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The Digital Gender Gap in HealthCare

Progress, Challenges
and Policy Implications

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Key takeaways

The digital gender gap, if left unaddressed, has the potential to exacerbate existing health inequities. Closing the digital gender gap requires a multifaceted approach to address all the intersectional inequalities faced by women and girls from diverse backgrounds. This entails finding ways and solutions on how to include women and girls in the design of digital health interventions.

Recommendations:

- Understand and address the harmful gender norms, practices, and stereotypes that hinder women's safe and meaningful use of digital technology.
- Establish more inclusive and gender responsive education and digital training that focus on the specific needs of women.
- Develop laws, policies, and strategies that support women to stay online including laws to protect online rights and preventing cyberbullying and sexual harassment.
- Ensure the collection of gender-disaggregated data on the digital gender gap— considering other intersectional factors— to inform policy and business decisions that seek to close the digital gender gap.

Background

Digital technologies, services, products, and skills are transforming people's lives and livelihoods. However, despite the rapid proliferation of digital tools and services, significant challenges remain in ensuring women's meaningful use of digital technology in their lives and society. Meaningful participation in today's digital age requires addressing the numerous barriers that exacerbate the digital gender gap. Gender inequalities, intersecting with and compounded by other social differences such as class, race, age, urban/rural, and (dis)ability, continue to shape the extent to which different women, men, and gender diverse people are able not only to access but also use and benefit from these modern technologies.

Women's access to mobile phones and internet continues to increase across low- and middle-income countries (LMICs). However, a closer examination reveals that significant gender gaps still exist. Across LMICs, women are 7% less likely than men to own a mobile phone and 15% less likely to own a smartphone (a principal means for internet access)¹. In South Asia, only 67% of women own a mobile phone while in Sub-Saharan Africa and Middle East & North Africa, mobile phone ownership among women is 75% and 82% respectively^{1,2}. In LMICs, the proportion of women using the internet is 58% but there are still 234 million fewer women than men accessing the internet. In Eastern Europe and Central Asia, 60 million women have no access to mobile internet³. The gender gap in mobile internet use is 38% and 17% in South Asia and Middle East & North Africa, respectively¹. In Sub-Saharan Africa, only 39% of women have access to the internet and

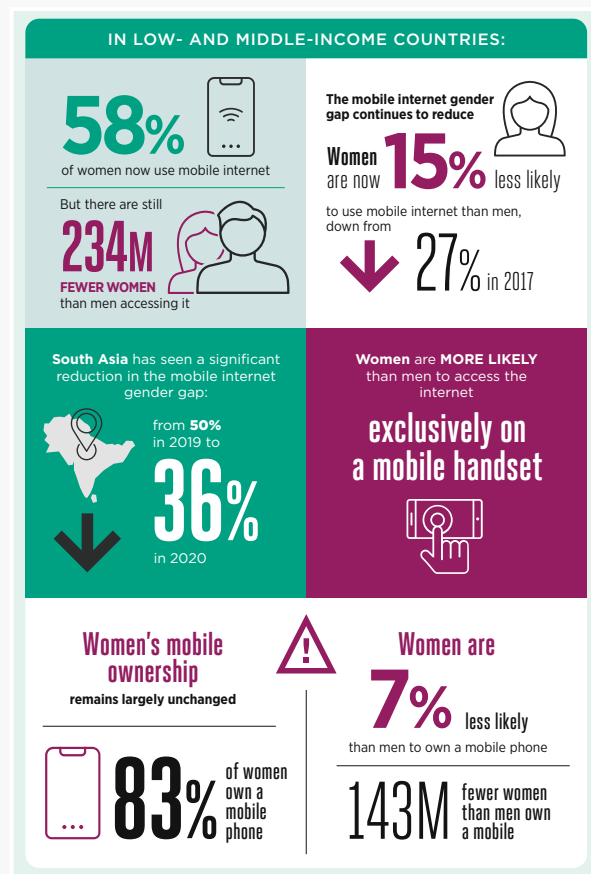
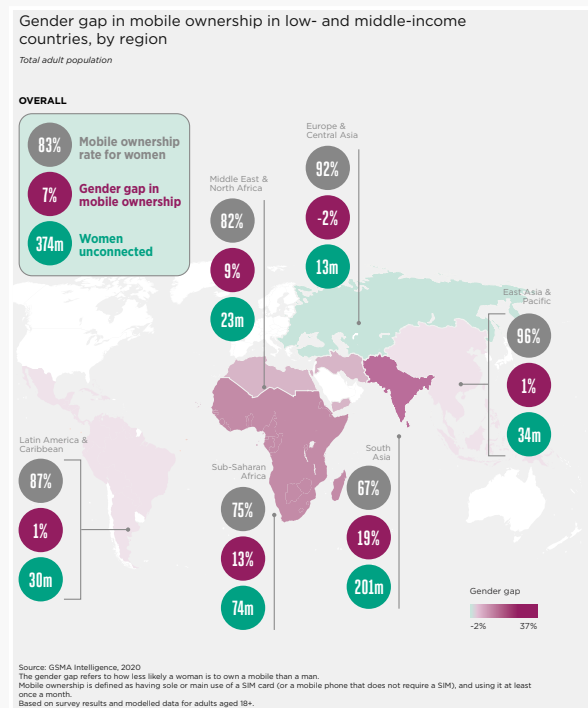


Figure 1. GSMA. GSMA Connected Women – The Mobile Gender Gap Report 2021.; 2021.

only 15% of them can afford to use it^{1,4}.

The digital gender gap persists beyond mobile phone ownership and internet access. Women have lower levels of digital skills than men and use digital technologies for a smaller number of complex



Figures 2 and 3. 1. GSMA. GSMA Connected Women – The Mobile Gender Gap Report 2021.; 2021.

tasks⁵. Women are less likely to study and/or work in Science, Technology Engineering and Maths (STEM) fields. Only 30% of the world’s researchers are women, and less than a third of female students in higher education opt for STEM fields⁶. Across OECD countries, women-owned start-ups receive 23% less funding and are 30% less likely to have a positive exit compared to male-owned businesses⁶. These statistics show that the digital technology revolution is gendered.

What Causes the Digital Gender Gap?

The digital gender gap is driven by unequal gender power relations and discrimination commonly found offline in many societies. These are further reinforced by a complex set of social, cultural, economic, political, and legal barriers that negatively affect women and girls’ access to and ownership of digital technologies^{8,9}. Among women, mobile phone ownership does not necessarily translate to usage since they must navigate other barriers such as tariff costs¹⁰, time⁹, illiteracy¹¹, and negative stereotypes¹².

Social norms that support men’s control over women continue to perpetuate the digital gender gap¹⁰. For instance, women rely on their husbands

to own mobile phones and buy data¹¹, and norms that dictate that a woman’s primary responsibilities are family and household duties¹² negatively affect women’s use of digital spaces. Additionally, negative stereotypes and perceptions that mobile phone use promotes promiscuity¹³, erode traditional courtship norms¹¹, and distract from household work and studies¹⁴ continue to perpetuate digital inequality. When these social norms and economic barriers are changed, women and girls meaningfully use digital technologies¹⁵. Furthermore, in contexts where girls have freedom and agency to access digital technology, they report increased digital literacy and improved management of online risks¹⁶.

Beyond social norms, the digital gender gap is driven by the affordability of digital devices, and tariffs which disproportionately affect women given that women earn, on average, 25% less than men globally¹⁷. In 19 of the least developed countries, the price of 5 GB of fixed broadband is more than 20% of monthly gross national income per capita. Furthermore, accessibility and availability of digital technologies, especially among women in rural areas, continue to drive the digital gender gap. Women and girls may struggle to access public ICT facilities due to unsafe roads, limits on their freedom of movement, or because the facilities themselves are considered unsuitable for women and are often dominated by boys and men¹⁸.

Digital technology spaces and platforms reinforce power imbalances between men and women. Most online platforms and spaces maintain traditionally male-positive stereotypes which affect women's meaningful participation¹⁴. The gender unbalance in the technology developer teams where women are less represented in higher ranks negatively affect the design, data representation, and invariably the experience of female users. Institutional procedures and working environments with a higher ratio of males, female absence in leadership, job duties and tasks that favour males, lack of female role models and mentors, and the lack of formal procedures for recruitment and promoting women continue to perpetuate the digital gender gap^{12,19}.

Digital literacy reinforces the digital gender gap since women and girls may not have the right digital skills to enhance their safe and effective use of digital technology, not just as consumers, but also as creators and innovators. This is important as women and girls face a disproportionate digital harm and harassment which often keeps them offline²⁰. A report by Amnesty International showed that nearly a quarter (23%) of women in eight countries (Denmark, Italy, New Zealand, Poland, Spain, Sweden, the UK and USA) experienced online abuse or harassment at least once in their lives²¹. In some cases, gender norms limit women's educational attainment which negatively affects literacy and ability to navigate digital devices²². Furthermore, once girls are in school, gender stereotypes discourage them from pursuing STEM subjects which negatively affects their participation in digital spaces¹⁸. Early childhood socialisation within schools may negatively impact the future career trajectory for girls³. For instance, teachers differentiated attitudes towards girls and boys (e.g., praising boys for their inquisitive minds and girls for being quiet) can play a key role in defining gender roles and shaping girls' attitudes towards ICT careers, resulting in underrepresentation of women in the sector²³.

What are the Impacts of the Digital Gender Gap on Health?

Digital technology and health have become intertwined. Mobile health (mHealth) solutions and Health Information Management Systems (HMIS), often powered by artificial intelligence and big data with unique health IDs including biometrics, are the basis for the public and private sectors. Some of the emerging and established digital technologies in healthcare also include wearable

devices and personalized telemedicine and other telehealth applications²⁴. The COVID-19 pandemic has resulted in the expansion of telehealth and digital applications for contact tracing, surveillance, vaccine registrations, and certification²⁵. This application of digital technology in healthcare balances data privacy risks with potential positive benefits on access and quality of healthcare, enhanced diagnostics, training, and better prevention²⁶.

However, it has been demonstrated that the digital gender gap—mediated through, mobile phone ownership²⁸ and access²⁹, illiteracy³⁰, costs¹⁰, time⁹, harmful social norms³¹, design features³², and male dominance³³—can serve to exacerbate existing health inequalities. For example, gender dynamics—such as norms that regard men as key decision-makers in the household—results in men dominating digital health programs primarily intended for women. This was the case in Uganda, where men participated twice as much as women in an SMS-based HIV campaign, and in the Democratic Republic of Congo where over 80% of callers on a family planning hotline were men^{34,35}.

Digital technology is critical in attaining the Sustainable Development Goals (SDGs) since it may act as a gateway to achieving health and gender equality⁵⁸. Digital health has the potential to address gender inequality in health by ensuring increased access to healthcare, sharing of health information and services, empowerment of one's health data, and reduced the burden of unpaid care work^{36,23}. However, with the persisting digital gender gap, we are more likely to exacerbate the existing gender and health inequalities. Health apps and algorithms often ignore the sex and gender dimensions of health³⁶. Digital technologies designed without gender considerations continue to disadvantage women, especially from minority backgrounds.

Barriers to Closing the Digital Gender Gap

Access

While mobile phone ownership and internet coverage are increasing across the world, equitable access to the latest mobile technology remains a barrier to closing the digital gender gap. Worldwide, Africa has the lowest internet penetration rate at 39%, and 15 countries, including South Sudan, Somalia, Eritrea and Burundi, have 10% or less of their population online³⁷. There are several ways to start to close this 'access gap'. For example, Mobisol Rwanda offers a 'rent-to-own' model for mobile phones which

has expanded access for low-income households³⁸. Whilst in Niger a project is bringing mobile phones and the internet to rural areas at a lower cost through providing subsidies to service providers and tower companies helping to reduce poverty in rural communities³⁹.

Affordability

Although mobile phone prices have fallen significantly over the years, affordability of data and connectivity remains a significant obstacle to effective phone and internet use. In India, for the bottom 40% of the population, mobile devices and tariffs constitute 15% of monthly income⁴⁰. The cost of smartphones is between 4-6% of the average monthly income in Botswana, Jamaica, Mexico, and Costa Rica. Before being replaced with a new data tax, ‘social media taxes’ of 30% in Uganda forced many people offline⁴¹ while in Brazil and Argentina, consumer taxes can account for more than 30% of the total cost of mobile ownership⁴⁰.

Ability

Digital literacy plays a key role in closing the digital gender gap. Women often lack the skills and confidence to use digital technologies safely and securely. Digital literacy is influenced by factors such as education, income, access to digital devices, and cultural biases discouraging women and girls from using technology. Efforts to support this include, the GSMA Mobile Internet Skills Training Toolkit (MISTT) which is a set of free resources to teach people the basic skills they need to access and use mobile internet⁴². The World Wide Web Foundation supports a range of capacity-building trainings to advance women’s digital skills, active citizenship, and civic participation through technology across countries in the Global South⁴³.

Need

Many women lack the confidence and motivation to participate in the digital world. The value proposition for women’s use of digital technologies has yet to be established among low-income communities in many parts of the world. Stereotypes, cultural taboos, and safety concerns discourage women from actively participating in the digital space. Furthermore, most digital programs often do not take women’s specific needs and concerns into account, while a lack of locally relevant content and use cases in the required languages reduces the appetite for women to go online. For example, over 50% of websites are in English, while only 2% are in Mandarin and less than 0.1% are in Hindi³¹.

What needs to be done to reduce the Digital Gender Gap?

The digital gender gap is grounded in global gender inequality. Addressing the digital gender gap requires a multifaceted approach to address all the intersectional inequalities faced by women from diverse backgrounds. This entails finding ways and solutions on how to include women and girls in the design of digital health interventions.

Address gender norms and barriers. This involves understanding and addressing the root causes of the gender digital gap and addressing the harmful gender norms, practices, and stereotypes that hinder women’s safe and meaningful use of digital technology in their lives and society. Often, technology can play a role in tackling these challenges. For example, in Nigeria, an NGO produced a radio show to break down gender stereotypes, challenge cultural taboos, and promote skills and opportunities for women and girls to use digital technologies⁴⁴.

Establish more inclusive and gender-equal digital skills education and training. Digital training and education should focus on the specific needs of women— including providing training in socially acceptable spaces, within small groups to encourage peer-to-peer learning, and with women trainers who act as relatable role models⁴⁵. Furthermore, interactive, educational content in local languages should consist of relevant, relatable problems women face rather than the technology. In Tanzania and Pakistan, an initiative is tackling low digital literacy among women through interactive education content while in Mozambique, an initiative is training women on how to use technology and the internet smartly and safely⁴⁶. Women have successfully learned to access information, use digital tools, pursue economic opportunities, and increase their incomes.

Empower women and girls to study STEM. There are significant and positive multiplier effects by creating an environment that empowers, and encourages, girls and young women to consider studies and careers in the ICTs. For example, in Tanzania, an NGO called ‘Apps and Girls’ provides training, workshops, and summer camps⁴⁷. In Cambodia, the Ministry of Education, Youth and Sport applied a similar approach through the ‘Sisters of Code Clubs’⁴⁸. Furthermore, the Ghanaian ‘Tech Need Girls’ project and the Caribbean ‘Girls Hack-2019 Hackathon and Interactive Tech Expo’, encouraged women to pursue studies in STEM^{49,50}.

These initiatives have changed female perceptions of ICT, as well as increased girls' critical skills, self-confidence, and awareness.

Develop policies to close the gender gap in the digital sector. Governments should craft policies that empower women to become digital content creators and promote them as digital technology leaders and entrepreneurs. Finland was the first country to ensure that broadband access is a legal right and today the country is one of the most digitally equitable societies⁵¹. Similarly, Rwanda, which has effective national broadband planning, has seen 1GB data fall to less than a fifth of its 2015 price, from 20.2% to 3.4% of average monthly income making the internet more affordable to women⁵². The country has made faster progress than many of its East African neighbour, that have less robust broadband planning.

Collect gender-disaggregated data on the digital gender gap. Decision makers need gender-disaggregated data—considering other intersectional factors—to inform policies and business decisions that seek to close the digital gender gap. However, less than a quarter of countries across Africa and Asia publish sex-disaggregated data on internet access. After advocacy work from the Alliance of Affordable Internet (A4AI), Mozambique openly publishes sex-disaggregated census data on ICT access and adoption. These insights have been used to inform ICT policy interventions to close the digital gender gap.

Invest in digital technology infrastructure. Investments should be channelled towards digital technology infrastructures such as broadband and fibre technologies, especially in rural areas, to increase the number of women and girls connected to the internet. An investment by OP Finnfund Global Impact Fund has improved broadband access in rural Indonesia and the Philippines⁵³. Furthermore, cross-country initiatives such as the East Africa Submarine Cable System enabled service providers to provide cost-effective, reliable, accessible services that include health and e-Government services to millions of people⁵⁴. Universal Service and Access Funds (USFs), when managed well, can also be used to invest in initiatives aimed at closing the gender gap⁵². According to A4AI, over \$170 million of unspent USF balances could be used to connect six million women – or provide skills training to 16 million women and girls.

Develop, laws, policies, and strategies that support women to stay online. The internet is increasingly becoming indispensable for the full enjoyment of human rights—including the right to freedom of expression—making it crucial for

governments to ensure the full enjoyment of online rights. Since the world is increasingly becoming digitalised, governments should introduce policies that protect internet users, especially those who are illiterate and vulnerable, against cybercrime, abuse, and harassment. Vodafone India, for example, has developed Sakhi, a free mobile service. This contains a set of security and safety measures designed to keep women safe on and offline. Since its launch, millions of women in India have signed up for the service. Sakhi increases women's sense of confidence and strengthens their belief that change and new opportunities are possible. Furthermore, Sakhi has had a positive impact on the Vodafone brand through increased brand loyalty and mobile use. Several African countries—including Kenya, South Africa, Tanzania, Nigeria, Botswana, and Uganda—have enacted laws to fight cyberbullying, a growing form of gender-based violence⁵⁵.

Reduce or remove sector-specific taxation. Governments should avoid using the mobile or technology industries solely as sources of revenue. This includes considering reducing taxes on low-cost devices accessible to the most population, avoiding sector-specific taxation, and taking a longer-term perspective with initiatives such as mobile-spectrum pricing. Countries such as Colombia and Kenya have managed to make digital technology accessible to millions of people through a reduction in taxes—for example, removing the value-added tax on low-cost handsets to increase the potential for people to get online⁵⁶. Evidence has shown that any short-term drop in tax revenue is frequently compensated by long-term gains in additional economic growth as user numbers grow. In Ecuador, for example, the abolition of a mobile excise tax in 2008 resulted in a 40% increase in mobile phone penetration, a lower cost-per-minute for mobile calls, and increased usage per user⁵⁷.

Closing remarks

The digital gender gap is not going to close on its own. The root causes of the gap are complex, diverse, and interrelated and need collaborative work and coordinated action. Addressing the digital gender gap is critical to realizing the significant potential health benefits that digital technologies can bring for women, their communities, and the broader society. Greater digital access and use could not only have a profound impact on women's health but deliver significant benefits to the wider economy and society and support the achievement of the SDGs.

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