



Exploring the digital divide

Access to and use of mobile phones, the internet, and social media by adolescents and young adults in Bihar



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Background

Adolescents and young adults in India today are living in a world that is being increasingly penetrated by digital media. Indeed, India has the second largest online population worldwide, with around 700 million active internet users (Statista, 2020). Two-thirds (67%) of the internet users in the country are between 12 and 29 years of age (Statista, 2020), and about 32 percent are those aged 12–19 (IAMAI and Nielsen, 2019).

Exposure to mass and digital media plays an important role in shaping attitudes and behaviours of adolescents and young adults, including their self-confidence, self-identity, sense of citizenship, health and lifestyle choices, and interests in political and social issues (Buckingham, 2008).

Drawing on longitudinal surveys of adolescents in Bihar in 2015–16 (wave 1) and three years later in 2018–19 (wave 2), this policy brief explores:

- Access to mobile phones, the internet, and social media and how this changed over time;
- Patterns of mobile phone and social media use;
- The digital divide by gender and marital status;
- Experience of harassment through digital media platforms.

The UDAYA Study

The UDAYA study (Understanding the lives of adolescents and young adults) is a longitudinal study of adolescent boys and girls aged 10–19 in Bihar and Uttar Pradesh, conducted by the Population Council in 2015–16 and 2018–19, with the support of the Bill and Melinda Gates Foundation and the David and Lucile Packard Foundation (see www.projectudaya.in for more details about the study).

A total of **10,433** boys and girls were interviewed in 2015–16 (wave 1), and **8,467** of these boys and girls were re-interviewed at wave 2 in 2018–19 (see Population Council, 2020, for more details). The main reasons for loss to follow-up were migration of the participant (8% for boys and 5%

Key Findings

- ➔ Mobile phone ownership is increasing rapidly, but gender disparities in ownership persist.
- ➔ Although internet and social media use have increased over time, the gender gap in their use has widened, with girls less likely than boys to use these media.
- ➔ Of all groups of adolescents, married girls were the group least connected digitally.
- ➔ Adolescents used mobile phones predominantly for communication and entertainment; few adolescents, other than older boys, used them for economic or educational purposes or to access information.
- ➔ Social media platforms were used predominantly for communication and entertainment.
- ➔ Experience of harassment through mobile phones and the internet increased over time.

for girls) and refusal by the participant or his/her parent or guardian for an interview (4% each for boys and girls).

Findings presented in this brief draw on data from respondents who were interviewed at both time points (N=8,467). We note that there was some attrition bias between survey rounds. Specifically, a larger proportion of respondents who were re-interviewed resided in rural areas and belonged to disadvantaged castes and the Hindu religion compared with respondents who were not re-interviewed.

We compared access to and use of mobile phones, the internet, and social media for adolescents over time, that is, across the two surveys. We note that questions related to internet and social media use were asked of those who had completed at least five years of education in the 2015–16 survey, because this was considered a prerequisite for their ability to gain access to the internet on their own. We therefore restricted the analyses to this sub-group of adolescents and young adults.¹

¹ All means, medians, and percentages indicated in the tables and figures have been weighted using normalised weights for the total population. However, in order to show the total number of adolescents and young adults interviewed, unweighted numbers of respondents (Ns) are provided. Because numbers are unweighted and percentages are weighted, we caution readers against deriving numbers based on the percentages provided in the tables and figures.

Results

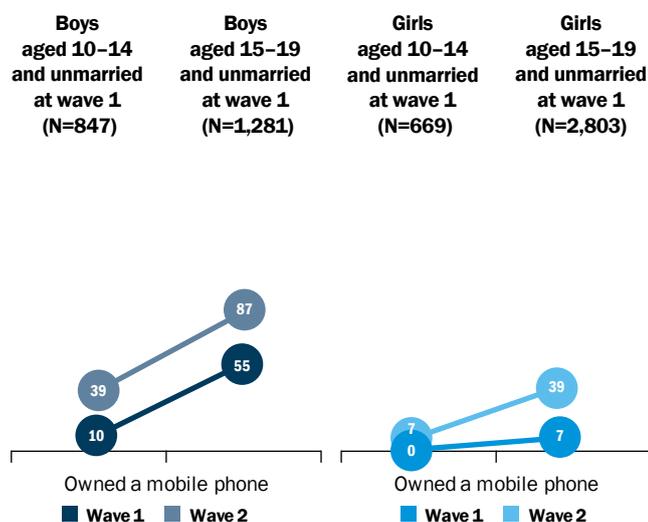
Key Finding 1

Mobile phone ownership is increasing rapidly, but gender disparities in ownership persist

Boys were significantly more likely to own mobile phones, regardless of age, and ownership of mobile phones increased over time at a greater rate among boys than girls. By 2018–19, over 90 percent of adolescents, regardless of age and sex, owned a mobile phone or were able to access the mobile phones of family members (not shown in figure). Whereas boys, especially older boys, mostly owned their mobile phones, the proportion of girls who owned mobile phones was considerably lower, especially among younger girls. Other girls who had accessed mobile phones had done so by borrowing them from family members (see Figure 1).

Among adolescents who owned or had access to a family member’s mobile phone, 69 percent of younger boys and 57 percent of younger girls reported that they had used a mobile phone on the day preceding the interview at wave 2 as did 91 percent of older boys and 74–79 percent of older girls. The median time that adolescents spent on the mobile phone on the day preceding the interview at wave 2 ranged from 30–40 minutes among girls to 60 minutes among younger boys and 90 minutes among older boys.

Figure 1: Percentage of boys and girls who owned a mobile phone at wave 1 and wave 2, Bihar, 2015–16 and 2018–19



Notes: All Ns are unweighted. Differences between wave 1 and wave 2 were significant ($p < 0.01$) for all categories of adolescents.

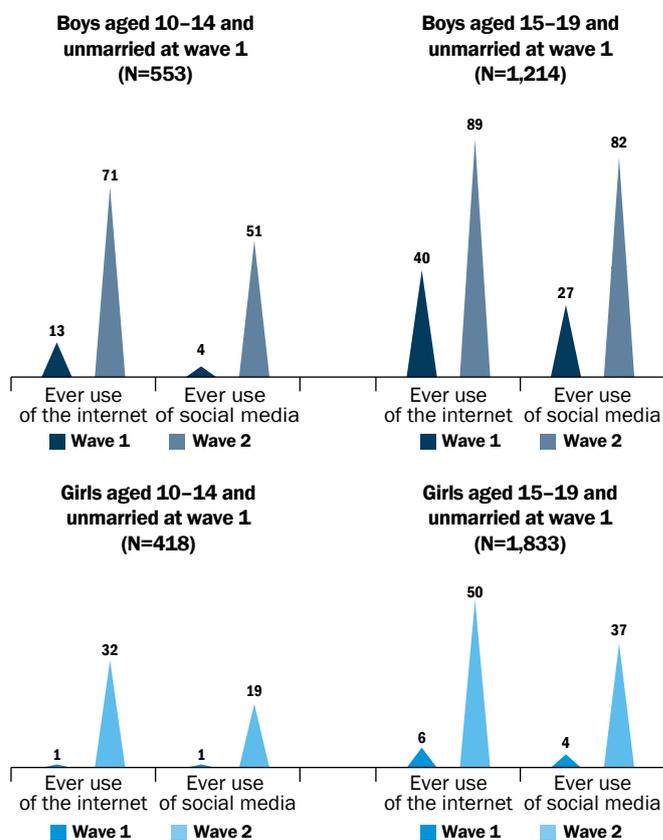
Key Finding 2

Although internet and social media use have increased over time, the gender gap in their use has widened, with girls less likely than boys to use these media

Internet and social media use also increased among both boys and girls over time, although the increase among girls was smaller than that among boys (Figure 2). By 2018–19 (wave 2), 71 percent of younger boys and 89 percent of older boys reported ever use of the internet as did 32 percent of younger girls and 50 percent of older girls.

Likewise, use of social media increased substantially among younger and older adolescents by 2018–19, when 51 percent of younger boys and 82 percent of older boys reported ever use of social media as did 19 percent and 37 percent of younger and older girls, respectively. Among those who had used social media platforms in the three years preceding the 2018–19 (wave 2) survey, 65 percent and 34 percent of boys and girls, respectively, who were aged 13–17 at wave 2 and 74 percent and 59 percent of boys and

Figure 2: Percentage of boys and girls who ever used the internet and social media at wave 1 and wave 2, Bihar, 2015–16 and 2018–19¹



Notes: All Ns are unweighted. ¹Differences between wave 1 and wave 2 were significant ($p < 0.01$) for each category; the analysis is restricted to those who had completed five years or more of education at wave 1.

girls, respectively, who were aged 18–22 at wave 2 reported that they had used social media on the day preceding the interview. Of these, boys spent on average 30–60 minutes and girls spent on average 25–30 minutes on social media platforms on the day preceding the interview.

Findings also show that the gender gap in digital media use has widened substantially over time. Thus, while there was an 18 percentage point difference in regular internet use, that is, daily or weekly, between older boys and girls at wave 1 (20% versus 2%), this difference increased to 33 percentage points by wave 2 (70% versus 37%).

Key Finding 3

Of all groups of adolescents, married girls were the group least connected digitally

Findings show that married girls were the least connected digitally (Table 1). Although married girls were more likely than their unmarried counterparts to own a mobile phone (58–60% versus 40%), they were less likely to access health and wellness information using mobile phones (4–5% versus 10%). They were also less likely than their unmarried counterparts to regularly use the internet (27–33% versus 48%) and to ever use social media platforms (27–29% versus 40%).

Table 1: Access to and use of mobile phones, the internet, and social media among girls aged 18–22 by marital status, Bihar, 2018–19

Indicators	Remained unmarried at wave 2	Married in the interim	Already married at wave 1
Owned a mobile phone	40.4	60.2	58.3
Accessed health and wellness information through mobile phone*	10.1	3.9	4.7
Used the internet regularly (daily/weekly)**	48.3	32.7	27.3
Ever used social media**	40.1	29.4	27.3

Notes: *Among those with access to mobile phones; **Among those who had completed five years or more of education at wave 1.

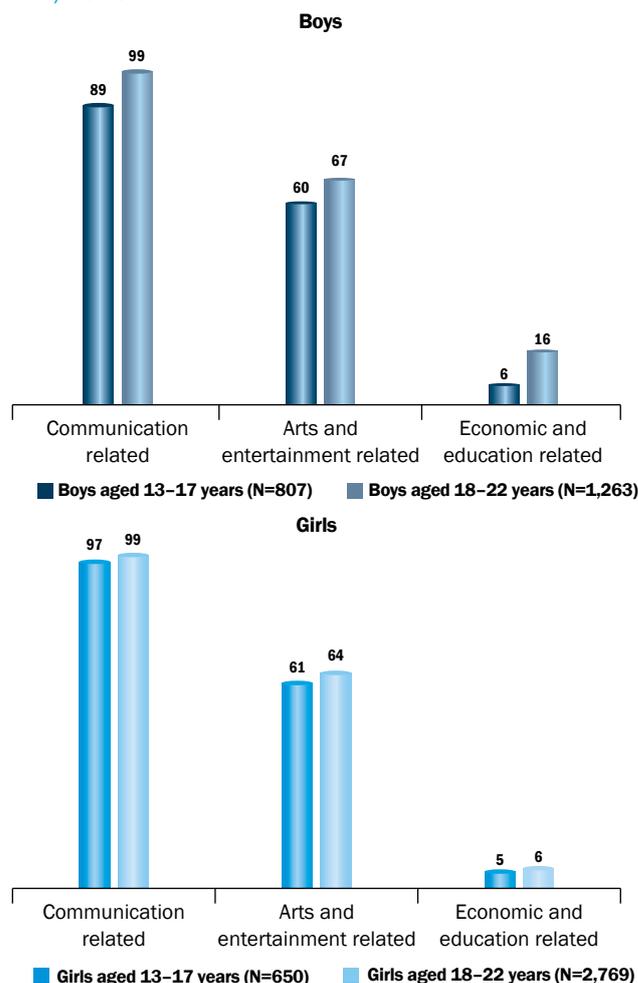
Key Finding 4

Adolescents used mobile phones predominantly for communication and entertainment; few adolescents, other than older boys, used them for economic or educational purposes or to access information

Findings from the 2018–19 survey show that adolescents with access to a mobile phone typically used it for communication-related purposes, that is, making phone or video calls or sending messages (89–99% of boys and 97–99% of girls; Figure 3). Other popular uses were for arts and entertainment, that is, listening to music, watching movies, playing games, and taking pictures (60–67% of boys and 61–64% of girls). Few adolescents, except older boys, used mobile phones for economic purposes (transferring money and shopping online), educational purposes, or accessing information on the internet (16% of older boys, 6% of younger boys, and 5–6% of younger and older girls).

When asked specifically whether they used mobile phones for accessing health- and fitness-related information in the three years preceding the 2018–19 survey, 11–24 percent of boys and 4–11 percent of girls answered affirmatively.

Figure 3: Activities for which a mobile phone is typically used by boys and girls with access to mobile phones, Bihar, 2018–19



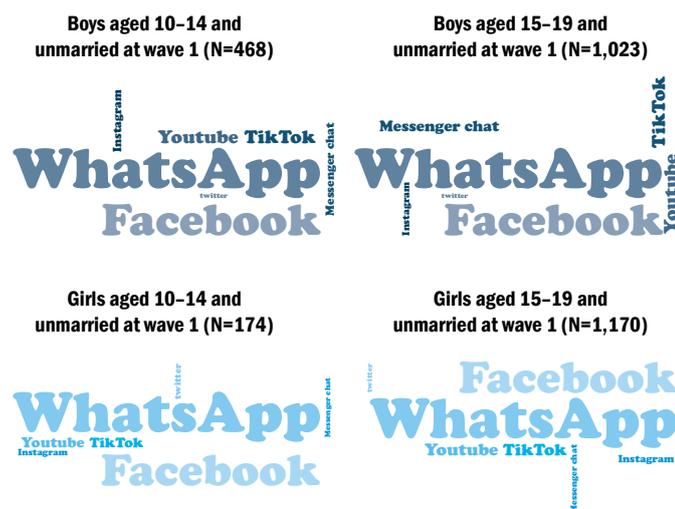
Notes: All Ns are unweighted. Percentage total may not equal to 100 owing to multiple responses.

Key Finding 5

Social media platforms were used predominantly for communication and entertainment

Most boys and girls who used social media in the three years preceding the wave 2 survey listed WhatsApp followed by Facebook as the platforms that they used (Figure 4).

Figure 4: Social media platforms used by boys and girls at wave 2, Bihar, 2018–19¹



Notes: All Ns are unweighted. ¹The analysis is restricted to those who had completed five years or more of education at wave 1 and who had used social media platforms in the three years preceding the interview.

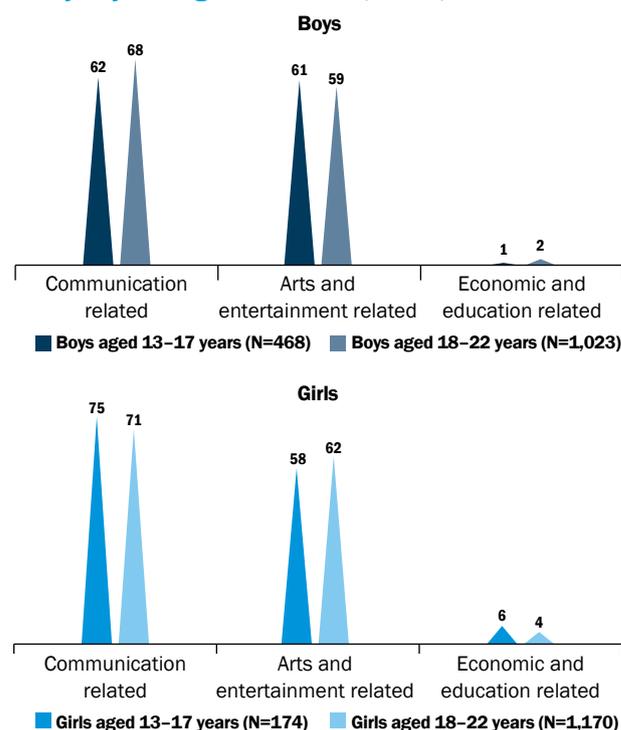
Findings presented in Figure 5 show that as in the findings for mobile phone use, the most frequently cited uses of social media in wave 2 for those who had accessed social media in the three years prior to the wave 2 survey were communication related (62–68% of boys and 71–75% of girls) and arts and entertainment related (59–61% of boys and 58–62% of girls). Few used social media for economic or educational purposes or for accessing information about jobs or health (1–2% of boys and 4–6% of girls).

Table 2: Percentage of boys and girls who reported experience of harassment through mobile phones or the internet at wave 1 and wave 2, Bihar, 2015–16 and 2018–19

Indicators of harassment	Boys aged 10–14 and unmarried at wave 1		Boys aged 15–19 and unmarried at wave 1		Girls aged 10–14 and unmarried at wave 1		Girls aged 15–19 and unmarried at wave 1		Girls aged 15–19 and married at wave 1	
	Wave 1	Wave 2	Wave 1	Wave 2	Wave 1	Wave 2	Wave 1	Wave 2	Wave 1	Wave 2
Experience of harassment through mobile phone	0.0	1.5	1.4	4.7	2.2	8.4	6.9	18.8	8.3	17.0
Experienced harassment over the internet	0.1	0.9	0.5	1.6	0.2	0.8	1.3	1.2	1.7	0.3
Experienced harassment over phone or the internet	0.1	2.7	1.6	6.3	2.1	8.9	7.8	19.7	9.6	16.9
Number of respondents	847		1,281		669		2,803		2,867	

Note: All Ns are unweighted.

Figure 5: Activities for which social media platforms were used by boys and girls at wave 2, Bihar, 2018–19¹



Notes: All Ns are unweighted. Percentage total may not equal to 100 owing to multiple responses. ¹The analysis is restricted to those who had completed five years or more of education at wave 1 and who had used social media platforms in the three years preceding the interview.

Key Finding 6

Experience of harassment through mobile phones and the internet increased over time

With increased access to mobile phones and the internet, experience of cyber harassment increased over time among both boys and girls (Table 2). Between waves 1 and 2, for example, experience of harassment through mobile phones or the internet increased from two percent to six percent among boys who were aged 15–19 at wave 1 and from eight percent to 20 percent among girls of the same age at wave 1.

Policy and Programme Recommendations

The UDAYA findings underscore the increasing saturation of mobile phones and social media platforms, especially WhatsApp, among adolescents. Digital media can play an important role in enhancing young people's awareness of health-promoting behaviours and their entitlements, promoting supportive norms with regard to secondary school completion, inculcating positive notions of masculinity and femininity, and encouraging the adoption of healthy behaviours. At times of crisis, such as the COVID-19 pandemic, mobile phones and the internet can provide critical information, help maintain connections, and provide a platform for remote learning. It is thus imperative that we bridge the vast gender disparities in digital access lest we further disadvantage girls.

A Assess the reach of programmes and campaigns that seek to impart health and educational information to adolescents through mobile phones and social media platforms

Our findings that digital platforms are rarely used by adolescents for health, employment, or educational information suggest that programmes and campaigns that aim to inform adolescents through these platforms should pre-test and monitor their reach to make sure they are connecting with their intended audiences. Efforts are also required to evaluate existing media and mobile-phone-based interventions for adolescents to assess their impact in raising adolescents' awareness and enabling them to make informed choices.

B Address the gender gap in access to digital media

The gender gap in access to the internet and social media needs to be addressed to ensure that women have equal opportunities in an increasingly digital world. The urgency of this is evident in the context of the COVID-19 pandemic. Strategies to overcome the adverse impact of mitigation efforts, such as closing of schools, are severely constrained by unequal access to digital technology. Unless addressed, existing inequalities will be further amplified.

C Sensitise adolescents and young adults about the potential risk of cyber bullying and educate them about safety measures

Reports of harassment via mobile phones more than doubled for most adolescent cohorts in the UDAYA study. While overall rates of harassment are relatively low, teaching young people how to keep safe on the internet and social media is a topic that could be included in life skills education or other subjects.

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