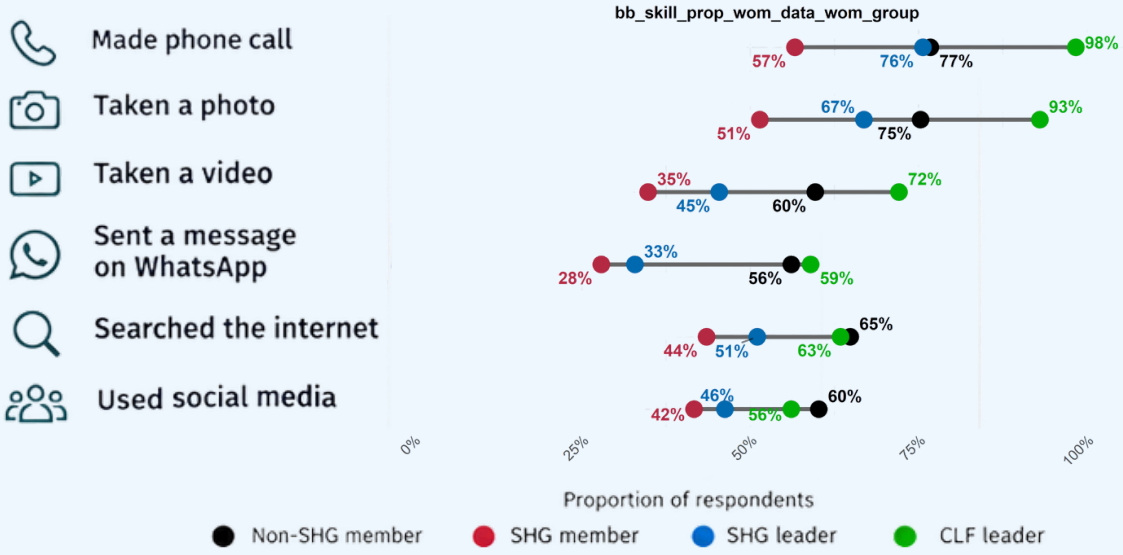


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3 Use of phones to support SHGs limited mostly to leadership

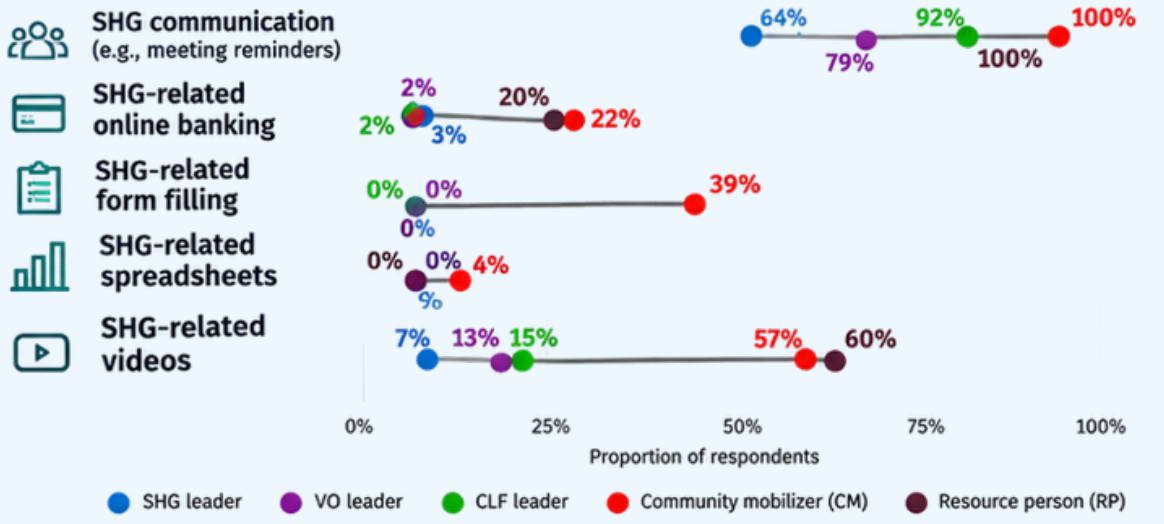
Phone use for SHG-related work is **concentrated among leaders and community mobilizers,** with limited use among general SHG members

General phone use highest among CLF leaders*



Routine members largely used calls and WhatsApp for meeting reminders; community mobilisers were the main users of LokOS, Maasik Prativedan and digital records. Leadership status alone should not be assumed to create digital role models.

Phones used mostly for communication, videos, and banking*



**Findings for RPs, VOs, CLFs should be viewed with caution because of small sample sizes*

Perspectives from an SHG member



"I do not use the phone for any group work. Mostly to call or listen to group announcements, but not for anything major."

SHG member (26 years, illiterate, basic phone owner)

Why limited use among members?

- Not part of WhatsApp groups
- Rely on CMs for information and meeting updates
- Limited confidence, skills and opportunities for use

Perspectives from a community mobilizer (CM)



"I needed a phone mainly for work-related requirements, especially for LokOS entry. The officials told us we must do location entries using our own phones."

Community mobilizer (47 years, literate, smartphone owner)

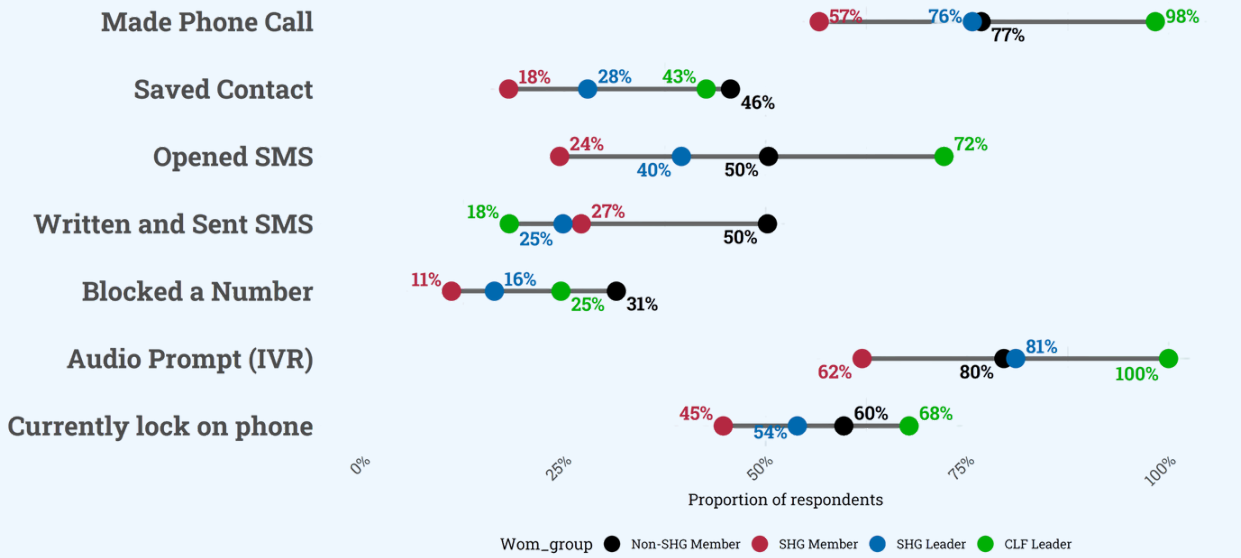
How CMs use phones for SHGs

- **Maasik Prativedan** – registers and meeting attendance
- **LokOS** – financial transactions and loan repayments
- **WhatsApp** – coordination with CLF leaders, supervisors and block officials
- **Videos** – health, nutrition and livelihoods content for group meetings

4 Digital skills are a major bottleneck

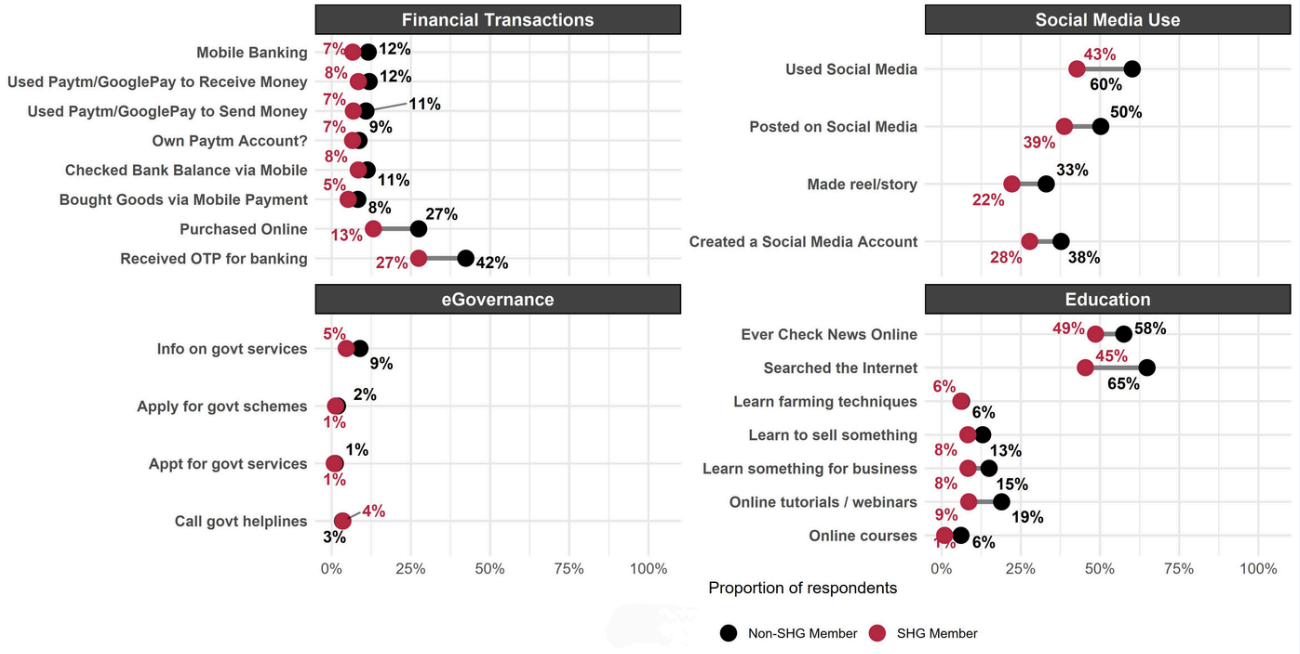
Digital skills represent a significant barrier to women's ability to translate phone access into meaningful digital participation. Among SHG members, 50% identified a lack of digital skills as a barrier to using phones for agricultural activities, while 44% reported similar barriers for animal husbandry. Limited awareness of how mobile technologies could support these activities further constrains adoption.

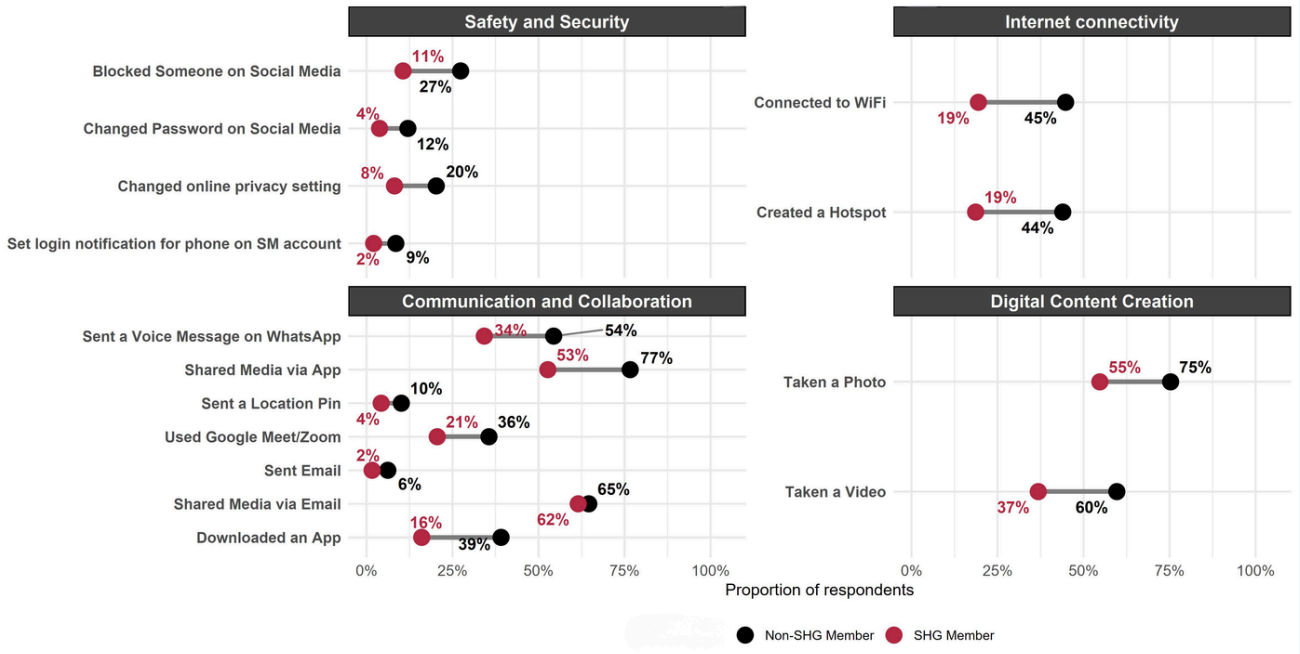
Prevalence of women with basic digital skills by SHG cadres



These gaps extend across basic and advanced digital competencies. Only 57% of SHG members reported ever making a phone call, 18% could save a contact and 24% could open an SMS. Engagement with more advanced digital activities was even lower: 23% had searched the internet, 10% had connected to Wi-Fi and 7% had used mobile banking. Across nearly all 65 digital skills assessed, SHG members reported lower levels of digital skills than non-SHG women

Digital Skills prevalence among SHG and Non-SHG women



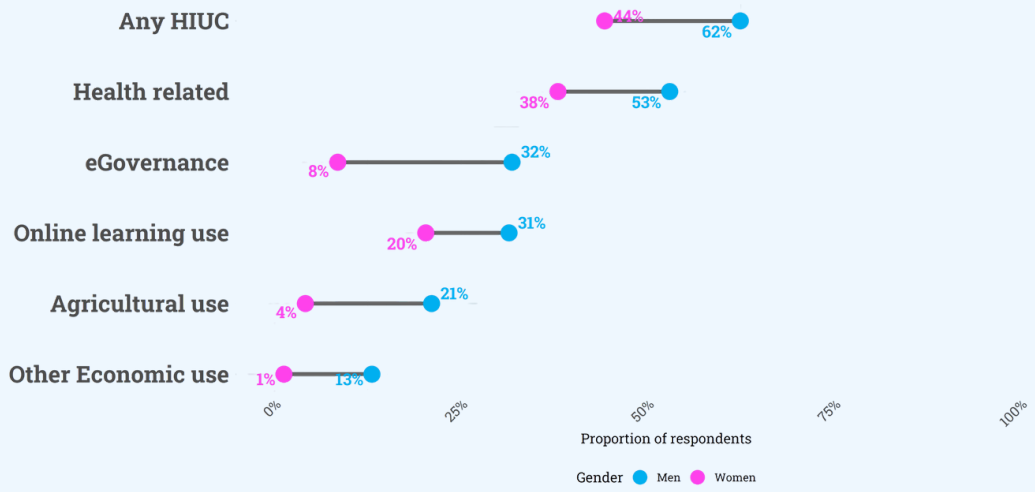


5 SHG members with higher digital access and use (DAU) scores have better women's economic empowerment outcomes (decision-making, savings, repayment)

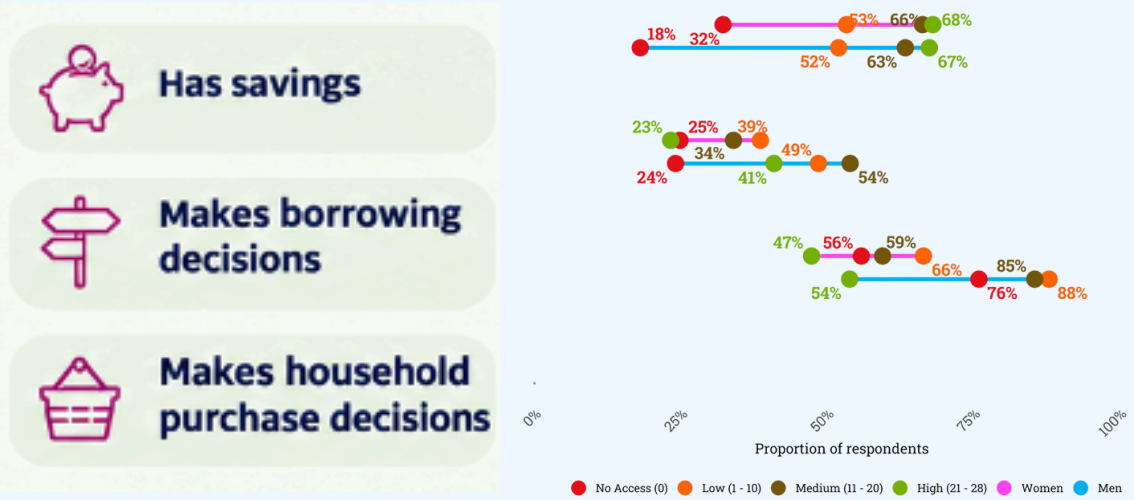
44% of women reported at least one high-impact use case, compared with 62% of men; the sharpest gaps concern e-governance, agricultural and economic activities.

Greater digital access and use (higher DAU score) is associated with better women's economic empowerment (savings, decision-making and repayment) and higher engagement in high-impact uses, although women's use remains lower than men's, particularly for e-goverance, agricultural and economic activities.

Use of phones for high-impact use cases (by gender)



Women's WEE outcomes improve with higher DAU scores



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From access to meaningful digital inclusion

Evidence from the survey and follow-up interviews points to a combined programme model: reliable access, recurring connectivity, practical skills, household support and purposeful use.

What the qualitative research adds

Financial constraints and gender norms limited women's phone access, with men and children prioritised. Family resistance was driven by concerns about infidelity, the perception that women would break phones, and concerns about smartphone addiction (among women and children)

Working women were the exception: Work and income generating use cases were emphasized as the most compelling drivers of women's digital access and use. Where women needed phones for work (Aangawadi workers, community mobilizers and others), the families were supportive, and the women themselves took decisions to buy phones (such cases were few).

Use is tied to perceived value. Families were more supportive where phones helped women earn, communicate with relatives, access government services or support children's education. Community mobilisers used digital tools because their work required them.

A handset does not remove the gender gap. Differences in digital skills and agency persist even among smartphone owners. Qualitative interviews identified recharge dependency, low confidence, fear of device damage and restrictive household attitudes.

RECOMMENDED PROGRAMME PRIORITIES

1 Affordable, functional devices

Pair access to suitable smartphones with attention to device condition, recurrent data and airtime costs.

1	Type and quality of men's phone matters	Some said women cannot have a phone if male family members do not. Women cannot have a smartphone if their husband still has a basic phone.
2	Perceived lack of need	Women were perceived not to need their own phones; shared access for calls and emergencies was seen as sufficient.
3	Financial costs of recharge / limited resources	Keeping the husband's phone charged is often the priority, since he goes out for work and uses the phone for his work.
4	Illiteracy and low digital skills	High rates of illiteracy and low digital skills limit phone use.
5	Family suspicion, distrust, and accusations of distraction	If men distrust their wives, or family members feel she is neglecting her work, they may take her phone away.
6	Fear of breaking the phone	Fear of breaking a valuable asset is compounded by limited experience and a sense of unfamiliarity.

2 Hands-on digital upskilling

Teach foundational and task-based competencies through low-literacy, confidence-building approaches with repeated practice.

What women said

Sometimes families restrict women from using phones. Has that happened in your case?

And what would help build that confidence again?

So, support from family and training from outside?

Researcher

Not much, but yes, they say things like "What will you do with it?" or "You will not understand." That affects our confidence.

If they encouraged us, if someone said, "You can learn," we would feel stronger.

Yes, both are needed.



(F_59, 26 years, illiterate, SHG general member, basic phone owner)

Key training elements

Hands-on and practical
Step-by-step use on a real phone, with repeated practice

Low-literacy friendly
Use simple language, visuals and local examples

Task-based and relevant
Build skills for everyday needs (e.g., saving an ASHA's number, using WhatsApp, checking information)

Additional enablers

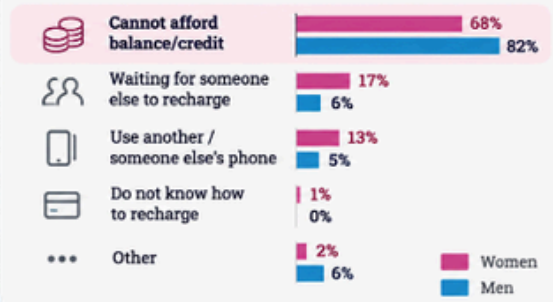
Engage husbands and family members
Women noted that husbands need to be included in any training they received.

Keep it accessible
Ensure trainings are near the community and do not require significant travel.

3 Develop a strategy for managing recurrent costs associated with phone use (ongoing credit)

Affordability of credit is the main barrier to making outbound calls

Among those unable to make an outbound call (~25% of respondents):



"I feel troubled when I need to call someone... I was not able to call my daughter as I had no recharge on the phone. There are three phones in the house, but only the one I share is not regularly recharged. There are other more important expenses for the household."



(F_44, illiterate, 50 years, shares her son's smartphone to make calls, does not own her own phone)

Implication

Design support for affordable, reliable and regular phone credit (e.g., lower-cost plans, group or bulk recharge, or recurring/top-up mechanisms).

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4 SHG-centred use cases

Develop practical, context-specific training curricula that demonstrate the immediate value of mobile phones for women's everyday needs, SHG participation and economic empowerment. Prioritise accessible, high-impact use cases that build confidence, demonstrate tangible benefits and create opportunities for sustained digital engagement.

- **Demonstrate practical benefits:** Showcase how phones can support health, education, livelihoods, financial transactions and access to government services, using relatable examples and peer testimonials.
- **Prioritise livelihood and income-generating activities:** Build skills around accessing agricultural information, promoting products, communicating with customers and using digital financial services, reflecting women's expressed interest in economically productive applications.
- **Integrate digital skills into SHG activities:** Develop task-based curricula covering SHG communication, meeting reminders, savings updates, accessing government schemes and progressively using SHG-specific digital platforms.
- **Engage families and communities:** Demonstrate the wider household benefits of women's digital participation to encourage family support, reduce restrictive norms and strengthen women's confidence and autonomy.

5 Peer-based Digital Champions

Recruit and support capable community mobilisers, master bookkeepers and CLF leaders to provide sustained, peer-to-peer mentorship and practical support for digital skills development.

- **Identify existing digital capabilities:** Assess which SHG members and leaders already use mobile technologies independently and have the skills, confidence and willingness to support others.
- **Establish a network of Digital Champions:** Equip selected community mobilisers, master bookkeepers and CLF leaders to provide hands-on training, troubleshoot challenges and build confidence through ongoing peer support.
- **Integrate digital learning into SHG activities:** Create regular opportunities for practical learning through SHG meetings, linking mentorship to relevant digital tasks and SHG functions.
- **Provide sustained support:** Combine peer mentorship with structured training, organisational support and access to affordable connectivity to reinforce skills and encourage continued use.

6 Family and community engagement

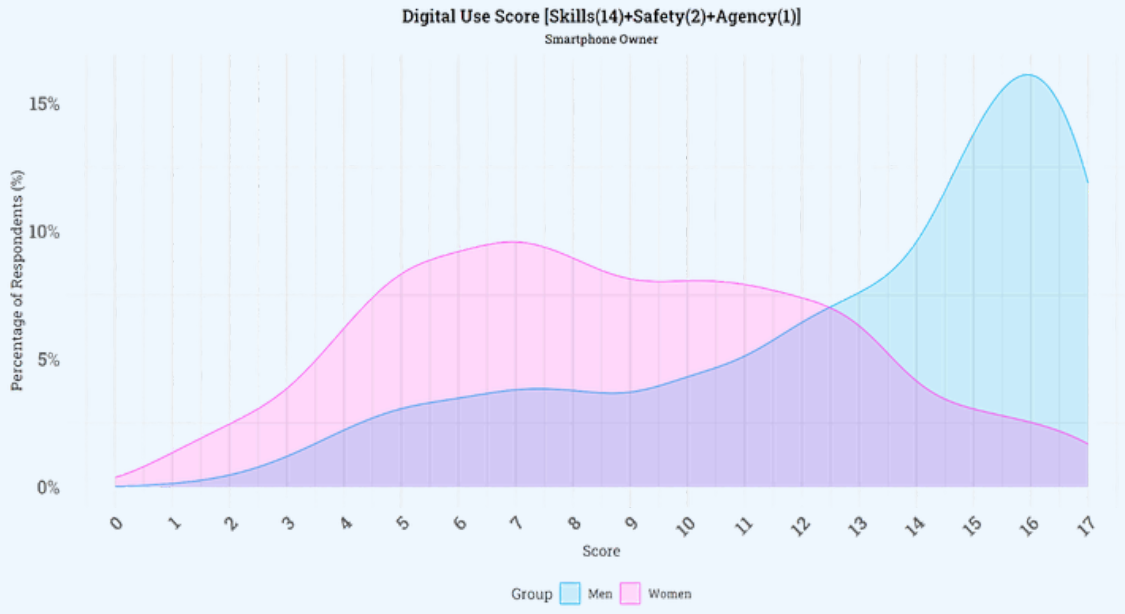
Engage husbands, other household decision-makers and community leaders to address restrictive social norms, build support for women's digital inclusion and strengthen their confidence and autonomy in using mobile phones. Key strategies include:

- **Community sensitisation:** Develop targeted campaigns engaging husbands, male family members and village leaders to raise awareness of the importance and benefits of women's phone ownership, connectivity and independent use.
- **Demonstrating practical benefits:** Use videos, peer testimonials and other accessible media to showcase high-impact phone use cases linked to livelihoods, health, education, financial services and household well-being, highlighting benefits for women and their families.
- **Community-based Digital Champions:** Work with village leaders to identify and support local Digital Champions who can advocate for women's digital inclusion, engage men and families, challenge restrictive norms and encourage women's independent use of technology.

7 Measure inclusion beyond ownership

Track quality of access, affordability, skills, digital agency and high-impact use, drawing on the report's Digital Access and Use Index. A minimum of 13 survey questions are recommended to derive the index.

Break out the "Digital Access" from the "Digital Use" → helps to showcase that removing physical access barriers alone is insufficient. Smartphone ownership alone does not eliminate gender disparities in digital competencies, safety and agency. Women continue to demonstrate lower digital use scores than men, even when they own a smartphone.



Acknowledgments

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For more information or permission to adapt this resource, please contact:

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