Institute of Social Studies Trust

BEYOND THE SCREEN

Gender and Smartphone App Access, Use and Control Among Youth

A case study of Kalyanpuri, Delhi

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Research Lead
Anweshaa Ghosh

Research Team
Anweshaa Ghosh, Shipra, Camellia Reja

Reviewed By
Ratna M Sudharshan, Independent Researcher; Former Director and Trustee at ISST, New Delhi.
Dr. Jahanvi Andharia, Director and Research Fellow, Institute of Social Studies Trust, New Delhi

Design By
Mandar Mehta & Riddhi Joshi

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All photos were taken with participants' consent.

Content

Girl watching video on social media

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Executive Summary

Smartphones, especially post COVID, have become a crucial necessity, especially for the age group captured in our study, as they used them for online classes. This has led to increased smartphone penetration among low-income groups, making it interesting to evaluate what smartphone app access and usage mean for the youngsters who are still exploring the ever-changing vast world of smartphone apps. The study focusses on three major areas i.e. access to smartphones, usage of smartphones and the control exerted over their usage. The study also explores how the intricacies of smartphone app consumption differ based on age, gender, class and phone ownership status. It examines not only app usage but also the youngsters' perception of smartphones as 'neutral' spaces, reflecting the aspirations and disappointments of the online world that transcend their offline limitations.

The study investigates the pattern of smartphone app access and usage among adolescents and young adults from low-income groups in Delhi, with a focus on gender-based differences. The data for the study was collected through an online survey of 102 youngsters (15-22 years), 5 focus group discussion (FGDs) involving 37 individuals (organized into groups of girls aged 15-17 and 18-22, boys aged 15-17 and 18-22, and mothers of children aged 15-22), and personal interviews of 7 boys and 7 girls aged 15 to 22 years, a total of 14 in-depth interviews.

As the study includes both adolescents and young adults with personal phones and those sharing smartphones, when discussing access to smartphone apps, the findings become unique. Gender, along with age in our sample, influenced the time, content, navigation of features and use of smartphone apps and platforms on smartphone devices. In households where devices were shared, it was clear that boys had been given preference of use. Economic conditions also influenced the kind of platforms one accessed across various genres; most respondents relied on free versions of various educational apps which gave them access to only limited resources.

When discussing the usage of smartphones, the apps popular among youngsters ranged from gaming to social media. It was fascinating to discover the effort and sometimes money these youngsters, mostly boys, invest to excel in their chosen apps and how they derive gratification from this process. However, not everyone was equally invested. There were clear gender patterns in the types of games and the time and money one invested in these.

The access to personal phones had a great role to play. Besides, there were social perceptions associated with the specific apps. It was interesting to see how smartphones, which almost everyone in the sample got access to because of online classes, even after covid was being used for educational purposes. This democratization of education access, previously determined by parents' ability to pay, has acted as a window of opportunity for the youngsters from lower income backgrounds.

With the access and use of various apps come issues unique to the world of social media. These include safeguarding themselves from online violence and dealing with the real-world consequences of online violence. These youngsters navigate through these challenges as they interact with the digital world. The control imposed by family, society, and geographical limitations influenced these youngsters' smartphone usage. One found clear patterns of restriction on girls and women's use of mobile phones which mimicked gender and social norms in the physical world. This form of 'paternalism' of protection led to self-policing while using various apps (what to post, when to post, to post, chatting with friends). While there were aspirations to have one's own smartphone, there was also the upholding of the image of a 'good girl', especially among the younger cohort of girls who had the lowest interaction with smartphones. This situation arose due to a combination of factors – sharing of phones, restrictions on use by parents/guardians and self-policing. Further, episodes of gender-based violence also influence the use of platforms or selecting a certain feature of the app (such as using private accounts).

To navigate these controls, they employed various mechanisms to bypass or negotiate restrictions and safeguard their interests. Those who shared phones had limited control on posting on social media or chatting. Girls shared that they would log in and log

off each time they wanted to check a popular social media account and avoided posting anything directly and rather share it in their friend chat groups directly. While both girls and boys seemed to be unaware of various grievance mechanisms if they got in to trouble, boys had a larger network of friends, siblings and community members than girls to find solutions. Almost everyone was skeptical of going to the police owing to the patronizing attitude of the police towards them, though there have been instances of the police cyber-crime in helping a girl in a 'fake photo-morphing' case.

Most respondents were unable to articulate how the state could help them but there were concerns around fake news and economic frauds wherein the state could interfere. A few girls also felt more safety features on the apps/platforms could help them to feel more confident in using the app independently.

Owning a smartphone was an aspiration amongst all young people, irrespective of gender. It is a window of opportunity to seek information, pursuing leisure or simply exploring one's agency and aspiration in the online world. The digital gender divide goes beyond simply owning one's smartphone, but the gender barriers and controls of the offline world show its presence in the online world. There is an urgent need for multi-institutions to innovate and come up with solutions that target various aspects of the digital gender divide – tacking gender norms in the communities around phone use, gender-based violence in the online space, targeted and multi-faceted digital literacy for girls and women, etc., for an inclusive and equitably beneficial digitalizing world.

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Chapter 1

Introduction, Methodology and Demographic Profile

1.1 Introduction

In recent years, with the acceleration in technology, India has witnessed an unprecedented surge in smartphone usage. This development has been fueled by several factors including rapid urbanization, increasing internet penetration, and affordable mobile devices. The impact of this technological revolution is profound, influencing various aspects of society, economy, and culture. This was further buoyed by the Indian government's initiatives, such as Digital India, which has played a crucial role in enhancing the country's technological infrastructure.

Launched in 2015, the Digital India campaign aimed to ensure that government services are made available to citizens electronically by improving online infrastructure and increasing internet connectivity. As a result, internet penetration in India has grown significantly, reaching over 50% of the population by 2020. This has laid the foundation for a more connected and digitally empowered society.

The rollout of 4G networks has been a game-changer, providing high-speed internet access to even remote areas. Companies like Reliance Jio have revolutionized the telecom sector by offering affordable data plans, thus democratizing internet access. The anticipated introduction of 5G technology promises to further accelerate this trend, enabling faster and more reliable connectivity.

Surge in Smartphone and Internet Usage

The availability of affordable smartphones has been instrumental in increasing their adoption across the country. Brands like Vivo, Xiaomi, and Samsung dominate the Indian smartphone market (The Hindu, 2024). These, along with other local manufacturers such as Micromax, have introduced cost-effective models that cater to the needs of a diverse population. The Indian smartphone market in 2023 was shaped by the growing availability of affordable 5G devices, strategic price corrections, and a concentrated push by brands to strengthen their offline retail presence (IDC, 2024). Reflecting this growth, the production value of India's smartphone ecosystem increased by 18.5 times from ₹18,900 crore in 2014-15 to ₹3,50,000 crore in 2022-23 (Government of India, Ministry of Electronics and Information Technology, 2024). Exports grew by 57.5 times during the same period (Government of India, Ministry of Electronics and Information Technology, 2024). In 2023, India's smartphone shipments reached 146 million units, a modest 1% year-over-year increase (IDC, 2024).

The expansion of smartphone usage and the government's Digital India initiative together have changed the communication landscape of the country. Through the Digital India Initiative, the Government of India aims to boost universal coverage of internet connectivity. Under this, the government has connected urban areas, rural areas, and remote areas of the country (PIB, 2024). The Government of India is also actively improving rural connectivity through initiatives like the Universal Service Obligation Fund (USOF) to enhance 4G access in uncovered villages, ensuring the benefits of smartphone adoption reach even remote areas (Government of India, Ministry of Electronics and Information Technology, 2024). Under USOF, around 9,000 remote villages have been connected with 4G services at an expenditure of ₹11,000 crore, ensuring modern telecommunications and bridging the digital divide (PIB, 2024).

Internet accessibility has significantly improved, with the average cost of data in the last decade being reduced by 96.58%, i.e. from 268.97 per GB to 9.18 per GB (PIB, 2024). As of March 2024, internet subscribers have increased from 251.59 million in 2014 to 954.40 million in 2024, representing a growth of 279.34% at a Compounded Annual Growth Rate (CAGR) of 14.26% (PIB, 2024). Additionally, the average internet speed has increased by 2432.29% in the last decade, from 4.18 Mbps to 105.85 Mbps (PIB, 2024). Meanwhile, internet data consumption has increased by 7696%, from 0.26 GB to 20.27 GB per user monthly (PIB, 2024). The global ranking of India's average internet download speed has improved from 130th in 2014 to 16th in 2024, moving up 114 ranks (PIB, 2024). Still, according to NFHS-5 (2019–2021), 93.3% of households in India

own at least one mobile phone, and 48.8% have access to the internet. In India, 95.08% of inhabited villages have access to a 3G/4G mobile network, as per the Department of Telecommunications (Waghmare, 2024). According to Oxfam's India Inequality Report 2022, 67% of the urban population uses the internet, which is as low as 31% for the rural population (Oxfam India, 2022).

The access to smartphones, though it has increased at the national level, remains far from gender equitable. According to the recent National Family Health Survey (NFHS)-5 (2019–2021), 53.9% of women aged 15 to 49 years have their own mobile phones (MoHFW, 2021). This percentage rises to 69% in urban areas but drops significantly to 47% in rural areas (MoHFW, 2021). In Delhi, 73.8% of women in this age group have mobile phones (MoHFW, 2021). Additionally, NFHS-5 indicates that 93.3% of households in India own at least one mobile phone, and 48.8% have access to the internet (MoHFW, 2021). The recent National Sample Survey (NSS) 78th Round's Multiple Indicator Survey (MIS) (2020-2021) provides additional insights, highlighting stark gender disparities in mobile phone usage. It reports that only 49.9% of rural women and 72.4% of urban women aged 15 and above used a mobile phone with an active SIM card in the three months preceding the survey, significantly lower than their male counterparts (NSS, 2021). For women aged 18 and above, the figures are 51.5% of rural women and 74.2% of urban women (NSS, 2021).

Smartphones have become an integral part of daily life for many Indians. They are not just communication tools but gateways to a multitude of services and opportunities. From online banking and e-commerce to telemedicine and education, smartphones have enabled access to services that were previously out of reach for a significant portion of the population.

In terms of resources, the Government of India is keen to grow the digital infrastructure of the country. Under the Budget 2024, the Ministry of Electronics and Information Technology (MeitY) has been allocated a budget of INR 21,936 crores, a 52% increase from the previous year and continuing to grow steadily since 2017. The budget provides for the setting up of Digital Public Infrastructure (DPI) at scale to improve the services sector and enhance productivity gains, innovation, and business opportunities, especially in agriculture, health, and urban governance. It hopes to accelerate its progress towards the 2030 Agenda for Sustainable Development and the implementation of its Sustainable Development Goals by strengthening DPIs in these sectors.

In terms of bolstering the digital skill initiative in India, the budget mentions the launch of Pradhan Mantri Kaushal Vikas Yojana 4.0 (PMKVY 4), the flagship youth skilling scheme in India, which will also cover new-age courses for Industry 4.0 like coding, AI, robotics, mechatronics, IoT, 3D printing, drones, and soft skills. Further, the digital ecosystem for skilling will be expanded with the launch of a unified Skill India Digital platform. It would:

- **Enable demand-based formal skilling**
- **Link with employers including MSMEs**
- **Facilitate access to entrepreneurship schemes**

Collectively, these advancements underline the strides India has made in smartphone adoption and internet usage, showcasing its remarkable progress compared to a decade ago.

Smartphone app basket (participatory tool), FGD with girls (15 - 17 years)

[1] The MeitY implements the DIGITAL INDIA Programme, INDIAai Mission, National Informatics Centre, and the Production Linked Incentive Scheme, among other initiatives focusing on technology, data, cybersecurity, and other digital solutions.

Box 1: Context of SDGs

On the international stage, the gender digital divide and its impact are reflected in various Sustainable Development Goals (SDGs). The relevant SDG targets for reducing the gender digital divide and enabling greater adoption of technology for girls and women are listed below:

- SDG Target 4.4 aims to "substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship, by 2030". [1]
- SDG indicator 4.4.1 measures the "proportion of youth and adults with information and communications technology (ICT) skills, by type of skill"[1] and indicator 4.4.2 measures "percentage of youth/adults who have achieved at least a minimum level of proficiency in digital literacy skills".[2] Similarly, UNICEF's Comprehensive Life Skills Framework refers to digital skills as part of 'foundational skills' alongside literacy and numeracy, and gives them equal importance.[3] (ASER 2023, pg. 2)
- From a gender perspective, SDG goal target 5.b aims to "enhance the use of enabling technology, in particular information and communications technology, to promote the empowerment of women"

Access – the gender digital divide

While there is an upswing in numbers for smartphones and mobile penetration, it is important to also note that inequality persists in ownership of smartphones and access to internet connectivity. Scott et al. (2021), based on their primary study in rural Madhya Pradesh (India), report that women's phone use was constrained and significantly limited their actual usage, despite claims of 'freedom'. It was constrained by: (1) low expectations and desire around phone usage, (2) dependence on men to access a handset, (3) poor phone functionality, (4) limited digital skills, and (5) restrained time allocation. According to Oxfam's India Inequality Report 2022, socioeconomic factors like gendered social norms, affordability, geographical location, and digital literacy levels govern access to available digital gadgets. The gender-based digital divide replicates the gender inequality present in the physical world. As per the Global System for Mobile Communications Association, GSMA Report (2023), this gender digital divide is not unique to India, as women across low-and-middle-income countries are 7% less likely than men to own a mobile phone. The report shows that between 2018 and 2020, with more affordable handsets and the onset of COVID-19 restrictions, the gender gap was narrowing in India; while this trend changed in 2021 when more men started adopting mobile internet, the numbers for women remained unchanged (GSMA, 2023). In India, by the end of 2021, 61% of men had mobile phones, in comparison to 31% for women (Oxfam India, 2022), which is worse than their low-and-middle-income counterparts.

According to GSMA (2023), in India, there is an 11 per cent gender gap in mobile ownership, a 40 per cent gender gap in smartphone ownership, and a 40 per cent gender gap in mobile internet. All are in favour of men. As per NFHS-5 data, it is revealed that in rural India, men are nearly twice as likely as

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women to have used the internet (49% vs 25%).

This, along with income-based digital divide between households and intra-household discrimination, are the disadvantages which exacerbate the gendered digital divide (Nikore, 2021). Bhallamudi (2024) points out that access is highly gendered and classed. In his study with adolescents in Mumbai, he showed how the access to smartphones in Mumbai was obtained by owning, borrowing from family members, or/and by sharing or co-owning a smartphone. Among adolescents from lower-income households, boys are more likely to own mobile phones than girls. Gender and class together play a role in determining access to mobile phones. The study further showed how gender, class, and caste identities intersected to show lower-class households with a focus on class- and caste-based morality, emphasizing respectable femininity through academic performance, home training, and restricted mobility, with parents limiting access to mobile phones to preserve these values.

Tyers-Chowdhury and Binder (2021), through their extensive review of literature from across the world, claim that women use the internet differently than men. This could be limited by access to an advanced handset, the limited time for which women can access a phone, a smaller range of digital services, and less frequent use of digital services and internet (Oxfam India, 2022). In India, 19 per cent of female and 8 per cent of male mobile internet users access the digital world through someone else's internet device (GSMA, 2023). Tyers-Chowdhury and Binder (2021, p.6) shared, "the gender gap in digital access is accompanied by a gender gap in meaningful digital use." As such, due to this mediated access to ICTs through family, women often fall behind in acquiring the required digital awareness, literacy, and skills to be able to use mobile internet (Banerjee Belur et al., 2024).

Access to the internet and digital devices is regulated by the male gatekeepers of society (Tyers-Chowdhury and Binder, 2021), who operate under the guise of gendered social norms that dictate 'appropriate behaviour' (Oxfam, 2022). This control is justified by girls in the name of the 'protective nature' of the family (C3 and DEF, 2021). C3 India and Digital Empowerment Foundation (2021, p.14), in their study, showed that the parents who limit the free access to phones for girls believe that they do it because "phones are not safe," it is "a waste of time," it "may harm her eyes," or that she "may misuse it." The control over mobile usage behaviour by traditional community and caste leaders in India is well-documented (Banerjee Belur, 2024). Moreover, this 'concern' for women's safety also translates into physical barriers when women are discouraged from availing of public facilities such as cyber cafes, which are often seen as 'boys' hangout' spaces with little female presence (Khan and Ghadially, 2010; Banerjee Belur, 2024). As such, these normative barriers significantly restrict the digital rights of girls and women in India.

Consequently, the digital gender divide adversely affects the aspirations of girls and women. Without access to sufficient digital resources and agency, the scope of women's livelihood is confined to traditional roles, if any, which are usually low-waged, low-skilled, and with negligible social protection. The digital gender divide adversely affects the aspirations of girls and women, rendering their world smaller compared to their male counterparts. The digital transformation with internet, digital platforms, mobile phones and digital financial service offers "leapfrog"[2] opportunity which can bridge the gender divide

[2] as popularized by World Bank in early 2000s, in context of countries in developing countries, could bypass stages of technological advancement

allowing women to have more opportunities (Das, 2023). Though every woman doesn't benefit from the "leapfrog" opportunities due to external factors causing digital gender divide (Das, 2023). The lack of access to digital resources for women obstruct their personal growth, given that crucial information and resources are now at people's fingertips through the digital world.

Closing the gender divide is imperative for achieving gender equality and creating an environment that empowers women to realize their full potential across all facets of life. The women in India have limited access to the digital resources. This limitation is rooted in the socio-cultural limitation and discrimination. However, Gurumurthy and Chami (2014, p.8) underscore that from a gender justice standpoint, a more nuanced and longer-term perspective than 'give-access-get-empowerment' is needed for positive gender outcomes in the information society. They maintain that for a truly gender transformative change in the digital divide narrative, it is important to examine how techno-social practices reproduce gender power differentials, what norms are privileged in the structures of the Internet and how the logic of techno-social spaces is contingent upon the design and production of technological architecture.

Rationale of this study

This study looks at the gendered patterns of access, usage, and control with reference to using smartphone devices and the various apps on the smartphone. The respondents covered in the study belong to the age group of 15–22 years, a generation that was born in a rapidly digitalizing world and adapted to digitalization in larger numbers and more rapidly than the previous generations, especially during the Covid-19 pandemic. This was mainly fuelled by schools and allied activities moving to online mode. Further, the study is conducted in low-income households in Delhi, where digital assets are few and often shared. There is, however, a large aspiration around having one's own smartphone, irrespective of gender, and it is seen as a liberating device, a window to the world beyond one's ghettoed existence. As compared to the previous generation, AI and automation are going to generate jobs, and many existing jobs will be non-existent in some years, and newer and more informal jobs controlled by algorithmic management will become the norm. ILO's report (2024) reiterates that lack of skills and the entry barriers for newcomers created by large digital monopolies have been significant obstacles to faster technological adoption, particularly in low-productive sectors and developing countries. In this scenario, the study explores, using a gender and intersectional lens, how young people from low-income communities are accessing the digital world in terms of the platforms they access, time spent, and their purposes for usage. It explores how young people are negotiating both the 'online' and 'offline' public spaces and what they are adopting and how this would help them to secure their position in the growing digital economy. It aims to provide evidence on where the lag is happening even if one 'owns' a smartphone. As we move ahead in the report, we will be unpacking how access and usage are varied, multi-dimensional, and gendered, irrespective of ownership status and time spent on the smartphone. The report will also highlight the various controls that young people, especially girls, negotiate and navigate when using their smartphones and living their aspirations through various smartphone apps.

Our key research questions were:

How do smartphone ownership and sharing dynamics influence the digital experiences of adolescents and young adults?

What are the gender-based differences in the use of smartphone apps and content consumption preferences among adolescents and young adults?

What forms of control do adolescents and young adults experience in their use of smartphone apps, and what strategies do they employ to resist these controls?

1.2 Methodology

The study was conducted in ISST's community centers – Saathi and Yuva Center. While the Saathi Center has been functioning for the past 23 years, the Yuva Center was started focusing on the needs of those aged 15–25 years in 2018. Both these centers act as inclusive, safe, and feminist spaces where children are encouraged to think around issues of gender (binaries, roles, norms, etc.) and other intersectional identities, which help them to overcome their own prejudices. The two ISST community centers were selected for this short study for two reasons: (i) easy access to the respondents, and (ii) familiarity, which would result in gathering rich qualitative interviews. The adolescents and youth, owing to their visits to the center, can articulate their struggles and openly speak about 'taboo' subjects such as exploring relationships or pornography on the internet.

This was a mixed-methods study with purposive sampling – adolescents and young adults (boys and girls) in the age group of 15–22 years having access to their own smartphone device or having access to a shared device. The researchers conducted focus group discussions (FGDs) using a participatory tool, 'Smartphone App Basket,' which was designed for this exercise (see Box 1). The FGDs were followed by in-depth interviews with boys and girls (see Table 1 below).

To analyse the scale of some of the initial findings, the research team conducted a short survey with 102 respondents, 60 girls and 42 boys (15–22 years) (see Table 1 below), using a Google form, which was translated into Hindi. All the survey respondents visit the community centres to attend computer classes or other project-based interventions. Some of the survey forms were shared with the respondents using WhatsApp directly, while the rest (for those who did not own or did not have access to a smartphone during the time of the survey) were filled out with support from the community centre staff on their devices.

Box 2: Location of the study

The study reached out to adolescents and young adults who frequent the two community centers run by ISST in Kalyanpuri in Delhi – Saathi and Yuva. The area is notorious for crimes against women's safety, and children and young adults approach the center for computer skills, photography courses, after-school remedial classes, etc., at a fraction of the cost compared to those provided by other private training centers in the area. One finds many girls coming to the center because of the nominal costs. Along with technical skills, the center focuses on building their understanding of gender, sexuality, citizenship, etc., which provides them with crucial tools and ideas to navigate the outside world, which is often skewed against them. The centers have become a safe space for the young people to voice their opinions and concerns without being judged. It gives them the ability to question and articulate their thoughts and has led to confidence and motivation to challenge gender norms to achieve a better life and overall well-being. As such, the respondents' articulation of thoughts was extremely important to understand the various platforms they were using and their purpose, their aspirations in the digital world, and to re-look at gendered patterns of controls that limit girls' ability to participate in the digital world.

Box 3: Key terms and their context in the study

- **Access:** Access to a smartphone doesn't necessarily mean ownership of the smartphone but refers to an individual's ability to use a smartphone at one's convenience. Access to a smartphone device with internet connectivity is dynamic and can change as per circumstances.
- **Usage:** This term describes the purpose for which smartphones and various apps/platforms are used. The study aims to examine the gendered usage patterns of the device and the varied apps/platforms (and specific features within these apps) one has access to.
- **Control:** Control encompasses both human and environmental factors that limit or regulate access to and usage of smartphone apps. This includes socio-cultural norms and economic constraints. It also explores personal perceptions of what apps/platforms, and which features one can use, influenced by the two factors described above.
- **Ownership of smartphone:** Ownership means that the individual feels that the phone belongs solely to them and/or they are the primary user of the phone and have the agency to share or refuse to share the phone with others without facing consequences. Ownership does not require the phone to be new or bought with the individual's own money. The device may be brand new, second-hand, or handed down by others.
- **Sharing of smartphone:** Sharing refers to an individual using a smartphone that the primary owner has allowed them to access, either alone or with one or more family members. The sharing arrangement may involve equal access for all users, or it could be more restricted, with the primary owner keeping the phone most of the time and providing it to others only when needed. As with ownership, the phone does not necessarily have to be new or purchased by the respondent.
- **Smartphone:** A smartphone is any mobile phone with internet connectivity and the capability to display and play audio-visual content. This includes devices capable of running apps and browsing the web.
- **Apps/Platforms:** In this context, apps/platforms refer to consumer-oriented mobile applications, typically downloadable from app stores, rather than those developed by public or government organizations. These are apps that are either pre-installed on smartphones or can be easily downloaded by users.
- **Gender:** The participants of the study identified themselves as cis-het males or cis-het females and, for the purpose of the study, the report uses the term gender to describe the two cis-genders. Notably, the researchers recognize that gender identity is diverse, fluid, and complex. Further research and evidence are required to understand the digital gender divide beyond the binary of cis-genders.
- **Youth:** The United Nations defines youth as individuals between the ages of 15 and 24. This study focuses on this definition of youth.
- **Adolescents:** In this study, adolescents refer to young people aged 15 to 17, typically still in school.
- **Young adults:** This group refers to individuals aged 18 to 22, who are typically out of school and may be pursuing higher education/skills, seeking employment, or already employed.

Table 1: Study Sample

Details	Male (15-17 years)	Female (15-17 years)	Male (18 – 22 years)	Female (18-22 years)	Mothers of children aged 15 to 22 years	Total
FGDs	1 (n=9)	1 (n=9)	1 (n=6)	1(n=7)	1 (n=6)	5
In-depth Interviews	3	3	4	4		14
Survey	22	29	20	31		102

The research team made sure to take the consent of all respondents during data collection. For the survey, consent was taken within the Google form for respondents above 18 years. For respondents under 18, a consent form was shared with their guardians prior to filling in the survey, explaining the study's purpose and survey (phone numbers of the researchers were also provided in case of queries or clarifications). Verbal consent was also taken from respondents above 18 years for individual interviews and key informant interviews for adults. A similar consent process as the survey was followed for respondents under 18 years for their in-depth interviews and FGD. The data was anonymised and transcribed verbatim, and analysis of the data was done using NVIVO. The team used Excel to arrive at pivot tables and graphs for the quantitative analysis.

Box 4: Smartphone App Basket – a participatory tool for conducting FGDs

The smartphone app basket was designed to understand the variety of apps that girls and boys use on smartphones. Cut-outs of various smartphone app icons (for example, Facebook, YouTube, Instagram, Meesho, etc.) were provided to the participants of the FGD. The facilitators introduced "baskets" (categories listed below) for the FGD participants to place the various app cut-outs:

- Chatting
- Education, skill, jobs
- Gaming
- Social Media
- Shopping (including UPI payments)

The participants were also provided with post-its for adding additional apps which were not available in the cut-outs and which they accessed. Apps were provided for each of the categories one by one.

Once the apps were distributed in a labelled basket, the facilitators initiated discussion on some of the following points:

- When, why, and how the participants use the app
- What their unique experience of using the app was (positive and/or negative)
- Whether any violence was faced while or as a result of using the app; who stopped them from using an app?
- Perceptions about apps – should girls/boys use a certain app?

Using this methodology helped in facilitating an in-depth discussion around the issues. The groups found it exciting and visually engaging, which helped in navigating and adding to the discussion.

1.3 Demographic Profile

1.3.a. Age of the respondents

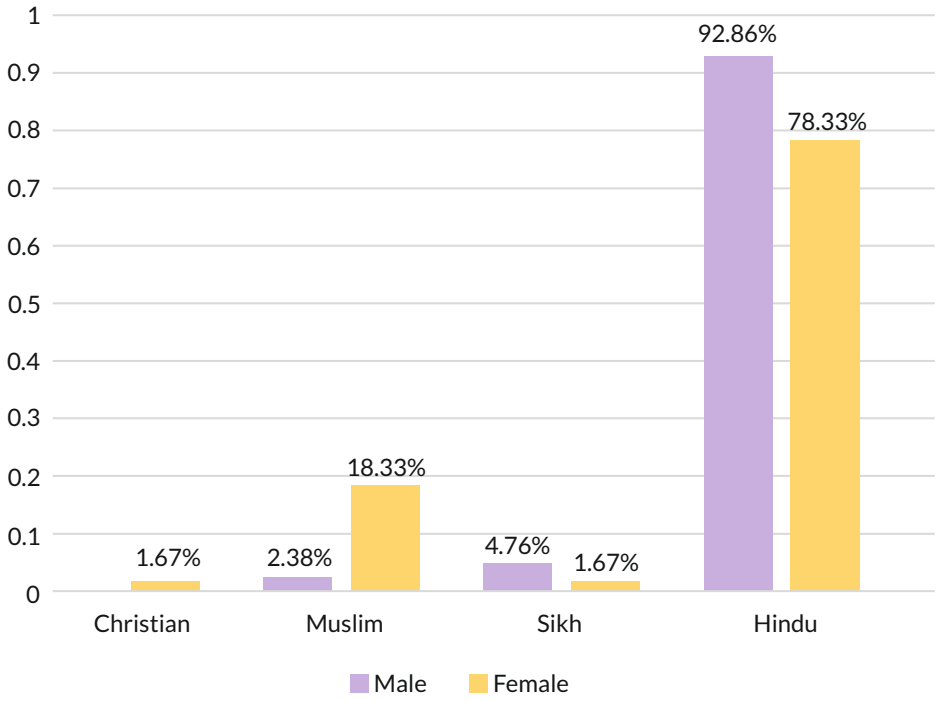
The research respondents in this study ranged from 15–22 years. A survey was done with 102 adolescents and young adults in the age range. For representational and analysis purposes, there were exactly half the respondents in the two age ranges – 15 to 17 years and 18–22 years. Figure 1.3.a shows the sample's gender distribution in both these cohorts to be almost similar, with girls indicating higher representation in both age groups. Boys, while slightly more represented in the younger cohort, see a decline in representation as age increases.

Figure 1.3.a: Age of Respondents

1.3.b. Religious affiliation of respondents

The respondents for the survey were mostly Hindus, while about 18% of girls were Muslims. In the qualitative studies, we spoke to two Muslim women, and the rest were Hindu. In FGDs, most participants were Hindus, except for a couple of participants who were Muslims.

Figure 1.3.b: Religious affiliation of respondents



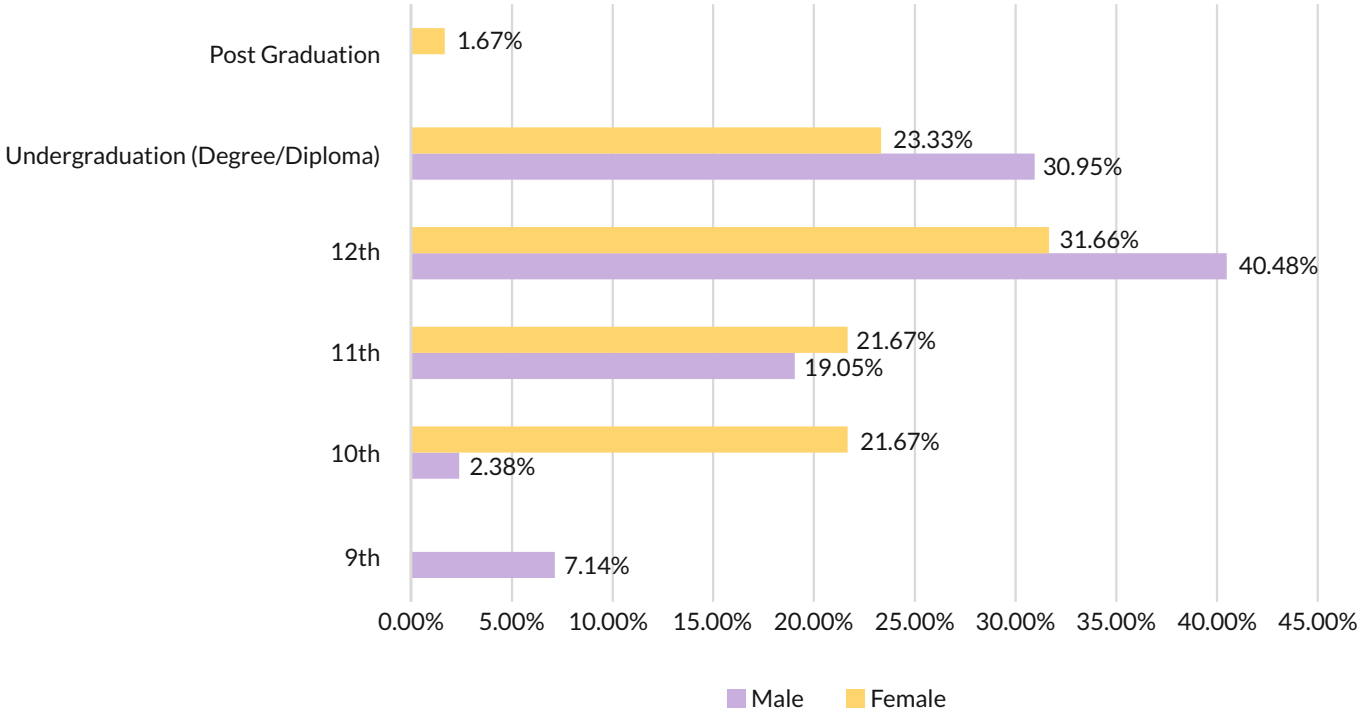
1.3.c. Current educational status

In terms of educational status (see Fig 1.3.c below), all respondents under 19 years were attending school at the time of the survey. In qualitative interviews and FGDs, in the age group of 18–22 years, most girls were pursuing graduation/diploma through the National Institute of Open Schooling (NIOS), while the boys were actively looking for jobs or already involved in family businesses, such as looking after shops, setting up shops in weekly markets, etc.

1.3.e. Household size

A little over a third of respondents come from families with five members (36%), followed by six members (19%). Most families are nuclear in nature but live close to their extended families. The area of respective households is generally small; a respondent shared that because their house was small and cramped, he and his brother had rented a room in the same lane where they go to sleep at night (Interview, March 2024). We find that members of multi-generational extended families live in close proximity to one another in the same neighbourhood, interacting on a daily basis. They interact frequently and support each other with daily tasks. Respondents mainly belonged to second-generation migrants, and some families already own a house of their own in the communities.

Figure 1.3.c. Current educational status of respondents



1.3.d. Occupational status

In our survey, most of the respondents were still in school, and the boys sometimes helped their parents at work, such as minding the shops if needed. In the qualitative data, we found that among those who were above 18 years, most boys and some girls were looking for work, and a couple of them had done volunteer work or part-time jobs.

Figure 1.3.d: Occupational status of respondents

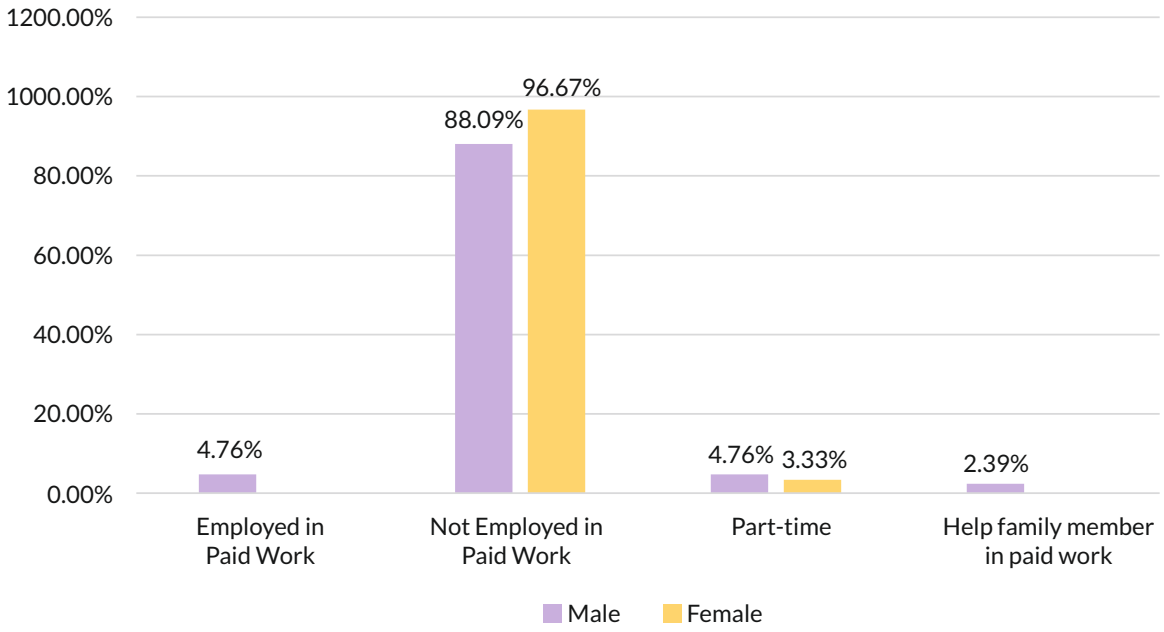
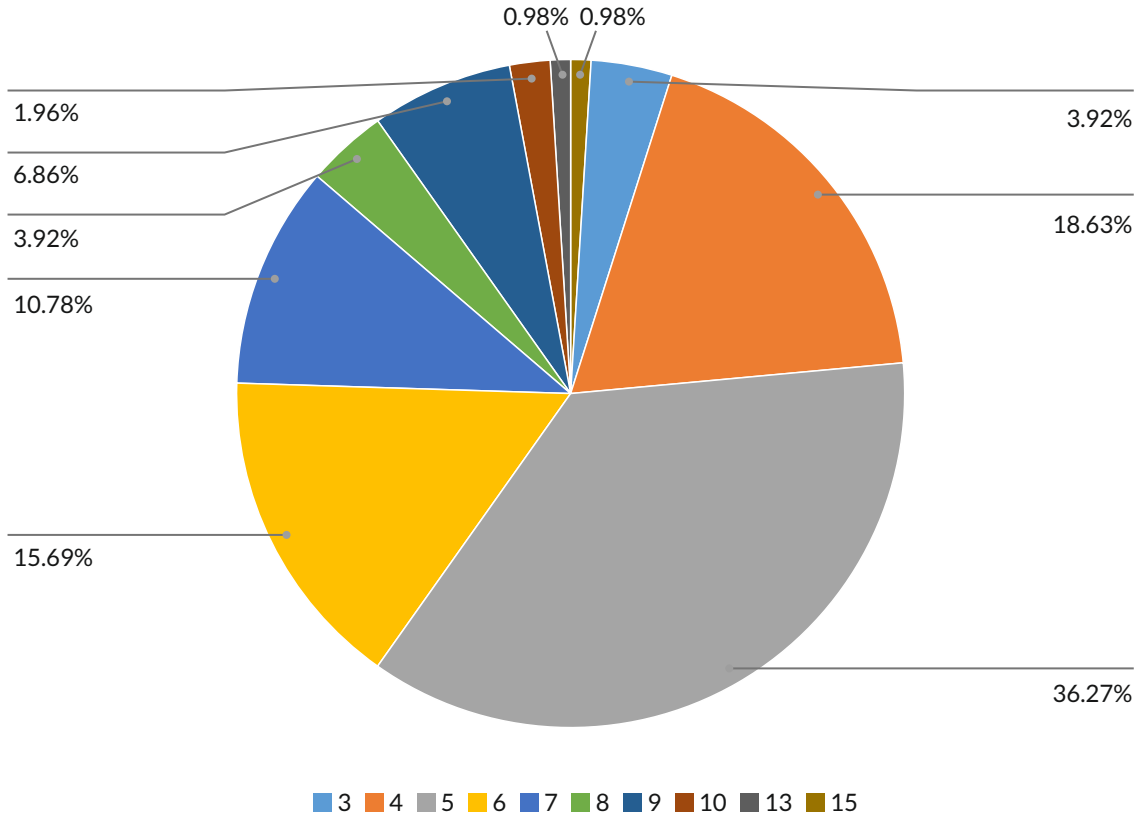
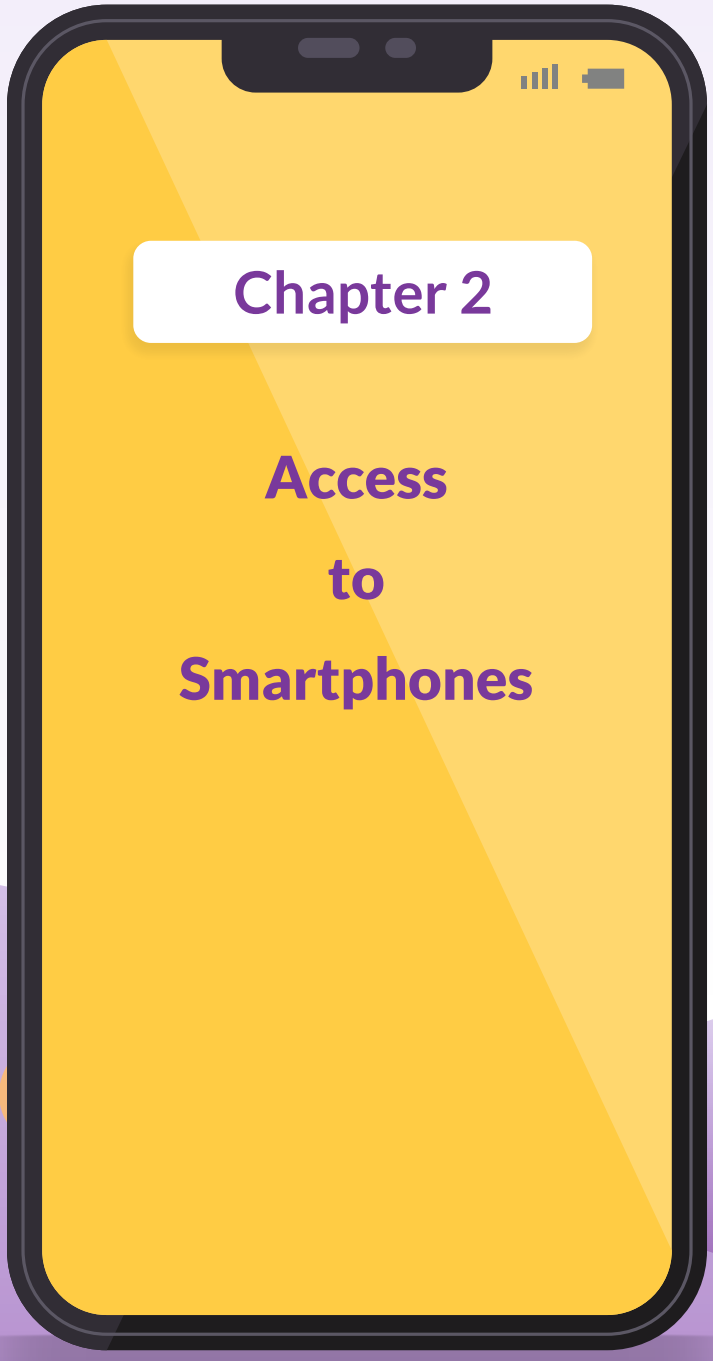


Figure 1.3.e: Household size





Chapter 2

Access to Smartphones

This chapter will examine gender disparities in smartphone access among adolescents and young adults, as well as their patterns of smartphone usage. The first section will focus on access, followed by a discussion on usage in the subsequent section.

Access to smartphone

Access to a smartphone device refers to an individual's ability to use a smartphone whenever convenient (see Box 3 for Key terms). It is a multi-layered concept, intertwined with social factors such as gender, intersectional identities, and access to resources. For instance, owning a smartphone does not always guarantee uninterrupted access, just as a person might have seamless access without owning one. In this study, adolescents and young adults access smartphones either through shared use or ownership.

Smartphones have become an integral part of the lives of adolescents and young adults over the last half decade, especially after the COVID-19 pandemic and the subsequent lockdown. Prior to the pandemic, lower-income households in Kalyan Puri typically did not own smartphones, and those that did usually had just one device, owned by the earning male member(s) of the family (FGD, Boys and Girls from both age groups, February 2024). The age cohort interviewed for the study had to rely heavily on smartphones for their education due to the closure of schools during the pandemic. This forced many families to purchase smartphones to support their children's education, which had shifted to online learning. In households with multiple children, siblings often had to share one smartphone for their online classes, adversely affecting their learning (FGD, Boys and Girls from both age groups, February 2024).

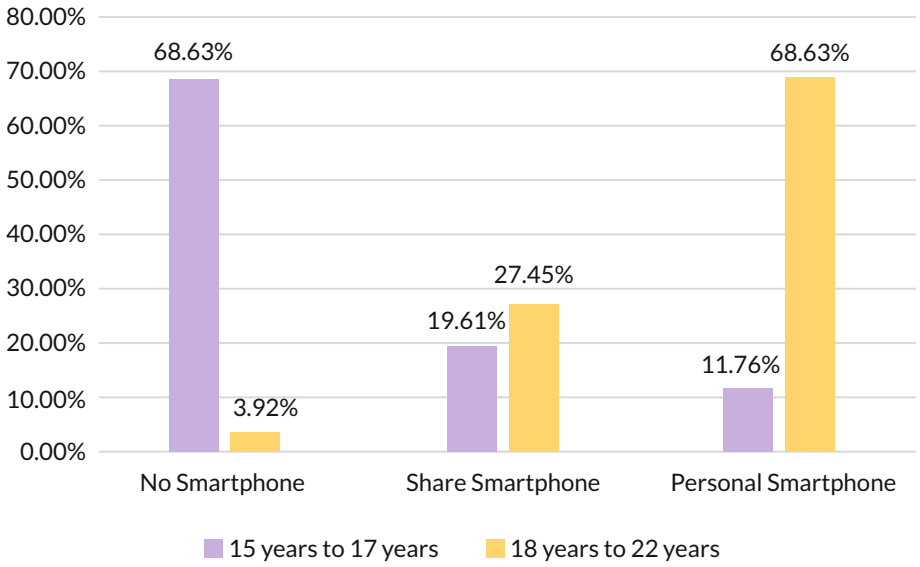
Daksh, a 17-year-old boy who owns a smartphone, had his first smartphone given to him by his nana (maternal grandfather), his guardian at the time, for online classes. It was a basic smartphone that was bought from the Kunlidpur Sunday market (Interview, March 2024). However, access to smartphones for educational purposes was not always guaranteed or prioritised, especially for girls. During the pandemic, Ridhi, a 17-year-old girl who uses her elder brother's smartphone, had very limited access to a smartphone for her online classes and had to rely on her friends to copy notes and classwork (Interview, February 2024). Gender and economic inequalities intersect to hinder girls' education. Fortunately, Ridhi's school teacher was very understanding and encouraged her to attend class whenever possible. Her experience and the teacher's reaction show how these struggles were common during the lockdown, particularly among lower-income students.

While smartphones initially entered households primarily for educational purposes during the lockdown, they quickly became tools for leisure and entertainment, demonstrating their multifunctional role in young people's lives.

In Figure 2.1 below, we see that adolescents aged 15 to 17 are less likely to have access to a smartphone compared to their older counterparts. The figure highlights significant differences in smartphone ownership between adolescents and young adults.

Smartphone app basktet (participatory tool), FGD with girls (above 18 years)

Figure 2.1: Age wise ownership and access to Smartphone devices



This trend was also evident in our FGDs (February 2024) and interviews (March 2024). Most respondents in the 15–17 age group did not have access to smartphones, except for two boys and one girl who owned their own smartphone devices (FGDs, February 2024). The FGDs with young adults revealed more instances of acquiring a personal device after completing school amongst both genders. Ridhi (currently in grade 12) dreams of earning money after passing school to buy her own smartphone. This pattern of obtaining a smartphone after reaching an educational milestone, like completing school education, reflects societal expectations of adulthood, responsibility, and, in the case of girls, a sense of security.

In our study, girls expressed that they typically gained more mobility after completing school and entering college, which is seen as a gateway to adulthood and autonomy. The aspiration to earn money and buy a smartphone was common among respondents without smartphones across age groups and gender. However, it is easier for boys across age groups to receive a personal device – a new one or a second-hand one – as compared to girls. Anuj, a 19-year-old who owns a smartphone, remarked, **"...boys, after 12th grade, you know, they get a mobile, they get permission. But girls don't get that. Girls only get a personal one if they start working" (Interview, March 2024).**

In the older cohort, a few girls had received a personal phone from their family (based on the family's economic condition and social outlook) after passing school. Others expressed plans to get their own phones once they start earning on their own (FGDs, February 2024, and Personal interviews, March 2024).

Further, Figure 2.1 also showed that while most young adults owned a smartphone, there were exceptions. In our study, 4 out of 8 respondents from the age group 18–22 years shared their smartphones. Lakshay, a 19-year-old who shares a smartphone, mentioned that his younger male sibling gets more phone time than he does. He believes this is because his younger sibling is seen as smarter, and their parents favour him. This pattern reflects the intersection of age hierarchy and privilege within the family structure. While educational needs dictate some of the resource allocation, there's also a subtle reinforcement of family dynamics, with Lakshay attributing this to his perceived inability to secure a job. This suggests that even among male siblings, disparities in phone access can exist. When gender is not the central factor, other variables like resourcefulness or personal bias influence access.

However, when comparing boys and girls in our interviews and FGDs, the data almost unanimously showed that girls have less access to smartphones

than boys. For girls, this limited access is often due to resource allocation disparity compounded by gender-based restrictions on technology use. Although our online survey (Figure 2.2 below) indicated that girls had relatively more access to smartphones, this discrepancy suggests a need for further research to understand the context in which girls get access and the underlying socio-economic factors at play.

In the FGDs with adolescent girls, only one out of nine had personal ownership of a smartphone, while none of the girls interviewed owned a phone. In contrast, among adolescent boys, two out of nine in the FGDs and two in the interviews owned smartphones. While this difference may seem minimal, the confidence and sense of ownership observed among the boys was noticeably absent in the girls. Discussions with older boys revealed that five out of six had their own personal phones, with one sharing his phone with his brother (FGD, February 2024). Similarly, in interviews, two out of four boys in this age group owned smartphones. Conversely, among older girls, four out of seven had their own personal phones (FGD, February 2024), and similarly, two girls out of four interviewed owned smartphones (See Table 2 below for details).

Figure 2.2: Gender-wise ownership and access to smartphone devices

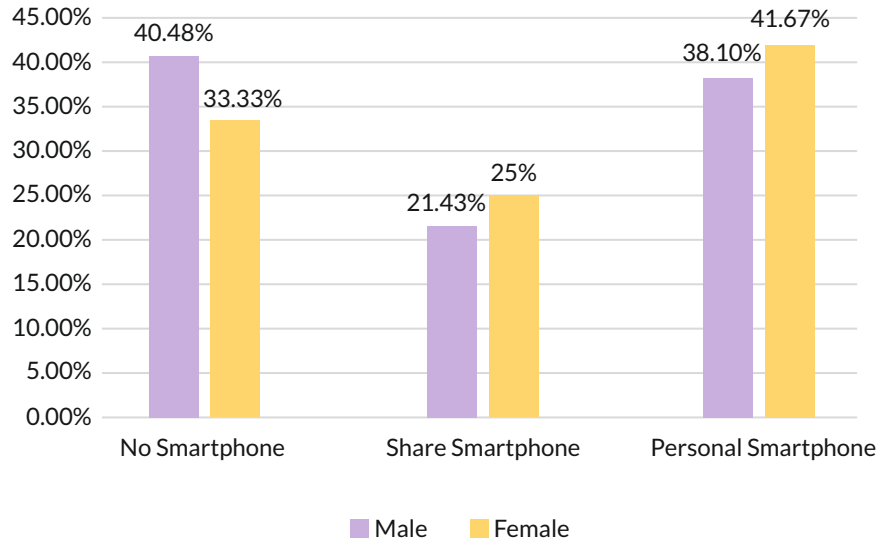


Table 2: Qualitative sample on ownership of smartphone device

Age group	Data collection method	Own Smartphone		Shared Smartphone	
		Boys	Girls	Boys	Girls
15 to 17 years	FGD	2	1	7	8
	Interviews	2	0	1	3
18 to 22 years	FGD	5	4	1	3
	Interviews	2	2	2	2

Girls do not gain ownership of personal smartphones as easily as their male counterparts. Ridhi shares the limited smartphone time she gets with her other siblings. Despite not owning a phone, her younger brother is more confident and comfortable using devices belonging to relatives or friends who visit their home. This reflects the societal privileges afforded to males. In contrast, Ridhi doesn't even have the luxury of confidently demanding screen time from her brother. She shared, ***"At night, when I ask my brother to let me use smartphone, he asks me if i have some (school) work on smartphone. When I refuse, he gives me the phone for 5 to 15 minutes and then takes it back... He says, "I don't get to use my smartphone whole day, and only at this time (at night) I get time to use smartphone." (Interview. March 2024).*** Ridhi's brother, though he has his phone with himself all day, feels that he can only use it leisurely once he comes home.

Although her younger brother is allowed to use Instagram regularly, Ridhi knows that creating a Snapchat account would likely get her into trouble. Similarly, Sana, an 18-year-old girl who shares a smartphone, has some control over its use within her sibling group. However, her younger brother's gaming time is prioritised over others' leisure activities. This reflects a common pattern where boys' leisure activities are given precedence over girls. The expectation that boys will use technology for gaming while girls primarily use it for schoolwork and social media usage is both reinforced and normalised. Insights from the Mothers' FGD further support this observation, highlighting that sons are perceived to spend time on games like Free Fire and PUBG or watching videos on YouTube, while daughters are seen using platforms like Instagram and WhatsApp for their activities (Mothers' FGD, April 2024).

Sana also observes that boys tend to have more access to smartphones than girls. She notes that parents are more likely to provide phones to boys, often reasoning that boys will eventually become the family's breadwinners. Sana shares, ***"the boys have phones... my aunt lives nearby, and she has four sons, each with their own smartphone." (Interview, March 2024)***

Economic constraint

In low-income communities, financial constraints mean a limited number of smartphone devices per family member. There is thus a constant tussle over who owns the phone, who shares with whom, for how much time, and for what purpose. As a result, many respondents spoke about sharing smartphones with other members or referred to the device as the ghar ka phone (home smartphone), indicating its shared purpose. These "home smartphones" function like landlines, with no single owner and the handset rarely leaving the house. Suresh, a 17-year-old boy who shares smartphone, shared, ***"I don't get scolded for using phone in night, but get scolded for using it in morning... They say, 'since morning you have taken the phone outside with you, we don't let us use it because of this'... Both my mother and sisters complain." (Interview, March 2024).*** In families of lower socio-economic backgrounds, smartphones have become a highly negotiated and contested resource. The struggle isn't just about access to the handset but includes factors like limited data recharges as well, reflecting the constraints that shape smartphone usage.

For almost every smartphone owner in our sample, their first device was typically a hand-me-down, passed down from parents or older siblings (Interview, March 2024). These phones are often replaced when the original owner purchases a new one, but the first phone is usually whatever device is available at home. Those who did not own a smartphone expressed a desire to earn in the future and purchase one for themselves (FGD, February 2024.

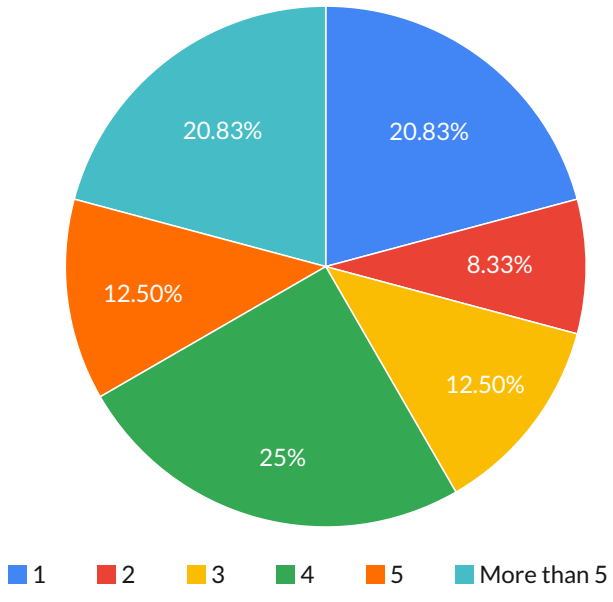
Anuj shares, ***"My family forces me (to take up a job like his brother), it doesn't feel good (to disappoint them), but what can I do. My sister, who is currently working in a call center, secretly got me an iPhone... So, she has taken it on instalment now. Yes, she supports me, she is good to me." (Interview, March 2024).*** This became a significant event, as she did this to support Anuj's passion for photography. However, their father remains unaware of the purchase, highlighting how decisions regarding smartphone ownership, especially those that deviate from traditional norms, are often concealed from authority figures in the household. Even their mother hasn't told the father. In their father's view, an expensive smartphone is not seen as a justified expense, and he would not approve of investing in Anuj's non-traditional aspirations, such as

photography and vlogging. Anuj and his sister perceive the economic investment in purchasing an iPhone as a strategic means of enhancing Anuj's cultural capital, particularly in the field of photography. The iPhone, with its advanced cameras and content creation tools, serves as a resource that can help bridge some of the gaps in this competitive industry, which requires both technical expertise and aesthetic sensibilities. By utilising the iPhone and the internet, Anuj aims to develop the skills and mannerisms necessary to succeed in this field. These tools provide him with a form of technological capital, which can be transformed into cultural capital through skill acquisition. The access to such technology not only enables him to pursue freelance work, exhibits, or collaborations but also opens pathways to professional opportunities that may have previously been inaccessible. This transformation of skills into cultural capital, coupled with new economic opportunities, demonstrates how technological access and skill development can facilitate upward social mobility.

Sharing of smartphone

For almost every respondent interviewed, their first interaction with a smartphone was through a shared device, either with parents, siblings, or both. Of those who shared a smartphone in the survey, more than 55 per cent of respondents shared it with four or more people (as seen in Figure 2.3 below).

Figure 2.3: Sharing smartphone with others



The sharing of smartphones often results in an asymmetric distribution, where some users have more access to smartphones compared to others in terms of time and freedom to use them as per choice. There are two main types of sharing as per the sample of the study: between siblings, which suggests perceived equal ownership (though here as well there is internal hierarchy), and between the phone owner and others, indicating pronounced power dynamics. In our online survey, most respondents who shared phones did so with their mothers, followed by fathers, sisters, and younger brothers. In most households, the mother's phone is considered the common household phone, while male earning members typically have personal phones, mostly for exclusive use. Even when the mother is earning, her phone is often treated as a shared device for the children, which underscores the societal expectation that women are primarily caretakers and secondary earners, with their resources considered available for the family's perusal. In interviews, when smartphones were shared among siblings, elder siblings often mediated access, acting both as gatekeepers and enablers. Farheen, an 18-year-old girl who shares smartphone, shared:

"Yes, I'm the oldest at home, so either my mom uses it (smartphone) or I do, but my mom doesn't use it much, so it's mostly mine... My mother... doesn't even know how to make a call, I do it for her... (my younger siblings) use smartphone as well. Like, sometimes I ask them to finish tasks and in return offer them some screentime. If I give them the smartphone for the whole day, they will break it, which is why I don't give it for the whole day. I only give it for some time and then take it back from them... when dad is asleep in the morning, the siblings use his phone." (Interview, March 2024).

This dynamic represents an interesting inversion of control, where Farheen, despite her gender, uses the scarcity of the device and her elder sibling privileges to exert power over her siblings. Farheen's knowledge of smartphone usage becomes the tool through which she asserts authority. In this case, the information asymmetry works in her favour. However, this is not the case for everyone. Anil, a 19-year-old boy who owns a smartphone, shared, ***"She (My sister) gives tuition classes to school students... I share it (smartphone)***

with my (older) sister... In the morning, if I don't wake up, she will use it from 5am... until I wake up... So, she uses it for two to three (2-3) hours in the morning, and then in the evening for half an hour to one (30 mins-1 hr), that's it." (Interview, March 2024). Anil's sister adjusts her schedule and sleep patterns around Anil's work to access the phone. Not having her own phone or even shared ownership limits her ability to negotiate time spent on the device. Despite Anil being sensitive to her need to socialise online, there's only so much access she can have. This highlights the gendered power dynamics within the household, where, despite contributing economically, the sister's lack of personal phone access reinforces her subordinate position relative to her younger brother.

At times, girls who use smartphones owned by their brothers internalise this discrimination. Despite having less access to the smartphone, Gauri, a 16-year-old girl who shares a smartphone, doesn't seem agitated by it. She explains that she and her sister are usually busy with school, studies, and tuition, so when she wants to use the phone, she borrows it from her brother to use Instagram. There is also an internalisation of being a 'good' girl who studies well and stays away from any digital devices, which are often seen as wasteful and corrupting by families and communities. However, in the FGDs with younger girls, more probing revealed latent aspirations attached to spending more time on smartphones and their aspirations – *"I don't know about this app... How will I know if I don't even have it in my hands?" (FGD with girls 15 to 17 years, February 2024)*

All the respondents who shared phones did not follow a structured schedule for usage. Sana shared that she and her siblings each used the phone for at least half an hour a day. Ridhi mentioned, *"So, we decided that whoever needs it more at the time can take it. If I need it more, I'll take it, and if you need it more, you take it."* However, after further probing, she admitted, *"Then we end up fighting... but I just give up and say, fine, take it."* A similar pattern was observed during the FGD when an adolescent girl shared, *"There's always a queue to use the phone, one after the other, and I'm always at the end [leaving little time to use it]." (February 2024).* This sentiment

Girl watching Instagram

was echoed by many other girls. This dynamic underscores how resource-sharing within households, particularly between genders, often favours patriarchy. Even when there's an attempt at egalitarian decision-making, gendered power imbalances prevail, with girls eventually conceding to boys' needs and priorities.

Balancing Screen Time

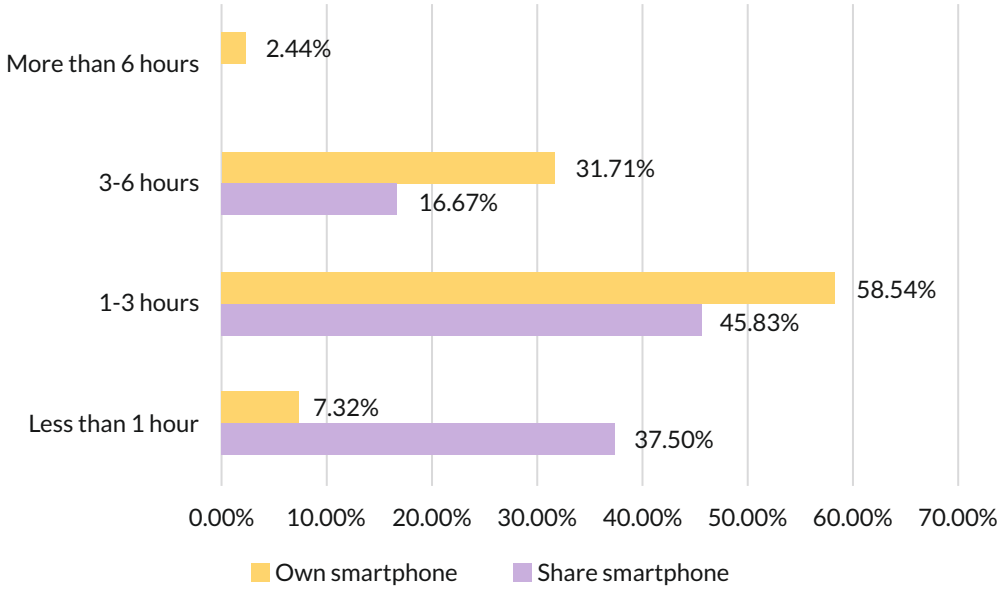
According to a study by Singh and Srivastava (2021)[3], almost half of their sample used their smartphone for more than 6 hours, followed by 3 to 6 hours and less than 3 hours in a day. In the same study, 41.6 per cent of the sample slept with their phones on. Males check their phones more frequently (11 to 20 times daily) compared to females (less than 10 times daily).

[3] study was done with 2000 participants (1000 boys and 1000 girls) of age range 16-30 yrs. from various educational institutes of the urban and rural areas of eight cities of Uttar Pradesh, India

When sharing a smartphone, physical access often becomes a source of dispute. However, ownership is not the only factor that restricts the time individuals spend on their devices. A significant factor that limits smartphone app usage is also gender-based unpaid care responsibilities.
In Figure 2.4 below, we see that individuals who own smartphones tend to spend more hours using them compared to those who share devices. This observation seems logically obvious; however, from a gender perspective, there is a noticeable difference in the time spent on phones based on whether they are shared or owned, as shown below. Although Figure 2.5 below shows that among respondents who share smartphones, females are more likely to access the devices for longer hours compared to their male counterparts, the same was not visible in our interviews and FGDs, which calls for further investigation. The adolescents and young adults in the study who shared smartphones reported spending between 1 to 3 hours using them daily (Interview, March 2024; FGD, February 2024). Very few participants who shared a smartphone accessed it for more than 3 hours a day. While access may increase on weekends or holidays, this is not reflected in their daily routines. Girls noted that their tight schedules significantly limit their phone usage. Gauri shared, ***"I don't spend much time at home. After school, I go to the (ISST Sathi) center, then return home for a bit of rest, eat, take a shower, then go to tuition, come back in the evening, eat dinner, and then go to sleep. I don't get to use my phone much... If I do, it's basically around an hour." (Interview, March 2024).*** They also cited the sharing of smartphones as a reason for not completing tasks. Ridhi mentioned that she briefly uses her phone in the morning to check messages and then again in the evening.

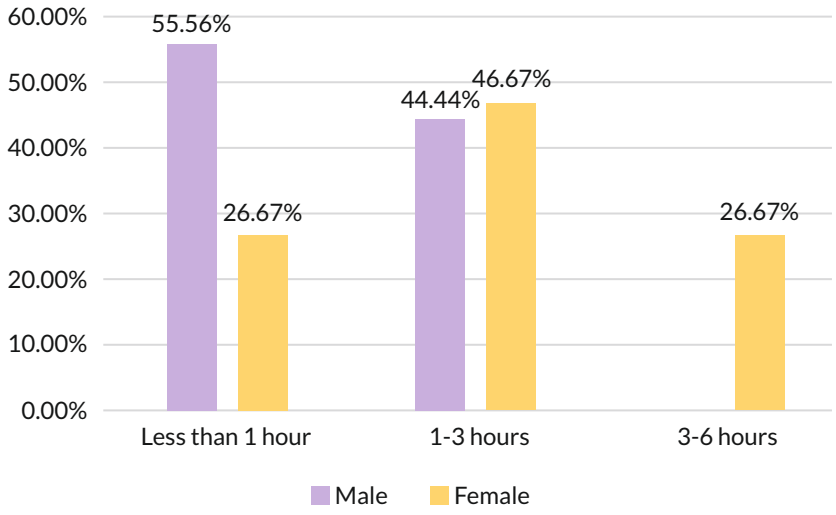
Figure 2.6 below further shows that among smartphone owners, most girls spend only 1 to 3 hours on their devices, while boys typically spend between 1 to 6 hours. Among the sample of smartphone owners, except for one outlier (4%) who used a smartphone for more than 6 hours, girls generally had less access to their phones. As shown in the graph, 80% of the girls reported using their phones for 3 hours or less, compared to approximately 44% of the boys.

Figure 2.4: Time Spent and Ownership of Smartphone



During the interviews, both boys and girls with their own smartphones reported having uninterrupted access, spending anywhere between 1 to 8 hours daily on their personal devices. Adolescent boys noted that they often hide their phones at school for personal use, while young men talked about concealing their phones at work. Anil, for instance, primarily uses his phone during his

Figure 2.5: Gender wise patterns of time spent on a sharing phone

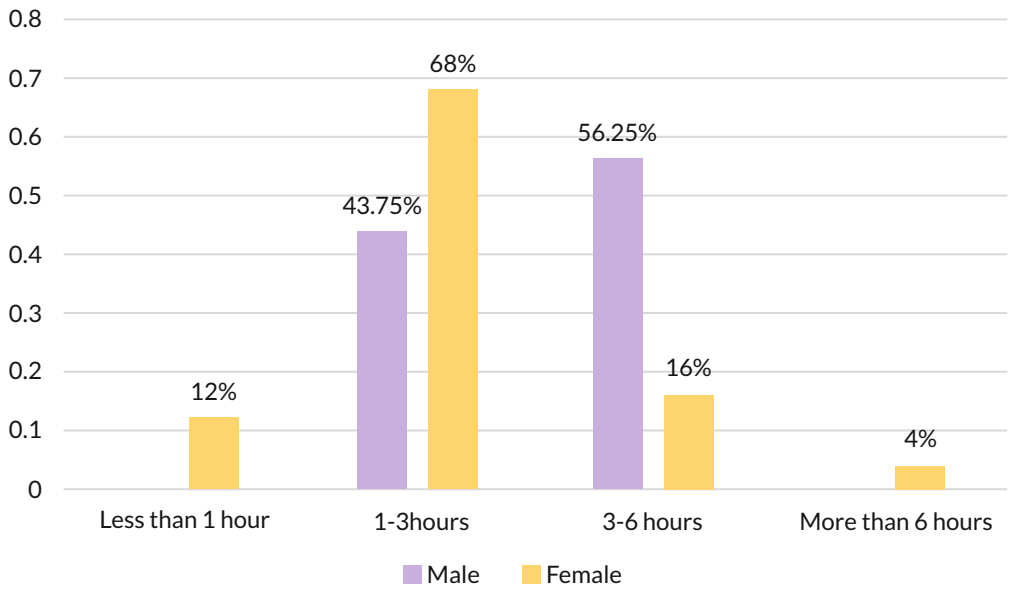


commute and at night. He is not permitted to use his phone at work, and when necessary, he has to hide it. He manages to use his phone for about 3–4 hours each day and up to 7–8 hours on holidays, often spending time on Instagram. Both genders experienced differing levels of freedom when using smartphones at home. Boys typically face restrictions on smartphone use only in external settings such as workplaces or schools, where rules or infrastructure limit their access. However, when at home, they generally enjoy considerable freedom to use their phones. In contrast, girls often face restrictions not only in institutional settings but also within their own homes, limiting their smartphone usage in both private and public spaces.

Unpaid care work

Women in India are known to spend some of the highest number of hours on unpaid and care work globally. Women aged between 15-29 years spend almost five hours more than men doing unpaid labour.[4] The girls and young women respondents of the study also identified how unpaid care work, predominantly performed by them, restricted their smartphone usage effectively. Naajia, a 18-year-old

Figure 2.6: Gendered distribution of time spent on smartphone based on ownership of smartphone device



who girl owns a smartphone, described her weekend activities, which involve house chores and cooking, tasks she enjoys. During weekdays, she attends an NGO and FEA (English coaching class run by an NGO), mentioning that she mostly uses her phone at night after dinner, despite having a personal phone.

Sana explained that her phone usage is shared among her siblings. She shared, ***"First, we come home... then we eat, relax, and after that, we have to sweep and clean (the house), wash the dishes, and do the laundry. When we both (she and her sister) do laundry together, we finish quickly... within an hour or so. After that, we lie down and watch videos on the phone, on YouTube... At 6 o'clock, prepare dinner, and then we don't use the phone... After eating and washing the dishes, my mom and dad come home, usually by 9 o'clock. Then we serve them dinner and wash the dishes again. Then we go to sleep. We sleep by 10 o'clock... My dad doesn't allow us to stay up late at night." (Interview, March 2024)***

Both figures 2.5 and 2.6 above show that some girls in the sample were using smartphones for longer hours. However, the nature of their usage wasn't specified. During the focus group discussions (FGDs) and interviews, it became clear that most girls, when engaging in domestic chores, prefer playing songs on their smartphones in the background, which translates into increased smartphone usage. Farheen shared her experiences with YouTube, noting that she enjoys listening to old songs, particularly those labelled "Old is Gold," which she finds enjoyable while performing her household duties and stitching clothes. She also listens to mushayras (Urdu poetry recitations) while working at home. She shared, ***"We have breakfast, then do some sweeping and cleaning, take a shower, and pray when it's time for namaz. After that, when we go home, we use our phones. If we have some creative projects related to clothing design, we create pieces and use YouTube for that... On YouTube, we play songs by searching for leads, and then we keep working (household chore) on it. So, we might spend 6-7 hours doing that until night." (Interview, March 2024).*** Sana and her younger sister listen to music while doing household chores or exercising, highlighting how they use phones to make mundane activities more enjoyable.

During the focus group discussion (FGD), adolescent girls shared that ***"boys use smartphone apps more because they don't have household responsibilities,"*** while girls have housework and tuition (FGD, Girls 15 to 17 years, February 2024). One girl explained, ***"Even if I use my smartphone for a little while, my mom assigns me tasks" (FGD, Girls 15 to 17 years, February 2024).*** This disparity is driven by two factors: the limited availability of smartphone as a resource, leading to prioritization of boys when distributing the time, and the belief that girls should be shielded from 'negative' impact of smartphone apps.

Boys are not reprimanded for neglecting domestic chores and are less frequently pressured to do them. Boys stated, ***"She (Mother) asks us to do household chores from time to time, like cleaning the fans, dusting, etc." (FGD, Boys 18 to 22 years, February 2024).*** This is comparison to work in which girls are delegated to girls on a daily basis is nothing.

Notably, Daksh in the sample was the only boy who was solely responsible for all home-based care work as he lives alone with his father, a necessity rather than being a gender role. Despite performing these unpaid care tasks, his father does not view it as Daksh's duty; instead, he expresses gratitude for his contributions. He is not prevented from using his phone due to household chores; rather, he voluntarily takes on these responsibilities. As a result, despite doing as much work as his female counterparts, he is in a better position than his female counterparts.

[4] https://www.thehindubusinessline.com/data-stories/data-focus/women-aged-between-15-29-years-spend-almost-five-hours-more-than-men-doing-unpaid-labour/article66682942.ece

Chapter 3

Patterns of Smartphone and App Usage

Access to smartphones does not necessarily determine the usage patterns of smartphones. The way individuals experience and navigate smartphone usage can vary greatly, even among those from similar economic backgrounds. The differences are not just in the types of apps explored but also in the content consumed within these apps. Although some apps operate offline, this study primarily focused on internet-based platform apps, as contemporary smartphones are primarily composed of them. The internet has become a ubiquitous and intrinsic part of nearly every aspect of life, especially with greater penetration of connectivity and affordable smartphone devices. The uptake of smartphones became necessitated during the COVID-19 pandemic. The digitalisation process has further increased with impetus from the Indian government.

As such, for adolescents and young adults, smartphones provide a gateway to broader social, educational, and informational landscapes, extending their engagement beyond immediate physical surroundings and social circumstances. In this chapter, we will explore these differences primarily from a gender perspective, while also considering age as an important factor. This section examines how gender and age intersect to shape smartphone app usage, highlighting the ways in which these factors influence behaviour.

Among the study's sample, the most popular apps across genders and age groups were Instagram, WhatsApp, and YouTube, except for girls in the 15 to 17-year age group who shared smartphones with others (Interview, March 2024). They reported using only WhatsApp and YouTube (Interview, March 2024). In contrast, nearly half of the boys in the sample reported using Snapchat actively for chatting, while girls primarily used it for offline purposes, such as applying photo filters (Interview, March 2024; FGD, February 2024). Beyond the popular apps, there were also some lesser-known or less-used ones. Apps like Facebook, payment apps, travel apps, and shopping apps were used by only a handful of respondents (Interview, March 2024; FGD, February 2024).

In this section, we will not only examine which apps are used but also investigate the patterns of app usage among adolescents and young adults of different genders. The same app may be used differently by different individuals, and here we aim to identify if there is a discernible pattern in this usage.

Smartphone app basket (participatory tool), FDG with boys (above 18 years)

Social Media

Social media platforms are extensively used by a wide range of individuals across different age groups and genders. The respondents mentioned engaging with social media by watching reels, reading posts, following news, chatting, and keeping up with updates from family and friends. According to Singh and Srivastava (2021), males use social networking apps more than females. Females use their phones more for chatting and messaging, while males use them more for social media, entertainment, and Facebook. The study also showed how males use more apps for news, phone calls, messages, and games than their female counterparts, while females use apps more for music, selfies, and educational information. These findings resonated with our study findings as well.

While almost everyone was a casual viewer, around half of the respondents actively created and posted content online. Among girls, only those over 18 who owned their own smartphones actively posted content online, while others did not (Interview, March 2024; FGD, February 2024). A possible reason for this is the fear of the unknown among younger girls, coupled with internalised control stemming from that fear, as they mostly use shared phones in the household. As these young women grow older, they and their peers begin to explore

the internet more and realise that it isn't as intimidating or risky as they once thought.

Going forward, we will now unpack the content being posted, as well as the efforts involved in creating it.

3.1 Posting online

The manner in which social media is used for self-presentation varies significantly across genders. Understanding these patterns is essential to grasp the nuances of online behaviour in today's digital landscape.

Figure 3.1.a below shows that a higher percentage of males post about themselves on social media compared to females, indicating significant gender differences in social media image presentation among 18 to 22-year-olds. The data presents general posting behaviour. In this survey, those who responded that they do not post on social media are the ones who have never posted on social media or did not post anything at the time of the survey.

Figure 3.1.b shows that both males and females primarily post pictures online, with males posting slightly more than females. Males also post more statuses and videos compared to females, who post slightly fewer reels and significantly fewer videos. Societal norms and expectations shape the ways in which individuals express themselves. Traditional gender roles often discourage females from being as visible in public spaces, including online platforms, which are an extension of the public space. Posting content online is a privilege that not all girls have, and this leads to self-censoring their online presence due to the risk of online harassment and fear of reputational damage, as other studies have also found (Hassan, Unwin & Gardezi, 2018; Barboni et al., 2018; Sonne, 2020).

Younger girls without smartphones often express a desire to post online. Ridhi likes the idea of posting photos online but is unable to do so due to restrictions imposed on her by her family. She shared, ***"It was Teacher's Day, so I wore a saree, and the photo was nice. I thought of posting it with a song or something, but I couldn't post it. I wanted to but couldn't. Then my friends, they posted everyone's photos." (Interview, March 2024).*** Although she did not inform her family about her photo, she asked her other friends to view the photo on her school friend's profile. Her desire for digital self-expression is stifled by her familial expectations.

Figure 3.1.a: Gender-wise patterns of posting on social media

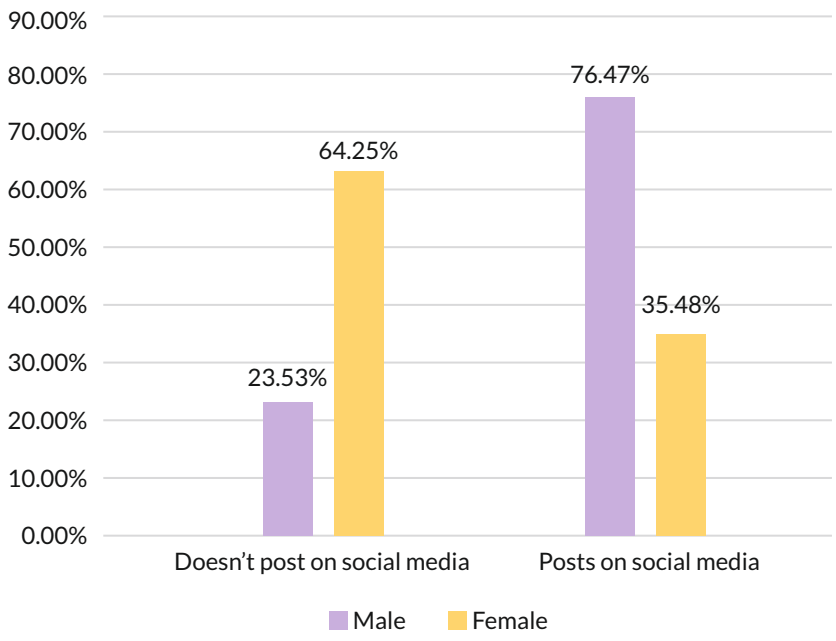
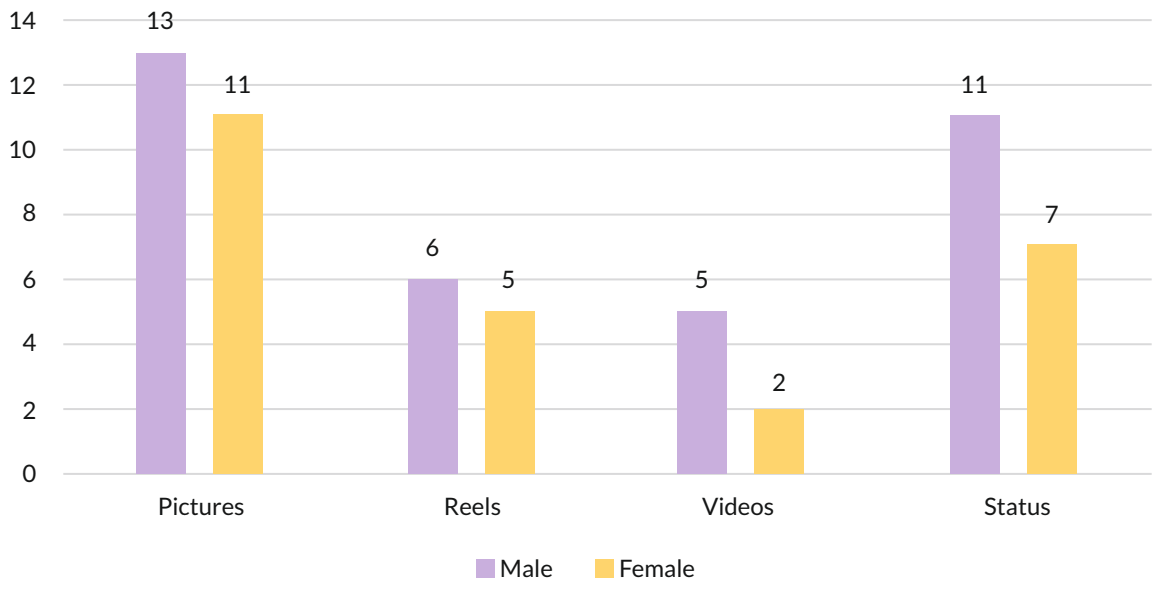


Figure 3.1.b: Gender-wise patterns on what is posted online



Some girls have conditional permission where they are permitted to post photos on WhatsApp but not on broader social media platforms. Sana shared, ***"Snapchat is there to take photos... then, I put it on my (WhatsApp) status, WhatsApp, I put it there or it mostly stays saved (in the phone)" (Interview, March 2024).*** WhatsApp is perceived as a more domesticated and ubiquitous platform compared to other social media. WhatsApp is often shared among family members, and even when girls have their own phones, it remains an app that others can easily monitor. Unlike other social media platforms like Instagram or Facebook, WhatsApp is perceived as more secure because it restricts communication to people who are already on one's contact list. Family members are typically more comfortable with WhatsApp since it offers a sense of control and familiarity, ensuring that anything shared is visible only to known contacts. This perceived security makes WhatsApp socially more acceptable for girls compared to other platforms, where interactions often extend to strangers or acquaintances outside one's immediate network. Girls who don't feel safe or are conscious of familial restrictions often feel more comfortable posting images on WhatsApp status, which is visible only to family members and friends. These images typically include photos from family functions or festivals. This offers girls the opportunity of being visible in the online world while staying within the boundaries set by their families. Though it is not true for all, Ridhi shared, ***"I don't even put my photo on WhatsApp... Because my brother forbids it, saying someone might see it. Since it's my brother's phone and his friends are on it, he tells the family not to post photos. If I don't post it there, doing it elsewhere is out of the question." (Interview, March 2024).***

For those who do not face such restrictions, discussions about posting photos and reels online reveal a genuine enjoyment of sharing their pictures. Most respondents reported using Instagram extensively for posting photos and reels. Amrita, a 20-year-old girl who owns a smartphone, enjoys creating reels for Instagram and keeps her content light with humorous or casual themes. Most of her posts are personal, including photos with friends or group reels. She shared, ***"The day I feel confident, the day I look good, I make reels… (the reels include) dancing and lip-syncing." (Interview, March 2024).*** She, as well as other respondents, posts these reels with occasional assistance from a friend for video editing. Birthdays are one occasion when the respondents frequently post photos online. The social validation received from sharing experiences, particularly during significant events such as birthdays, highlights the importance of social capital in shaping identity and social interactions. Here, individuals curate their online personas to gain recognition and affirmation from their peers.

3.2 Pre-requisite of posting online

When someone posts content, a lot of effort goes into the process, including editing, writing captions, physical preparation, creating the content, and financing. Here, as well, the nature of effort and energy differs in accordance with the skills and enabling environment of the individual.

3.2.a. Editing

Adolescents and young adults vary in how much effort they put into editing their content. Hemant takes a straightforward approach, using apps like VN to edit his sister's reels, Remini to clear his own photos, and Snapchat for filters. Similarly, Anil enhances his photos by blurring the background and adjusting brightness for better visual appeal. On the other hand, Anuj puts in considerable effort to make his content look professional. He meticulously edits his photos and reels using Canva and Photoshop, focusing on framing, captions, and syncing transitions with music. He even uses CapCut, accessing it through VPNs after it was banned in India, to utilise advanced features and effects that basic apps like VN cannot offer. Despite having an older i3 model laptop that struggles with heavy software like Premiere Pro, Anuj remains dedicated to his craft, ensuring his content stands out even if it requires more time and effort. This reflects varying levels of access, skill, and confidence among users, from simple enhancements to detailed, professional-like productions.

Girls, on the other hand, mostly engage in simple editing or seek help from male friends or brothers. It was evident in our FGDs with boys of both older and younger age groups that they had more time and space to work on skills required for gaming, editing, etc. This knowledge is further aided by the easy access to public/online spaces as compared to girls, which also fuels the desire to learn skills like editing photos, etc., to be able to post and garner likes on their videos and photos on social media. This is not merely a skill gap but a gendered digital divide that is evident even in basic tasks like editing. Although it may seem coincidental, the comfort with technology-based knowledge is socially constructed and reinforced.

3.2.b. Aesthetics

Most respondents flaunted the careful presentation of their online content. Lakshay frequently posts on Instagram, planning photoshoots based on locations. Lakshay shared, ***"(before posting) I decide on clothes and everything... like if I go to a mall, then new clothes... if I go for trekking, then sportswear" (Interview, March 2024).*** The adolescents and young adults plan everything from location to background music to clothes in advance, aiming to align their online personas with popular trends.

Naajia edits her content with filters and posts videos on YouTube, investing significant effort in preparing for shoots. She carefully selects backgrounds and outfits, often using her relatives' roofs. She even purchased a ring light to enhance video quality, showing the lengths to which young users go to craft appealing online identities. When it comes to aesthetics in content, both boys and girls active on social media exert similar efforts. They have access to comparable resources, and their desires to remain relevant and visible are also alike.

3.2.c. Economic Expenditure

Creating engaging reels and photos often involves financial costs. Coming from lower-income backgrounds, respondents find it challenging to travel leisurely and post. Anuj describes a budget trip to Vrindavan, where he stayed at a local math (religious institution) for 500, which included food and accommodation. They managed their trip on a tight budget by walking instead of using e-rickshaws, allowing him to create compelling travel videos without significant expenses. These young individuals, in their efforts to compete with online peers from higher-income groups who have greater financial means, skillfully utilize their limited resources. Their awareness of economic constraints compels them to optimize the use of what is available to them. However, girls face additional challenges in this context. Cultural constraints significantly limit their mobility, particularly concerning leisure activities. As a result, they often lack the opportunity to travel for

content creation. Amrita shared, *"(I create reel) sometimes at home, sometimes when I go out for college... when I nice clothes and think, okay, I'll make reels." (Interview, March 2024).* Despite challenges, both boys and girls create appealing content within their means.

3.2.d. Tactics for Maximizing Engagement

Boys take extra care to become more visible online, employing strategies that were not shared by any of the girls in the sample. Anuj describes how Facebook accounts are often created under fake identities to participate in "DP (Display Pictures) battles," where participants post pictures and compete for the most likes or comments. A common tactic involves copying and pasting comments from multiple fake IDs to boost engagement artificially. Similarly, Daksh strategically uploads his photos on Instagram about 30 minutes before peak times to maximize likes and views. Daksh shared, *"I check the timing... like when the likes are coming in and until what time. So, I go there, check the timing by clicking 'insert,' and it shows how many levels it has between 6pm and a certain time on a chart. After understanding that, I upload the photo about 30 minutes before the scheduled time, and then the likes and everything start coming in." (Interview, March 2024).* This shows how, despite both genders wanting visibility, boys are more aware of and engage with algorithms to ensure they stand out online. Girls on the other hand, had limited algorithmic knowledge in contrast to boys.

3.3 Going viral

Social media validates the efforts and skills of young people by providing them with recognition and a platform to express their voices. This validation escalates when their videos or audio clips go viral, reinforcing their determination to continue creating content. Among the respondents, two had experienced going viral or becoming popular on social media. Daksh shared,
"I don't usually post about celebrities, but once, when Sushant Singh Rajput passed away, there was a lot of news and viral content going around, claiming that he was murdered and all that. So, I don't know why, but something came over me, and I immediately started researching on Chrome and Google—who his girlfriend was, who he was going to marry, everything. I wrote it all down in detail on one page, and after that, I added a photo of Sushant Singh and uploaded it. After uploading, I shared it on Facebook and WhatsApp. I also shared it on Instagram, and I created a Twitter account. It was asking for 18+ verification, so I increased my age on Gmail and then uploaded it there as well. After that, I got over one million views... On Twitter... I got about 7.8 million likes, but after that, I deleted the account because I was getting spam and all that." (Interview, March 2024).

While Daksh now shares comedy videos about political figures with friends, he avoids posting such content publicly. Similarly, Naajia posted reels on Instagram and gained a significant following. She shared dancing, acting clips, and personal photographs, which garnered considerable attention. However, she paused her activity during exam periods and now plans to return to social media after upgrading her phone, as her current phone's camera is subpar.

With around 1,300 followers, Naajia is considering creating more content, including funny clips with her sister, as those tend to receive more views. However, she primarily likes to be the focus of her reels and fears losing her followers due to her inactivity. The virality of online content, fueled by algorithms play to remain relevant, contributes to the construction of digital identities, nurturing the aspirations and hopes of young people.
Daksh, active on YouTube, is interested in gaming content. He shared,
"Now that everyone's (friends') exams are over, we've thought about creating our own YouTube channel. One person will make a channel, someone else will make a different channel, and we'll all work on each other's channels. If one person helps with someone's channel, the other will also help in return." (Interview, March 2024).

They intend to work on diverse content and support each other in video production. Daksh had previously produced videos on popular trends like gaming and object-breaking, which garnered attention. Daksh shared,
"People get really invested in watching how something is being broken, so we thought of doing

something similar. We started breaking things like glass bottles, sauce bottles, and dropping them from stairs, and we recorded it. After making the video, we uploaded it, and it got good views... The channel's name is @lemonrice (name changed), and it was divided into three parts—there are three channels. The main channel's name has been removed, and we're thinking of a new name today." (Interview, March 2024).

Although the account was nearly frozen due to inactivity, it was eventually revived, and they plan to relaunch their channel.

3.4 Chatting

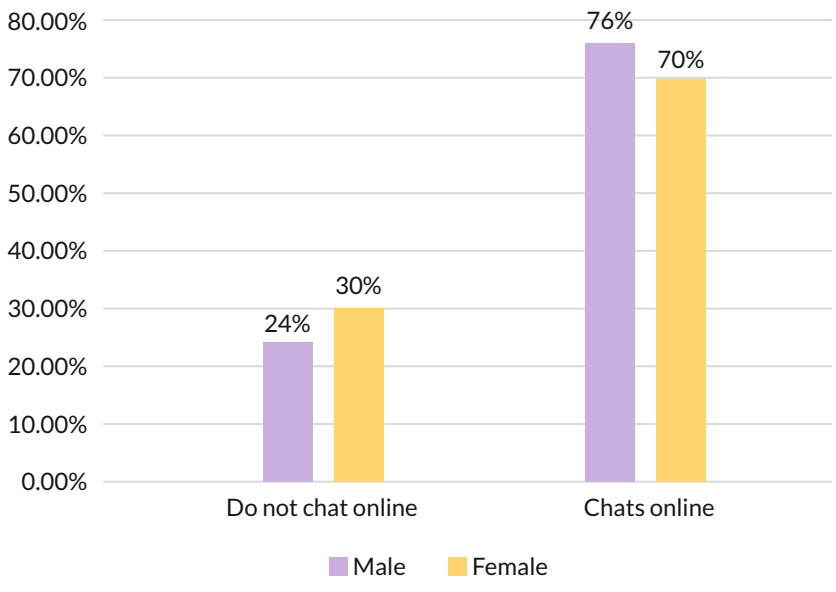
Chatting is a highly favoured activity among the respondents. Regardless of their ownership status, all participants utilise one or more platforms for communication. This form of interaction addresses the social needs of young individuals, facilitating intimate conversations with both familiar acquaintances and those they aspire to know. Unlike face-to-face communication, online chatting transcends geographical and mobility limitations, enabling individuals to establish meaningful connections without leaving the confines of their homes.

In Figure 3.4, it is evident that females are less likely to engage in online chatting compared to their male counterparts, although the gender disparity is minimal. Additionally, the data indicates that individuals are comparatively more inclined to chat overall.

Nearly all participants in the sample reported using WhatsApp for communication. Regardless of their ownership status, everyone had access to the platform. However, the use of shared phones often resulted in a single WhatsApp number being utilised by multiple members of the household. This situation could lead to one phone number being associated with various school groups across different classes, especially when siblings share the same number. For instance, Lakshay uses his mother's phone for WhatsApp, where the same number is shared among his mother and siblings. He receives college updates through the group chats.

Boys who share smartphones frequently report engaging in conversations with friends on other platforms, such as Instagram and Snapchat. This protects their privacy. However, not all individuals have the luxury of maintaining personal accounts on these platforms. Adolescent girls who share smartphones typically limit their usage to WhatsApp, using it primarily for chatting with friends, participating in school-related groups, and

Figure 3.4: Gender-wise patterns of chatting online



communicating with family members. They generally do not engage actively in private conversations with friends online. As Sana shared, ***"When we get messages from friends, we check them, but don't actively engage." (Interview, March 2024).*** WhatsApp is a chatting app whose usage is more prevalent in the public domain as far as sharing phones is concerned. Literature also supports this; Sonne (2020, p. 11) shares that due to the risks posed by women being visible online, women prefer 'closed-circuit' apps like WhatsApp as opposed to social media apps such as Facebook (GSMA, 2019) because of security concerns and the risk of gossip from using Facebook (which, in turn, can negatively impact young women's ability to marry well) (Barboni et al., 2018).

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Those who own smartphones also talk about using WhatsApp, but with limited capacity. For them, WhatsApp is more for day-to-day and intimate conversations. Naajia uses WhatsApp for chatting with friends and relatives, whereas Anuj uses WhatsApp more to coordinate with his employer about shoot dates and training schedules rather than talking to friends. He uses both WhatsApp and Instagram for chatting with friends and video calls using WhatsApp. Meanwhile, Hemant uses WhatsApp to talk to his potential girlfriend. Although he talks to many girls, he has only shared his WhatsApp number with the girl he likes the most. He distinguishes apps and their purpose when demarcating between his private and public life, with WhatsApp being part of his private life. He also uses WhatsApp for conversations within school and computer class groups.

Most respondents with personal phones asserted that they don't use WhatsApp much, but for some, it was seen as a personal space. Instagram is mostly used by all girls who own smartphones and by all boys, regardless of smartphone ownership, for chatting. They find opportunities to meet new people online and chat with them. A few boys in the sample also used Snapchat. When asked about the appeal of Snapchat, Anil shared, ***"When the conversation is over, the chat gets automatically deleted after being seen... in 24 hours." (Interview, March 2024)***. The app is considered useful for safety purposes. Streak sharing on Snapchat is another engaging feature. Anuj explained, ***"If I'm eating something, I send it, then the other person says, 'Eating alone, huh?' This and that... and a conversation starts." (Interview, March 2024).***

3.4.a. Virtual Social Circles

The boundless nature of the online world has given rise to various virtual groups. Hemant, who is religiously inclined, shared how he ordered a Rudraksha from Adiyogi Bhole Baba in Adheesh, Uttarakhand, through a forwarded link on WhatsApp that offered it free of cost. Hemant explained, ***"It will come after 6 months, it's original. It will come after the offering is made. That famous baba, who serves Adiyogi, is the one who makes the offering. He brings all Rudrakshs and gives them to us." (Interview, March 2024).*** He noted that payment was optional, and he had not paid yet and would still receive it. Virtual groups have become powerful tools for attracting a diverse population across geographies, uniting individuals with similar ideologies who previously found it difficult connecting.

The interviews were conducted around the time of the Ram Mandir inauguration in Ayodhya, and many boys reported being added to religious groups centred on the Ram Mandir (FGD, February 2024). Anuj described his participation in rallies related to the Ram Mandir, which he shared on social media after learning about the rally from his friends online. Anil was added to several Instagram groups related to the Ram Mandir but did not actively participate or share content. Hemant created and participated in a Sanatani Hindu group on Instagram, where he shared content praising the BJP and Hindu religious themes but eventually removed many members as the group became cumbersome due to frequent messages. Digital platforms serve as sites of political and religious socialisation, influenced by online peer networks. Any national event leads to a sudden increase in activity within these online groups, which then subsides once the event is over. The combination of virtual association and socio-political events can generate heightened attention to issues that previously would have required extensive on-the-ground networking to gain traction.

According to our study, boys were often part of larger virtual political, religious, or even casual groups involving strangers, while girls primarily participated in smaller groups with known friends,

classmates, or family. For example, none of them reported being added to any group related to the Ram Mandir inauguration. These groups were commonly found on Instagram and WhatsApp. For instance, Hemant participated in diverse group chats that included content such as double-meaning jokes and funny videos, while Daksh shared celebrity-related content and political jokes with friends. Not all boys engaged with strangers; Lakshay and Vishnu, an 18-year-old boy, who shared their phones with family members, mostly participated in groups limited to friends and family. The level of phone ownership and gender played significant roles in determining one's involvement in broader virtual social groups. For girls, cultural barriers and security concerns often restricted their participation in larger groups, whereas for boys, the time availability of a smartphone acted as a determinant factor.

3.5 Seeking intimate relationships

Seeking intimate relationships via dating world has changed substantially with the advent of the internet, making it a vast landscape with numerous options and consequences. The respondents in the study often met people, dated, or proposed online, with their dating lives heavily influenced by apps. However, the apps they used differed from those popular among adolescents and young adults from economically strong backgrounds. Anuj shared his experience on Bumble (a popular dating app), which he joined out of curiosity. He said, ***"They (the girls he met on the platform) usually asked to go on a date, and I might have had to meet them... but I didn't have enough money to go on a date, and I wasn't free either (due to work commitments) ... so I just didn't feel like going." (Interview, March 2024).*** He eventually deleted the app. Dating apps are designed with users from middle or upper-middle-class backgrounds in mind, not those from lower-middle-class or low-income groups. Most of the respondents turned to social media platforms like Instagram for dating. Naajia shared that she doesn't use dating apps but uses Instagram to meet new people, as her sister or family members can easily see her phone. She explained, ***"If my sister sees a dating app, she'll say, 'Oh, so this is what you want to do? You want to date? You want to do Shaadi.com? Okay, put the phone down, and we'll get you married first." (Interview, March 2024).*** She feels she would have to pay a bigger price for using a dating app, but Instagram allows her to mask her interactions with people from opposite sex without getting caught.

Two friends sharing a smartphone

Most young adult boys and girls spoke about meeting new people or making friends through Instagram. In the younger cohort, only boys with their own smartphones were vocal about meeting potential girlfriends on Instagram. None of the adolescent girls in the sample had experience of

meeting a stranger online with dating in mind. Sana, who is in school and shares her phone with her mother and siblings, mentioned that she has never made friends online. Sana “New friends? All my friends have been made in school... And like, the ones who are in our neighbourhood.” (Interview, March 2024). Older girls who were active on Instagram often had alarming experiences meeting new people, which made them wary or overly cautious. Amrita, for instance, described meeting a boy online who appeared charming—handsome, a biker, and a guitarist. After chatting for a while, he invited her on a date but unexpectedly suggested they stop by a friend's place. Feeling hesitant but unsure, she agreed, only to realize no one else was there, and he tried to get physically close. She quickly had a friend fake an emergency call, allowing her to leave. She then blocked him, and he did the same.

For boys, both adolescents and young adults often meet new people on Instagram with dating in mind. Hemant met girls on Snapchat as well but preferred Instagram for chatting, often asking them to switch platforms. This shows a preference for certain apps for certain activities and how these adolescents navigate relationships through different platforms.

Most of the respondents preferred talking to their online friends but avoided meeting in person. They mostly tried to keep their virtual relationships limited to virtual space. This was true for almost everyone dating online. Of all the people interviewed and participating in the FGD, only two had ever met anyone they met online.

Anil shared, *“When she asks to meet up, I make excuses that I can't come. My mom won't let me.” (Interview, March 2024).* The reluctance to meet online friends, particularly in the context of adolescents like Anil who use excuses to avoid in-person encounters, can be analyzed through Erving Goffman's theory of dramaturgy which. compares social interactions to theatrical performances, where individuals manage impressions to influence how others perceive them. The "front stage" involves the presentation of public behaviour aligned with social expectations, while the "backstage" is the private space where individuals reveal their true selves and prepare themselves. The reluctance to meet online friends, particularly in the context of adolescents like Anil, who use excuses to avoid in-person encounters, can be analyzed through Erving Goffman's theory of dramaturgy, which compares social interactions to theatrical performances, where individuals manage impressions to influence how others perceive them. The “front stage” involves the presentation of public behaviour aligned with social expectations, while the “backstage” is the private space where individuals reveal their true selves and prepare themselves. The reluctance to meet could also be because, during the online interaction, they engage in impression management by carefully constructing an online persona (front stage) that may not align with their idea of their offline self (backstage).

There was also a curiosity about meeting people from around the world. Suresh used Omegle and OmeTV for video chats but did so using his friend’s phone instead of his own. He connected with strangers from India and abroad through these platforms. Many people make friends while playing games on gaming apps. Hemant shared,

“There was a guy named Nitin from Bihar, from Muzaffarpur on PUBG (a tremendously popular gaming app). We talked and became good friends. Whenever I had any doubts in PUBG—like, I had bought RP (Royale Pass), which usually costs money, but I had gotten it for free—still, my name wasn’t showing up at the top, even though I knew it should be. This went on for a year, and everyone kept asking why my name wasn’t at the top. It was a simple trick; something had been turned off in the settings, but I couldn’t figure it out. I even watched videos on YouTube but still couldn’t understand. Then I asked Nitin about it, and he said to turn on a certain setting. I did, and the next day, my name started showing up at the top... Nitin is now on Instagram, he’s come to Instagram... he’s not a friend like before. Earlier, I used to play a lot, way more…” (Interview, March 2024).

When meaningful friendships are formed through gaming apps, young people often shift their interactions to more social platforms when they intend to deepen the relationship. Being added on other platforms becomes a symbol of greater intimacy with their virtual friend. Similarly, Daksh shared:

"I have a friend from Maharashtra, Mumbai. We are friends through BGMI (Battlegrounds Mobile India), and now we are friends on Instagram too. She has my number, and I have hers as well. Sometimes, we talk. From her side, she considers me a friend, but from my perspective, I consider her a bestie. She sees me more like a casual friend." (Interview, March 2024).

They've never met these friends in person. During FGD, a young adult girl shared that she made a friend named Khushi on Snapchat, thinking it was her real-life friend Khushi, but it turned out to be someone else, and they are still friends (FGD, 18 to 22 years Girls, February 2024).

Modern life often diminishes face-to-face interactions, which is believed to adversely affect community engagement. However, technology has now facilitated the emergence of new forms of association that have become a new way of life and are gaining social recognition.

Even when the love interest was from their social circle, young adults preferred expressing romantic interest online. Anuj mentioned that he finds it extremely difficult to propose to someone face-to-face, so he uses social media platforms like Instagram and WhatsApp instead. Anuj's discomfort with face-to-face proposals points to a broader societal tendency to avoid vulnerability. Proposing directly to someone requires a level of emotional exposure that many young adults may find daunting. Almost all respondents who met new people online preferred texting over other forms of communication. Only a few, like Hemant, were comfortable with text, audio, and video chats. Naajia said she prefers texting when dating because she can communicate better that way. Phone calls make her anxious about awkward pauses, and on video calls, she feels self-conscious and constantly worries about how she appears on camera. They curate their online personas while simultaneously grappling with insecurities in more direct forms of communication. Anuj also highlighted the impact of his violent neighbourhood on his interactions, sharing that he's cautious when talking to new people online as misunderstandings can lead to conflict. He explained, *"The area is such that people carrying knives and weapons just roam around, so we have to stay low-key." (Interview, March 2024).*

Navigating online love lives, adolescents and young adults often did something special for their online 'friends.' This gifting usually flowed from boys to girls. Hemant noted that while he hadn't given or received any material gifts, he edited a photo for a girl which is appreciated. He shared, *"I asked for the photo from them in the chat. I said, "send a photo... (I used app named) VN... I searched on YouTube, like how to edit photos of this type." (Interview, March 2024).* Naajia, reflecting on her 12th standard, recounted how she would have boyfriends she met on Instagram treat her with food delivery whenever she craved something. She would often tell her friends to download Instagram and find boyfriends to treat them. A girl shared how her boyfriend recharges her phone (FGD, Girl 18 to 22 years, February 2024)

Cultural norms around strict gender segregation are being challenged by young people in the online space, often leading to the creation of fake accounts for forming friendships. Naajia mentioned instances where boys created fake girl profiles to meet other girls. Boys, too, expressed caution about confirming identities online. Anil shared, *"First, you have to confirm whether it's a girl or not. I directly ask, 'Are you a girl?' If she says yes, I make a video call, and if she picks up, fine, otherwise, I assume it's probably a guy." (Interview, March 2024).* Lakshay echoed this caution, checking photos on social media and voice calls to confirm. Both boys and girls showed skepticism of gender of the people on other side when it came to meeting strangers online. For girls, it was primarily a concern of security and surveillance, while for boys, the fear was more related to being conned for money.

3.6 Gaming

3.6.a. Gaming and Gender Dynamics

In the realm of online gaming, boys typically engage with games like PUBG, BGMI, and Free Fire, while girls tend to favour games such as Ludo, Subway Surfer, cooking games, and Candy Crush. Generally, girls appear to be less invested in gaming compared to boys. For instance, Hemant coordinates with his friends through phone calls to engage in multiplayer, highly popular online games such as PUBG, Free Fire, and BGMI. However, this pattern

is notably absent among girls. Their participation in such leisure activities is minimal, as they lack the autonomy to engage in recreational associations at their discretion, reflecting the gender constraints on smartphone app usage. Engagement with games like BGMI and PUBG often reinforces traditional gender roles, where hypermasculine environments in these games are regarded as an acceptable male pastime, asserting stereotypical masculine qualities. In contrast, Ludo and Subway Surfer, played by girls, are viewed as "appropriate" games for girls as they require softer, lesser forms of engagement. Moreover, playing BGMI or PUBG often results in longer screen time, which can lead to addictive behaviour, a phenomenon that is socially normalised for boys but discouraged for girls. Conversely, games like Ludo and Subway Surfer typically involve shorter play sessions, often serving as quick escapes or downtime activities.

The lower engagement levels among girls reflect societal control over their leisure time, as well as the internalised control they exercise when choosing which games to play. During focus group discussions (FGDs), girls identified popular games among themselves such as Ludo, cooking games, Free Fire, Candy Crush, Granny, Tom Baby, and Subway Surfer (FGD, Girls 18 to 22 years and Girls 15 to 17 years, February 2024). While not every girl played every game, they frequently discussed their experiences with one game or another. Some girls in the group who didn't engage with games expressed sentiments like, ***"I don't play many games online because I don't know how to," while others remarked, "We don't play games (which is a bad habit)," (FGD, Girls 15 to 17 years, February 2024).*** This suggests that they may have internalized moral policing surrounding gaming, assuming that gaming is something negative which girls should not be part of. In the younger age group, girls also shared phones and had limited time to access to phones. They preferred engaging with social media for entertainment rather than playing games.

In contrast, boys mentioned a broader array of games, including GTA 5, Temple Run, Ludo, Snake Squeeze, Subway Surfer, WCC3 (World Cricket Championship 3), Ninja, Zombie, Candy Crush, Moto Bike, Free Fire, Tekken 3, Call of Duty, Teen Patti, PUBG, and BGMI (FGD, Boys 18 to 22 years, February 2024). This suggests that the gender-based choices of games imposed on children in the physical world, which shape their understanding of their social positions, also translate into the virtual world. When discussing gaming, a 20-year-old girl shared:

"I don't like Free Fire... it feels boring, and I don't understand anything in it. Once, my brother handed me PUBG because he had to go somewhere. I couldn't grasp it at all. I just hid in the game. Sometimes the sky would get bigger, and sometimes something else would happen. I just hid and got killed" (FGD, Girls 18 to 22 years, February 2024).

3.6.b. Money and Gaming

Non-Traditional Earnings: The boys in the sample frequently discussed earning and spending money through gaming. Notably, none of the girls mentioned using money for gaming or earning from it. Only Daksh reported earning ₹2,000 through PUBG by receiving payment per kill in an MPL event. Other methods of earning were also highlighted. Lakshay shared,
"There was an app... the Rooter app, and on it, I had to watch streams, and during the streams, I would earn coins, which I could convert into money or into game rewards. I could convert the coins and get something... (I earned) 60 rupees... I withdrew that into my friend's Paytm account... it's a daily thing, like people get encouraged to do a daily spin, and you might get 2 rupees or some other small amount like that." (Interview, March 2024).

Furthermore, Hemant spoke about PIE, an app introduced to him by friends, which they believe could become valuable like Bitcoin in the future. He learned about PIE through an animated series called 'Zamzam' and social media reels, explaining that he and his friends are not investing money but are collecting coins for free. He mines coins daily through the app, hoping they may become profitable someday. Daksh echoed this sentiment, sharing that he currently owns 10 coins valued at around ₹2,000 each and believes that by 2026, they could translate into crores of rupees.

Some friends have reportedly sold their Free Fire IDs for ₹70,000. ***"Rare IDs are created that contain items not available to others, these include guns, modes, and many other things" (FGD, Boys 18 to 22 years, February 2024).*** To sell an ID for this amount,

an individual must have invested over four years and considerable money in the game. The relationship between gaming and earnings is predominantly observed in boys, likely influenced by their socially constructed role as providers. This prospect of financial gain through gaming thus attracts them, leading to a significant investment of time and energy in virtual spaces.

3.6.c. Spending Money on Games

Boys in the sample generally spent varying amounts of money online, ranging from ₹10 to ₹250. This money was invested either in purchasing virtual goods or in betting. The former was generally accepted by all, while the latter was perceived as unfair and problematic. Anil shared his experiences with apps like Winzo and Probo for betting and gaming, although he was cautious about investing money in them. He recounted using apps that reward players for predicting outcomes and expressed concerns about hacking, which deterred him from extensive play. He had tried and won a few times but chose not to continue. The games are probability-based, relying on live match outcomes, where betting on lower-probability answers yields better rewards.

Anil recounted his experiences with Winzo, a platform where players can earn money through games. However, he found it challenging to accumulate the required ₹200 to withdraw money. Despite several attempts over three or four days, he was unable to reach the minimum threshold. Frustrated, he ultimately deleted the app, believing that games like Winzo are often unfair due to opponents potentially using hacks, making it difficult to win. Even if he started with some success and earned small amounts, he eventually lost money, leading to his decision to uninstall the game. He shared:

"So, we can't win, we know the other person will win, and the other person always wins. First, I'll win four games, then three, then three more, and then four more, with the winnings around ₹50-₹60. Then, when we start placing bigger bets, we lose. We think, let's place bigger bets, but then we lose those too, and eventually, we end up with zero money." (Interview, March 2024)

3.6.d. Enhancing Gaming Skills

Suresh, Anil, and Hemant exemplify how young gamers leverage digital platforms like YouTube to enhance their gaming skills and knowledge. Suresh improves his gameplay by learning advanced techniques, such as adjusting sensitivity settings, while Anil seeks cheat codes and tips from YouTube channels to excel at Free Fire. Games, originally intended for leisure, often transcend this role, becoming a source of social capital. A player's rank or status within the game can elevate their position in the social hierarchy among peers, with higher-ranked individuals gaining greater recognition and influence.

3.7 Entertainment

All respondents identified movies, series, and music as primary sources of entertainment, in addition to social media platforms. Notably, female respondents frequently mentioned Korean dramas as a preferred form of entertainment. The adolescent girls increasingly watched Korean dramas on YouTube and TV serials with others (FGD Girls 15 to 17 years, February 2024). They also reported extensive use of YouTube, not only for listening to music and watching movies but also for accessing fitness-related content, followed closely by Telegram in terms of popularity. OTT platforms such as Wynk, MX Player, Google Chrome, etc., were also used for entertainment by the respondents. They also mentioned accessing content from paid (mobile-only or limited-viewing subscriptions) platforms like Disney+ Hotstar, Netflix, and Amazon Prime. They would often watch these for free through alternative platforms that bypass paywalls, allowing them to view the same content without any cost.

3.7.a. Sexually explicit content

The respondents become curious about their bodies and explore various content available on the internet. In some instances, they hide their age to access certain material. However, this can become problematic when algorithms begin recommending sexually explicit content, even when it is not being actively sought. Occasionally, Naajia encounters inappropriate or sexually explicit content, which seems to be recommended automatically. She explores content both actively (searching for specific topics) and passively (watching

recommended videos). Naajia expresses frustration with how the algorithms sometimes push unwanted content, as it could lead to misunderstandings if someone else saw it, leading her to seek help from her sister to block or manage it. This, she fears, could hamper her independence. The same thing was discussed by Daksh where he shared: ***"Using websites on Chrome (porn websites) a lot is something that should be avoided (by girls)... Vidmate is especially popular, mostly among girls. What happens on Vidmate is that YouTube videos, which don't download easily on YouTube, are shared there, and they can download them from Vidmate. But the problem is, a lot of notifications (of pornographic content) come in, even if you're not looking at them. It keeps giving suggestions and notifications, which affects the girls as well. If they accidentally click on something, a website opens immediately, and it stays in history. After that, the app keeps suggesting things because it's designed that way." (Interview, March 2024).***

He is candid about his past experiences with porn and how it occasionally appears in his digital life. He mentions how Google and Instagram's algorithms sometimes suggest content related to what he and his friends talk about, which can lead to unwanted recommendations. His approach to this is a mix of reporting and indulging in content on occasion, indicating how algorithms can push users toward certain content based on their interactions. In their case, it was sexually explicit videos and photos.

3.8 Information asymmetry

3.8.a. Gendered Information Asymmetry

A distinct gender disparity emerged in platform usage. Female respondents predominantly utilised officially designated platforms for streaming series or movies. In contrast, male respondents demonstrated a broader awareness of, and willingness to access, pirated websites, using VPNs, to watch shows of their choice, indicating a higher familiarity among boys with unauthorized digital content compared to girls.

There was a gender-based demarcation when it comes to information and comfort with smartphone apps. Boys are more likely to come up with the mechanisms of bypassing the paywall. For example, Hemant often downloads paid apps for free through alternative methods. Hemant describes his experience with downloading apps and games. He mentions using a method to download paid apps for free, specifically naming an app like "Happy Emote" or "Happy Mode" that he and his friends used. He explains that they were able to download a pro version of the app for free, which would otherwise require payment. He notes that this method allowed them to download various paid games and an AI voice changer app for free. He also mentions that these downloads were obtained through Telegram rather than directly from the Play Store. Hemant highlights that this method was useful for accessing paid content without cost, though he acknowledges that such resources are not always available everywhere. He differentiates between regular subscription models ("the ones that are monthly") and external methods where payments might still be involved, but not necessarily through legal subscriptions. He mentions that he's found a way to bypass paying for some content ("the ones that require payment externally").

Gender socialisation plays a crucial role in shaping how boys and girls perceive and engage with technology. From a young age, boys and girls are often exposed to different expectations regarding their skills and interests, with boys being more encouraged to explore technology and digital spaces. This socialisation process conditions girls to view technology as a male-dominated domain, leading to self-exclusion from these areas. The social conditions force girls into internalising technological inferiority. Naajia initially believed Snapchat was only for taking photos, not for chatting or sharing posts, which she later discovered through experience. Naajia mentions that she uses filters to take photos on Snapchat but doesn't upload them, simply because she didn't know how. She would click a photo on Snapchat and upload it using Instagram. She mentions not being aware of features like stories or how messaging on social media works, reflecting a gap in knowledge regarding the full potential of these platforms. This suggests that her immediate social circle may also have limited digital literacy or simply does not

explore the broader possibilities of these platforms. Although she depends on YouTube for some information about social media, that is the extent of her knowledge. Sana admits she has limited knowledge about apps like Snapchat. She shyly shares, ***"I don't know anything about it (apps)... My brother also says that I don't know how to operate the phone (laughs)... He knows a little bit about how to use it, he keeps explaining how it works. But I haven't used it yet." (Interview, March 2024).*** The girls report that the boys help them by downloading movies for them (FGD, Girls 18 to 22 years, February 2024).

3.8.b. Perception about the app/platforms

Different apps have different perceptions associated with them. Interestingly, Facebook had a negative image among the girls. They didn't know how to operate it and had heard that it showed inappropriate content. Even girls with Instagram talked about Facebook as being an infamous app. Ridhi shared, ***"on Facebook there are a lot of inappropriate things, it doesn't look good." (Interview, March 2024).*** She feels that Facebook should not be used. Though later while discussing her brother's Facebook account she says, ***"I check it (brother's Facebook account) out when my brother posts a photo or when someone else has posted something." (Interview, March 2024).*** In the FGD, the adolescent girls shared how none of them had a Facebook account. They talked about being "banned" from using Facebook because "it showed inappropriate videos" (FGD, Girls 15 to 17 years, February 2024).

Interestingly, everyone had a similar perspective about Facebook. Further, both boys and girls shared that Facebook was usually used by their parent's generation, "chacha, chachi, mama, mami..." (uncle, aunts and other senior relatives) and posting any photo or video there would only lead to difficulties and so it was best avoided (FGDs with boys and girls. February 2024).

Other than Facebook, apps that provide medical services were seen as unapproachable by the respondents. None of the respondents, including those who were aware of such apps, had ever booked medical services (doctor consultations, medicine supply, etc.) online, not even during the pandemic, Anuj said, ***"No, we come from a somewhat low middle-class family, so there's that..." (Interview, March 2024).*** This highlights how apps of particular section of target audiences from specific socio-political positions.

Smartphone app basket (participatory tool), FGD with boys (above 18 years)

3.8.c. Gendered Perception of Smartphone Apps

In the study, elder boys and girls shared that both should have equal access to smartphones and apps. Although the younger cohort expressed similar sentiments, a few blamed girls for posting objectionable photos and videos. Gauri, a respondent from the younger cohort, prefers to avoid platforms like Instagram, as advised by her brother, who told her to use them only after completing her education. She perceives social media as a source of inappropriate content, such as revealing posts, and fears that such images linger in her mind, negatively affecting her focus on studies. Gauri believes boys should not use apps like Instagram or Facebook due to the emphasis on creating and consuming superficial content, such as posting and liking photos of girls showcasing certain body parts. She doesn't like it when girls wear provocative clothing and perform suggestive dances. She shared:

"...girls show off their waists, so that's why they're posting, and boys are liking it. So, that's not good... Girls shouldn't post it... girls think, "Yes, I showed my waist in this, and I got more likes." If they don't get likes (from boys), they'll think, "I shouldn't make such videos... Yes, if they are showcasing their skills, then they can do that (post reel) for that purpose." (Interview, March 2024).

Similarly, Hemant shared,
"... if they're on Instagram, they'll make reels, and if they make reels like that, they won't become famous. Girls have to make different kinds of reels, and they do make them... they get famous by wearing short clothes... On Instagram, only those kinds of girls are famous. Girls our age with new accounts are getting millions of views. That's what makes me angry, seeing them wear short clothes and showing off..." (Interview, March 2024).

The prevalent understanding that objectification of girls on social media is inherently negative cultivates a sense of superiority among some individuals, leading them to perceive themselves as guardians of virtue. Such dynamics may later result in attempts to dictate women's attire and behaviour, effectively concealing regressive ideologies behind a façade of opposition to objectification. This reflects broader societal patterns where control over women's bodies is justified under the pretext of promoting respect and dignity. Hemant shared that boys have more independence in smartphone usage. He said, *"Because girls' families don't give them respect, fearing that they might misuse it, like talking to some boy on the phone, which is already happening, many girls are doing that... that's the only reason..." (Interview, March 2024).*

3.9 Education and skill development

3.9.a. Formal curriculum and skill

All respondents mentioned using YouTube for studying. Regardless of gender or age, everyone was largely dependent on YouTube for classes and subsequent Telegram channels for notes. The most popular YouTube channel for education was Dear Sir, while others included ASC Starters, Khan Sir, Neetu Ma'am, Eklavya Study Point, and Khan Academy. Many respondents referred to the 'ma'am' or 'sir' they followed but didn't know the names of their channels. Google Search was another commonly used app that aided respondents in their education.

Anuj talked about how he is pursuing a bachelor's course that requires him to submit assignments. He copies the answers from YouTube, explaining that all he needs to do is type his university's name and course code to find all the answers to his assignments. For exam preparation, he also relied on YouTube videos. He shared that he entered his exam code and "one-day preparation" on YouTube and found a relevant video, which he watched for two hours on his way to the exam centre. Those YouTube channels also provide notes via the Telegram app. He shared that with those notes and videos, he cleared two papers but received a compartment in the other two.

Similarly, Rosie, a 19-year-old girl who shares smartphone, shared, *"I had done this (preparation for examination) on YouTube; it was my exam, so I got help from Eklavya (a YouTube channel) ... so, they shared some books and notes at that time (through telegram channel) because I didn't have books as the exams had already started." (Interview, March 2024).*

3.9.b. Marketable skills

i) Language skills

Most of the respondents were comfortable with Hindi, which is widely spoken in the area and their medium of education was also the same. However, knowing English language for entry into certain jobs in the labour market is widely understood and desired for economic upward mobility. Almost all shared that they used the Duolingo, an app to learn English and subscribed to YouTube channels focused on English language instruction. Rosie watches many YouTube videos to learn English, although she finds them difficult to fully understand. She is searching for better resources but continues to rely on self-study. Anuj is not actively learning how to communicate in English, but he follows several channels on YouTube and Instagram that provide tips about the language, such as when to use "is" or "was." Anuj shared, *"...Earlier, I used to learn from YouTube, there was a page on Instagram that taught it. They don't teach in a structured way; it would come up in reels on Instagram. So, I followed the page and watched videos on YouTube. When I couldn't communicate with them, I found out there is a free one-year course here called FEA." (Interview, March 2024)*

As the world has become more dynamic and cultural exposure has increased, Daksh, an anime

fan, shared that he is learning Japanese through Instagram channels and enjoys picking up new words like "Sensei" and "Arigato." Thus, language is not only a source of cultural capital but also a means of exploring a new world that they have just begun to glimpse and fueling their aspirations.

ii) Professional skills

Smartphones are effective tools for learning professional skills that can aid in future employment. Being from lower-income families serves as a significant restriction for the respondents, yet these platforms provide a window of opportunity. Anuj learns video editing from YouTube, stating that he cannot afford classes or have enough contacts in the industry to learn for free. He has started with Adobe Premiere Pro. He shared how he and a friend worked as assistants to a photographer; his friend, who lived near the photographer's place, taught him how to use Premiere Pro. When the photographer went to shoot famous personalities, his friend helped with the editing. After the shoot, his friend used the completed edited file to secure a job that pays him 30,000/-, presenting it as his work. It is a common practice in this line of work and is seen by Anuj as something important for career growth. Anuj aspires to do the same, believing that this is essential for career growth in his field. Additionally, he has learned Photoshop and camera functions from YouTube.

The younger girls in the cohort shared how they learned to stitch clothes. They all knew basic stitching but relied on the internet for more intricate techniques and the latest fashions and seemed to excel in their skills. Anil learned phone repair, while Hemant learned camera connections along with graphic design. Here, we examine how both boys and girls are acquiring skills that are traditionally and socially ascribed to their respective genders through the use of the internet. This is despite the fact that the internet provides a unique space where individuals can navigate and negotiate their identities. Nonetheless, social norms dictate the roles one aspires to and achieves within the limited set of choices. As such, girls from this community, with their negligible socio-economic currency, continue to pursue skills that are normative and do not pose any challenge to them or their families.

Though not everyone is learning skills aligned with traditional expectations, Naajia used YouTube to learn marketing skills and accessed content related to modelling, including tips on clothing and body figures, as she wishes to become a model. These respondents view the internet as a gateway to a new world. Rosie watches motivational videos on YouTube that inspire her aspirations, including those related to IAS and UPSC exams. Here, the world of the internet acts as a window to experiences beyond their limited immediate environment.

3.10 Survival and leisure skills

Through smartphones respondents also gained access to a new world of leisure activities. Respondents across genders spoke about making food, baking cakes, drawing, and similar pursuits. Anuj learned to make fried rice online when he was hungry and home alone. Gauri shared how she used YouTube to learn mehndi designs, makeup techniques, stitching designs, singing, and dancing. The internet offers new opportunities for many. Sana shared, ***"I used to have a passion for skating as well. So, I watched it on YouTube... I bought it (skates) with my own money—the pocket money I get. Then I bought it and practiced at home... And I practiced on the rooftop. And I learned it too." (Interview, March 2024).*** These opportunities, we can confidently claim, would not have reached them without access to smartphone apps.

3.11 Employment

The elder cohort of the sample had, at some point, earned some money through various petty jobs, such as campaigning for political parties during elections, stitching clothes, or applying mehndi. Anuj edited photos and videos for strangers via Instagram and charged them ₹50 to ₹100. The socio-economic background of the respondents often compels them to seek employment well before they reach 18 years of age. For them, earning is not a choice but a necessity.

The aspirations for jobs among young adults ranged from call centre positions to data entry, social work, teaching, modelling, photography, and even opening their own beauty parlours. When speaking with boys and girls over 18 years old, we observed how they utilised ChatGPT, resume makers, and Canva to create their resumes. They learned about these resources from Yuva Sathi centres, friends, and previous workplaces where they interned. Though not everyone was aware of these apps, Naajia opted to go to a cybercafé instead of attempting to create a resume online herself. She admits that she doesn't know how to make one online, illustrating her reliance on offline resources for digital needs, likely due to insufficient digital skills.

For job vacancies, Amrita uses Telegram groups, the Internshala website, and the LinkedIn app. Other popular job search platforms include naukri.com and WhatsApp status updates from placement agencies.

3.11.a. Job Aspirations

Not having a personal smartphone acts as a hindrance. Lakshay, who shares a phone with his family, expressed that once he owns a phone, he will use it for the same purposes but for longer durations. He mentioned that more than using the smartphone for chatting or social media, he intends to seek regular earning opportunities online. Although he was unsure about specific methods for job searching, he was confident he would find work for himself online.

Anuj shared that at one point, his Instagram account had 5,000 followers. He aspires to be a photographer and is currently focused on creating travel vlogs. He extensively researches locations on YouTube to minimise costs related to travel, accommodation, and food. He prefers travelling by local buses and staying at ashrams with subsidised meals to keep expenses low, with the goal of monetising his vlogs in the future. Additionally, he takes on small gigs, such as filling out surveys in scenic areas, to enhance his content. For example, during a trip to Shimla and Manali, he quickly completed a 200-page survey to free up time for travel. While there, he met an experienced travel vlogger who shared valuable tips on content creation and monetising through YouTube Shorts. Inspired by this encounter, Anuj and his companions embraced spontaneous adventures, exploring new experiences along the way.

Suresh attempted to create gaming content on YouTube with his friends, recording games by capturing their mobile screens. No one in his circle had a laptop, so he edited videos while his friends played. They received a decent number of views, with one video garnering over 9,000 views. However, they paused their efforts due to academic pressures (exams) and have not yet resumed the channel, although they are considering restarting it. His motivation for creating YouTube content stemmed from the desire to become famous and potentially generate income, but the effort required for daily uploads proved challenging.

The youngsters also have a realistic understanding of their socio-economic situations. Hemant, when he was younger, aspired to build a career in social media. He shared how he and his friends created funny reels. When asked what changed and why he no longer wants that career, he said, ***"I grew up and realized that this is just how it is." (Interview, March 2024)***

Farheen believes she won't be allowed to work outside the home, but she feels that if she finds work online from home, she will be permitted to work.

3.11.b. Useful smartphone apps at work

Anuj was previously employed with Flipkart, where his work required him to use his smartphone and online apps. His job involved checking the quality of second-hand smartphones. The quality check included examining for dents and blending, which he later verified using a computer. He used an app named Yantra Diagnosis to check smartphones physically for defects, and the app colour-coded the smartphones, helping them detect damaged screen areas. The process ended with them categorising the handsets based on their quality.

Similarly, Amrita uses YouTube videos and reels on English speaking skills and uses the same to teach children at the community centre, where she volunteers.

3.12 Limited utilization apps

In the study, we observed that payment apps, travel apps, and shopping apps were not widely used by the respondents.

As far as using smartphones for financial purposes is concerned, Sonne (2024) shares that only a small number of women use apps like Google Pay, Paytm, and PhonePe for payment purposes. In our study, we find that male users above 18 years sometimes used UPI payment methods such as Paytm and PhonePe. Only Anuj from the sample used UPI regularly for day-to-day payments. Others, even if they had used UPI apps in the past, did so infrequently. Many described their use of payment apps as a one-time experience in the past, while others expressed skepticism or a lack of understanding about how to use these services. Since most respondents, especially girls and boys under 18 years, were financially dependent on their parents, this also acted as a deterrent to fully being involved in online transactions. Moreover, most respondents belong to families of informal workers who receive wages in cash and prefer doing cash transactions. This meant that there were limited deposits in bank accounts, usually kept as savings and not for daily transactions. Further, there is also mistrust of using digital payments, as the respondents also spoke of fear of increasing economic online frauds happening in their communities. These online frauds occur owing to a lack of awareness about technology and the use of digital means and safety mechanisms in place to save them from potential frauds.

As for shopping apps, boys and girls with personal smartphones used them to a limited extent. The most popular apps were Flipkart, Myntra, Zudio Online, Meesho, and Amazon, but they ordered products only occasionally. Items purchased by the respondents included thumb sleeves (for gaming), clothes, shoes, accessories, yoga mats, makeup brushes, electronics, skipping ropes, hand grinders, and similar products. Naajia frequently shops online using Meesho, preferring it over apps like Myntra due to its affordability and discounts. She mentioned taking advantage of Diwali sales to get products at discounted rates. Although she doesn't shop online often, she opens the Meesho app only when she has saved enough money for small purchases. Besides, after using shopping apps, everyone in the sample talked about paying for the purchase in cash. Economic constraints play a significant role in how the respondents use these platforms. Ridhi shared, ***"I've seen that there are things that come for free with it (on Amazon), so I look for them. They show really nice things too. I can't order anything since I need money for that... (But) I look at clothes, and the lehengas are so nice. I look at whether they're cheap or expensive... (I) just look at lehengas, necklaces, slippers" (Interview, March 2024).*** While she finds many products appealing, she refrains from ordering due to financial constraints. Similarly, ordering food is not popular among the respondents. Even when they do, they order directly from food joints like Domino's to avoid paying delivery charges that are levied by popular food delivery apps.

As for travel apps, awareness and usage were minimal among the sample. Only two respondents had used ride-hailing platforms, and that too only when they were stranded with no other options available. Most of them travelled using public transport, though older respondents mentioned the Chalo app and the DTC app, explaining how they recharge their metro cards via Paytm. Limited information about the travel facilitating platforms such as MakeMyTrip, GoIbibo, etc., among respondents is due to their economic and social constraints. The economic class of the respondents poses a significant challenge, as these apps require a certain level of financial comfort, which is not the case for most. Additionally, their peers are also unaware of how to use these apps, which again may be influenced by economic factors.

Smartphone app basket (participatory tool)

Chapter 4

Smartphones and App Usage: Control and Coping Mechanisms

This section explores how access and usage of smartphones and apps are controlled – the barriers and the tools of control. Additionally, we have explored how the usage of smartphones and apps has resulted in various forms of action-based backlash. Lastly, the narrative will delve into the coping mechanisms employed to navigate and overcome control.

4.1 Gendered patterns of control media

Social media usage by women is closely regulated by the community. The women are generally scared of social media, like fear of their photographs being used for pornographic content or fear of being approached by unwelcome strangers seeking friendship or romantic relationships. They constantly endure the burden of keeping themselves safe from the online world, as noted by others too (Iqbal, 2021).

The findings from our in-depth interviews with boys and girls, aged 15 – 22, indicate that fathers and elder brothers are the primary individuals restricting the use of smartphones among adolescents and young adults. Most of them are asked not to use applications such as Facebook, Instagram, Snapchat, and WhatsApp. It is imperative to note that even though boys and girls face restrictions, the reason for curbing their usage is gendered in nature. On one hand, girls are discouraged from using smartphones and social media apps due to socio-cultural and gender norms, and on the other hand, the boys mostly face restrictions based on the context in which they are using their smartphone. For example, most of the boys shared that their fathers discourage them from using their devices at night. The restrictions faced by the boys have fewer socio-cultural implications.

4.2 Surveillance: Tool of control

Our findings from the qualitative study suggest that surveillance is a major tool of control. According to the participants, elder male family members keep track of when the smartphones are being used by the participants and the usage of the same. Phone checking done by parental figures is quite rampant for both genders, and this kind of surveillance is often justified by stating that adolescence is a stage of rapid growth and being influenced. Many instances of this phone checking stem from a broader anxiety about adolescents' and young adults' future course of action and safety taking a 'misguided' turn, but they also portray traditional norms and expectations. For example, Gauri, who borrows her elder brother's smartphone, shared that he keeps track of the number of YouTube videos viewed by Gauri. Lakshay's father monitors his phone calls, ensuring that he does not digress from what he perceives as the 'right path of life'. His father, scrutinising Lakshay's interactions and actions, assuring that he is not interacting with girls or falling into 'wrong actions', enforces moral surveillance and impinges on his autonomy. Lakshay shared that, ***"They see who I am talking to. If it is a girl or not or if I am engaging in bad activities" (Interview, March 2024).*** Lastly, Ridhi shared her hesitation about using Snapchat. Although her friends offered to help her create an account, she expressed concern about her brother potentially monitoring her activities on the phone. This reflects her apprehension about privacy and family scrutiny, especially from male family members.

In the case of female participants, some shared that their distant male relatives are surveilling their social media presence to exert moral surveillance and normative control. Naajia expressed that, ***"My uncle is in Saudi, and he sent me a screenshot saying that I've been dancing like this. He told my mom, 'Look at how she's dancing, get her Instagram shut down'. Mom said, 'Delete Instagram right now…who knows what kind of videos you're making for him to say such things.' So, I told her that I cannot delete my account, but I will reduce the number of videos I upload" (Interview, March 2024).***

4.2.a. Familial surveillance through fake social media accounts

Family members not only surveil by checking phones, but they also scrutinise girls' social media activities through the social media platform, by using their real or fictitious accounts. The fear and apprehension of being scrutinised act as a barrier for girls' self-expression on social media, mirroring the scrutiny they experience in the physical space as well. For example, Farheen shared that, *"At times my family members create fake accounts to check what I am doing on Instagram. They message me pretending to be a boy too - to see if I reply to a boy or not" (Interview, March 2024).*

4.2.b. Conditional access within a controlled environment

Often, families give conditional access to smartphones to girls when they are still in school for educational purposes. Many of the female participants shared that they were told they could only get their own smartphones after graduating high school. Post high school graduation meant work opportunities or higher education entailing possible mobility opportunities for some of them. Hence, safety through constant connectivity with the families was one of the main rationales behind granting access to their own smartphones. Further, the girls shared that they would buy their own smartphones with their self-earned money if they did not get them from their families post high school graduation. With this regard, Ridhi shared that, *"I have thought that after class 12, whatever money I will get, I will use that to buy my own smartphone" (Interview, March 2024).* However, even when these girls have access to their own smartphones, their usage actions are often monitored and scrutinized, within controlled environments ensuring their families are aware of their actions. The mothers shared that, *"We might be doing household chores, but we keep an eye on what the children are doing on their phones" (Mother's FGD, April 2024).* Additionally, Gauri shared that, *"My elder brother told me that they will give me a phone after I am done with my education. And if I want to create some ID on social media, then that also he and my other brother can help in making" (Interview, March 2024).*

4.3 Gendered disparities in usage and access of smartphones

4.3.a. Differential usage

Our findings from the qualitative study suggest that there is a gendered differential usage of smartphones within families, with boys enjoying more freedom and leniency to use their smartphones and take calls, and girls facing more surveillance. Most of the female participants shared that they are asked to justify their usage actions and even, hide phone calls from their parents. According to Amrita, *"Boys can do whatever they want. They can answer anyone's call without any issues. But for us it is different. For them, it's like, if they get a call, they can just answer it without worrying about their parents saying anything" (Interview, March 2024).* She stresses that before receiving a call, girls need to be mindful of who is calling them, the time of the phone call, and the space they are in, especially the presence of their family members. They also have to keep their phones in silent mode so that no one in their family is aware of an incoming phone call. This type of disparity reflects deep-seated patriarchal norms practiced in families, where girls' autonomy is controlled while boys enjoy more freedom and escape scrutiny. It was found that these disparities within families is based on gender solely as female participants shared how younger male siblings enjoy more freedom than them. In this context, our findings suggest that there is a gendered differential usage of social media platforms as well, with younger and elder male siblings having freedom to express themselves on social media platforms whereas the girls are denied. Farheen expressed that, *"It does hurt that we can't post, but boys can! Even our brothers can post. My brothers are younger; they're in 6th grade and must be around 12 years old, and they can post. If they don't listen, it's fine, but if we don't follow the rules, they'll take our phones away, which is why we don't even try" (Interview, March 2024).* This indicates gendered

expectations of the family members with acceptable behaviours established only for girls. The fear of repercussions acts as barriers to their self-expression and autonomy. It forces them to modify their behaviour and usage of the smartphone device and the apps they use, based on the perceived morality imposed on them. To this effect, Farheen also shared how fear of judgement has affected her. She said, ***"I post but not the ones showing myself; this does not happen a lot in my family. If I post, then they will say bad things about me and look at me in a wrong light. They exaggerate" (Interview, March 2024).***

4.3.b. Impact of gender and cultural norms on smartphone access

In-depth interviews and FGDs highlighted how girls are viewed as the keepers of honor and cultural values. Their actions in the physical or online spaces are deemed to reflect on the families' perceived moral values, furthering patriarchal norms and gender roles. Adding to this, Farheen said, ***"Sometimes, I get so angry, like why is it different for my brother and me? If my brother and elder male cousins are talking to their girlfriends with the family outside, they say, 'Boys are just like that, boys do not have any reputation to uphold.' They say girls shouldn't be doing such things. But both should be told not to do it—not just girls. When girls talk, there's a lot more pressure on us that we shouldn't be talking" (Interview, March 2024).***

The belief that 'boys do not have any reputation to uphold' propagates the notion that holds girls to higher standards of morality. It perpetuates the idea that a girl should be responsible for maintaining and protecting her family's reputation. Farheen also added:
"Once I posted a recording of my voice, a song that I sang, instead of a photo, and then I got a call from my cousin who lives in a village asking why I posted it. He said, 'Why are you doing this? You shouldn't be posting your voice like that… it's not right.' So, I deleted it" (Interview, March 2024).

This disapproval from her cousin and self-censorship are a result of the societal expectations that disapprove of women who are not within the boundaries of demureness or propriety. Additionally, our findings have also suggested that some male adolescents and young adults are trying to not perpetuate these patriarchal notions. For example, Hemant shared an incident where his brother was once slapped by their grandmother for being seen in a photo with a girl on his phone. Hemant mentioned that now his brother doesn't openly show such photos to anyone, as it could lead to criticism. Hemant advised his brother not to reveal such things to their sisters because if they start doing the same, it would be difficult for him to object. Despite Hemant's advice, his brother dismissed it, leading to frequent arguments between the two, which continue to this day. Hemant's brother appears to treat their sisters with more equality. He doesn't follow Hemant's controlling advice and seems more relaxed about the sisters being exposed to the same things he experiences. Whereas Hemant takes on a role of authority, safeguarding his sisters from potential harm. This difference reflects Hemant's more traditional, protective approach versus his brother's more open, non-restrictive way of relating to their sisters.

4.3.c. Paradox of gendered discipline

Families holding girls to a higher standard of propriety by restricting smartphone and social media usage force girls to conform to societal norms and traditional expectations, restricting their autonomy and self-expression. It also means that they expect girls to conform to traditional gender roles and fulfil all their familial responsibilities and chores. This phenomenon excludes most of the male participants, showcasing a stark gendered discipline in action, especially in terms of smartphone and social media usage. For example, Gauri shared that, ***"If boys aren't doing much, then they're always on the phone, sometimes playing Free Fire or something else, and their families don't stop them much. They just say, 'It's fine, he's a boy.' But for girls, they are told things like, 'She's a girl, she should study, do household chores, because she'll have to work in her in-laws' house in the future.' That's how it is" (Interview, March 2024).*** This establishes how girls are constantly reminded of their traditional roles as 'wives' in society, limiting their future expectations and confining the scope for future aspirations, it reinforces the vicious cycle of inequality. Additionally, it is important to note that usage actions are reprimanded differently based on gender. Girls lose their overall access to

smartphones or social media, whereas boys get told off. Here, the negative consequences increase substantially. To this, Farheen added that, ***"If boys are on the phone all night, there's no problem. At most, they'll be scolded for staying up late on the phone and sleeping in the morning. But if we use the phone at night, they'll take it away, saying it's not the right time to be on the phone" (Interview, March 2024). Lastly, this differential reprimanding is not only limited to familial space. Hemant shared the consequences girls face for using phones in school. He shared, "If boys get caught with their phones in school, then they get them back after pleading for some time. For girls, the school calls their families to meet" (Interview, March 2024).***

4.3. d. Impact of intersectional identities on access and use of smartphones and apps

Apart from the gendered patterns of control, there are other significant barriers such as financial constraints and privacy issues. These hinder smartphone access and usage as well. Anuj shared how he experiences a lack of privacy in his own house, which restricts him from consuming the content of his choice. Sharing his space with his family in a one-room house has led him to find other ways to consume content, such as pornography. He shared that it is an inconvenience for him to use earphones or to go to the building's rooftop while consuming content on social media or pornographic websites. Anuj shared that, ***"When it comes to using the phone, the first issue is that there's no space at home. I can't watch anything, not even adult movies, without earphones" (Interview, March 2024).*** In Naajia's case, societal perceptions hinder smartphone usage as she hesitates to study at home, often watching educational videos under a blanket at night or going to the park for privacy. She fears her family might taunt her, saying, ***"You're not doing anything, you're just watching videos continuously." (Interview, March 2024).*** Motivation from the household is not always present, especially when pursuing dreams involves significant opportunity costs.

Few of the participants also mentioned that they fear a breach of privacy from their family members. In this regard, Naajia shared a situation where her phone broke, and her primary concern wasn't the damage itself but the fear that her family, especially her sister, would discover her WhatsApp messages with her male friends during the repair of the smartphone device. This highlights concerns about privacy and family control over her communication, reflecting gendered surveillance in her life. The fear and apprehension of the possible breach of privacy lead to self-imposed restrictions in terms of communication and self-expression on social media. Additionally, a few of the participants mentioned that due to financial constraints, they have been unable to recharge their phones/data, hindering their day-to-day communications, content consumption, and other usage actions.

4.4 Backlash faced owing to the use of smartphone devices and specific apps

Adolescents and young adults experience a significant amount of backlash for using certain apps, and phones, especially the duration of their phone usage and the timing of their phone usage. This backlash is also due to the aspirations attached to their social media activities and presence. However, in some cases, the backlash they face comes in the form of harassment.

4.4.a. Mental violence

Often taunts are used as a tool of mental violence. Naajia shared how her elder sister used taunts in the form of character assassination because she wanted to be famous on social media. She shared that, ***"Once, when there was no light at my place, my older sister, who can be a bit rude, said to me, 'Yeah, go wear revealing clothes, make videos like that, and then you'll get a lot of likes.' I felt so disgusted that I didn't know how to respond" (Interview, March 2024).*** Her sister's discouraging comments dismiss Naajia's genuine efforts to create content to fulfil her social media related aspirations. This kind of behaviour undermines an individual's self-expression and possibility of pursuing an aspiration. These discouraging remarks often make individuals feel shameful and doubtful of their social media actions, curbing self-exploration.

4.4.b. Withdrawal of access

Many female respondents reported risk losing access to their phones for various reasons. In Naajia's case, her elder sister had threatened to take away her smartphone because of her increased screen time and engagement in social media platforms. She shared, ***"Now my sister has become furious, saying, 'What do you do on your phone? We gave you this phone for studying and for online classes!' My older sister started scolding the one who got me the phone, saying, 'You got her this phone, and now look what it's led to!'" (Interview, March 2024).*** This reflects on how girls are expected to behave regarding technology, and conform to societal norms, restricting their usage of technology.

4.4.c. Increased vulnerability to sexual violence

Social media is a pathway to several possibilities, including conversations with unknown individuals. While these interactions can form meaningful relationships, they also carry vulnerabilities. One of our female participants shared her experience with an online male friend who began making inappropriate statements, which made her feel uncomfortable due to the messages being of vulgar nature. After blocking him on her social media accounts, he continued to reach out and threatened her, conveying that he would create fictitious bare images using her facial pictures and include her phone number for others to contact her. The threat of such online harassment and the possibility of it being chronicled in one's digital footprint, adds to the perpetuation of gender-based violence faced by female adolescents and adults.

4.5 Coping mechanisms: Negotiations and bargaining

Findings from our qualitative study suggest that adolescents and young adults have various coping mechanisms to manoeuvre around scrutiny and

Girl using her smartphone

normative control. They employ these strategies not only to avoid surveillance and backlash but also to get more access to smartphones and apps, ensuring privacy and ideal usage.

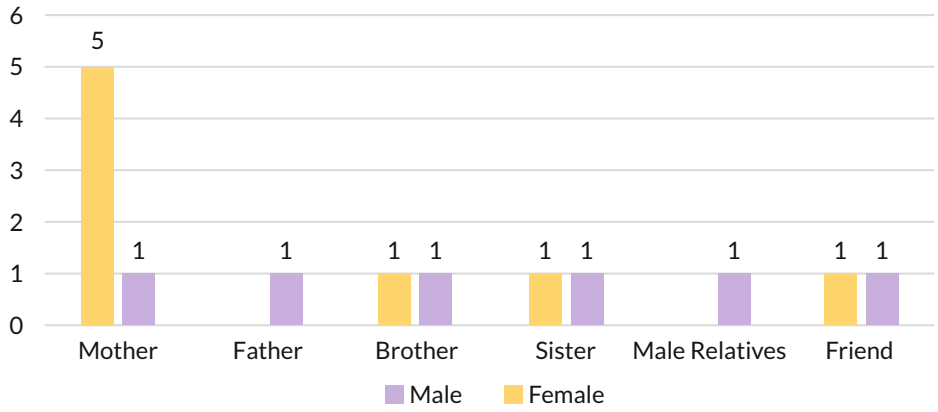
Adolescents and young adults employ strategies to protect and enhance their privacy for seamless smartphone and app usage. For example, Hemant routinely changes his phone password and blocks family members on social media to keep his online life separate from offline life. Also, the participants shared that they hide apps such as Instagram and BGMI on their smartphones to avoid any form of backlash from their family members. They shared that these apps are unlikeable to their parents as they open a world of unknown possibilities for the youth. One individual shared that they have a separate social media account on Instagram, solely followed by their family members, and another account, to showcase their 'true' self. This phenomenon, taking place in a digital realm, mirrors how they hide certain facets of their lives in the physical space.

Naajia's experience further highlights the youth's requirement for privacy; she shared that she refuses to share passwords with her potential partners. She mentioned that she values her privacy and has never shared her password with anyone, including her sisters, because she fears someone might misuse her personal information.

Our findings also suggest that the participants use location-based coping mechanisms to protect their privacy in densely populated communities and increase seamless smartphone and app usage, ensuring ways to avoid conflict at home. Given the

paucity of space, where whole families share a small room, many said they would step outside of their homes to talk to people or use a specific app. However, Gauri points out that if she steps outside of her home to talk to her friends on a phone call, she is aware that she is watched by her neighbours, who often assume that she is talking to boys, implying monitoring and a risk of familial conflict. Hence, she is unable to call her peers daily. Similarly, Daksh shared that he goes to his house's rooftop to use Instagram. Anuj talked about the challenges of watching certain types of content, particularly adult movies or bold scenes in web series, due to the lack of privacy at home. He shared that he typically waits until night when everyone is asleep or goes to the roof or finds a secluded place to watch content. Other participants, especially boys, mentioned that they visit their friends' houses to use such apps as these locations provide better privacy. In this context, it is imperative to mention that girls' experiences do not concur with these instances.

Figure 4.6: Support mechanism in case of trouble using a smartphone device



4.6 Support mechanism

The study also asked respondents if they had a support mechanism if they got into trouble while using a smartphone. In the survey, as seen in figure 4.6 above, among those respondents that faced problems, they mostly asked for help from their immediate family members or friends. Interestingly, girls mostly asked for help from their female family members, especially their mother. However, in our interviews and FGDs, the female participants' responses reflected a parameter – trying to solve the issue by themselves, followed by sharing with female friends or, in some cases, some of their male friends who were technically more sound, and sharing with their family members only in the end if these measures failed; Ridhi shared, ***"I would first ask my friends and if they are not able to help then I would go to my teachers and follow their instructions. I would not speak to my family members unless absolutely required ...telling them will only lead to more drama, neither will they be able to find any solutions, they will only make things difficult for me" (Interview, March 2024).***

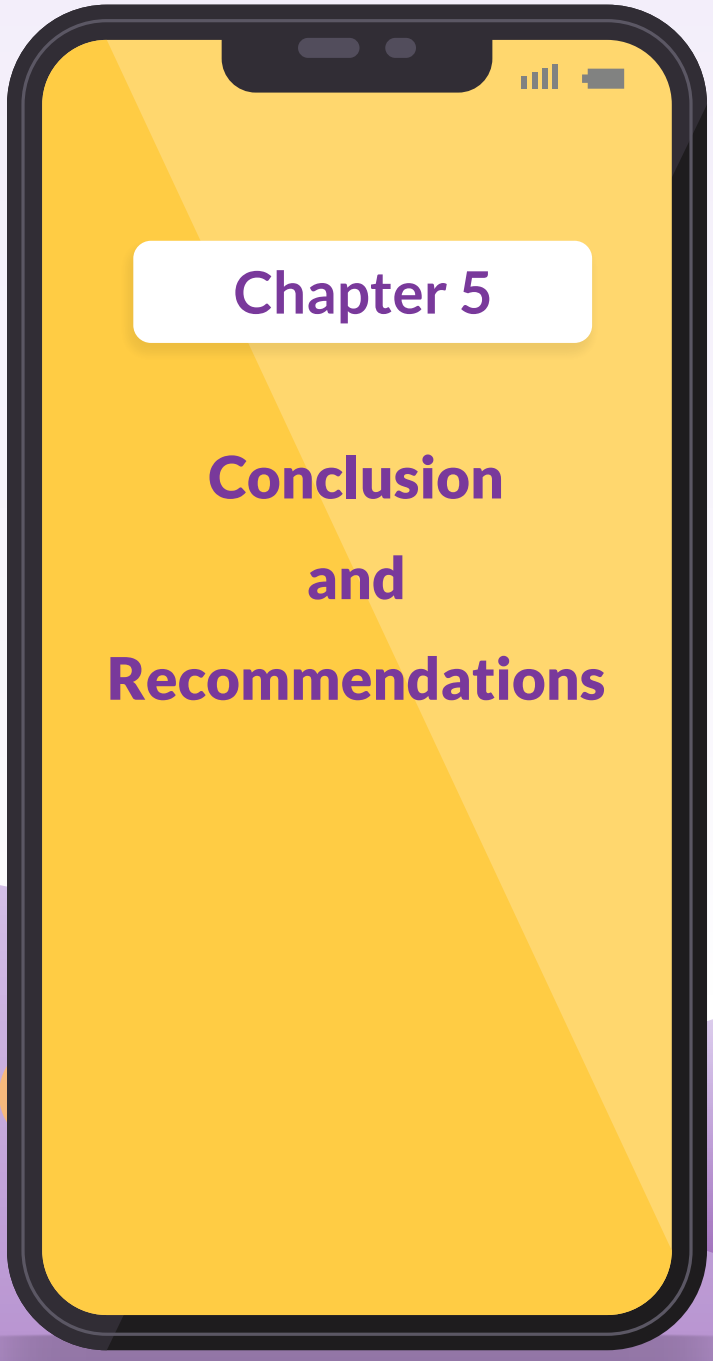
In case of being stalked on the social media or being harassed by men, girls generally seek help from their male friends whom they befriend at the computer classes at the community center or someone whom they can trust, like the teachers at the center, ***"This guy was calling me everywhere, on Whatsapp, on Instagram, he sent screenshots threatening me of things he would do me. When I could not handle it on my own, I asked one of my male friend here at the computer class.... Finally, I also shared this case with Sir here and he managed to block that person. I was really scared, and it was such a relief for me." (Arisha, interview, March 2024).*** Some of the boys responded that they would approach an influential person in the community or someone who has more technical knowledge about smartphone apps. This was mostly in the case of monetary frauds (which have become increasingly

Boy listening to music via social media

common) or if they get into trouble with the police. Some respondents also shared that they would first look for solutions online before approaching anyone else.

Most respondents were reluctant to go to the police station or cybercrime division. There was a general sense of apathy towards police inaction. They also feel the police will only ridicule them further. Girls, especially, shared during FGDs that the police should be involved only when the matter gets extremely serious, as involving them would mean having their parents getting involved, which would only lead to further backlash on them. (FGD with girls above 18 years, February 2024).
The respondents were also asked if they felt the state and the platform/app owners were accountable in making the user experience better. Respondents mainly shared their concern around the negative and misinforming videos that float around in WhatsApp and other social media, and think the state needed to play a more active role in monitoring these. Economic vulnerability and low digital knowledge have also led to widespread economic frauds in the area. Boys who often helped their parents with their paid jobs and financial transactions were particularly concerned about this. Almost all respondents were skeptical about the police and being at the other end of the police's ire in a high-crime area. They shared incidences of misbehavior by the police if they reported cyber related crimes, ***"they will taunt us that we are illiterate and do not understand anything or we should not have posted such pictures, etc." (FGDs, February 2024).***

Most respondents were not sure how the platform/app companies can be held accountable. This signifies how far removed the users, especially from marginalized communities, of the platforms are from the actual designing and governance of the platforms. On further probing, girls were more concerned about the app's safety features, especially harassment via screenshots of their chats and photos. Designing safety features at the user level and not only in the aftermath will help young girls to manoeuvre the digital world confidently. This underscores what Shah (2024) writes on importance of women's trust for digital inclusion, ***"When technology is not merely reactive to harms that women face, but also intentionally responds to their aspirations and needs in this way, women users are likely to have digital experiences that feel personally meaningful and encourage deeper engagement".***



Chapter 5

Conclusion and Recommendations

Historically, women and girls have been separated from technological advancement, which, in connection to this study, has persisted and shows up as the gender digital divide. Gunter (2019), in his comprehensive literature review, highlights that in the gendered history of telephone use, female adoption was situated mostly in a domestic sphere as an instrument of communication used to maintain contact with family and friends, while male adoption is associated more closely with the workplace. For women, the telephone became an extension of their private lives, and for men, it was an extension of their public lives (Fischer, 1994 in Gunter, 2019). Women have tended to conceive of the mobile phone as an important extension of their domestic role, while men see it as an extension of their identity as their public self, especially in the workplace (Lemish & Cohen, 2005; Rakow & Navarro, 1993 in Gunter, 2019). While this may have been true at one point in history, technology has evolved, and so has the role of smartphones in people's lives. This study examines how these patterns have both persisted and changed over time, given the context of people's lives in online and offline spaces.

The research was undertaken to add to the literature on digitalization and young people's aspirations, especially in low-income communities. In a rapidly digitizing country such as India, having the advantage of being a demographically young country, the cohort of 15–22-year-olds who are part of the study are a core group in the success story of digitally connected India. In this context, it is important that the youth in India pick up technical knowledge and skills, which will place them in a better position for competing for decent jobs. Consequently, reducing the gender digital divide would mean immense opportunity for girls and young women in the increasingly digitalized world. As the study highlighted, the gap goes beyond owning a smartphone device and internet connectivity. Reducing the gap would mean consistent and equitable use of the device and internet connectivity, which will help girls and women to explore and navigate platforms for educational purposes, leisure, skills, etc.

This study confirms that while the uptake of smartphone devices is increasing in low-income communities in mega cities such as Delhi, there is variance in terms of gender, age, and economic constraints. While working around reducing the digital gender divide continues to have high priority on the agenda of policymakers in terms of ownership and access to smartphone devices, nonetheless, the use of smartphones continues to mimic offline lives, thus being precisely controlled by cultural and gender norms.

The study showed that access to a smartphone is impacted by multiple factors such as ownership, number of family members, age, burden of unpaid and care work – influenced by gender, age, and economic status of the family. The time of access, in case of sharing a common device, corresponds to the primary ownership of the device and mobility patterns of the primary owner. While owning one's own phone allowed one to have more time for access, it did not always translate into the same, especially for girls. Most girls reported that they had to spend time on unpaid work and at best used the smartphone to listen to music when they did monotonous work. Ownership in resource-poor households does not mean sole ownership; it is assumed and required that the smartphone device be shared with parents and siblings, and hence time of access and use of the device is reduced. Further, the female respondents also shared that boys were hardly stopped by the parents from spending time on the device, while girls were often reprimanded for being on the phone or asked to perform some household chores. Even for leisure purposes, a boy's demand for time is given priority over a girl in the household. Besides the family, people in the community also comment and object if a girl is found speaking or using the phone for a certain length of time.

There was a whole arc of gender patterns when it came to the use of smartphone devices and apps. In the younger cohort of the study, 15–17 years, boys had much more knowledge and access to smartphones, even if they were sharing the smartphone device with their siblings or friends. The ease with technology underscored the historical advantage of men over women in the use of technology. The boys experimented, played games, chatted on various apps, and found ways to manipulate the apps and internet to serve their varied purposes – they had more regular access to the smartphone devices through their family

members or friends. The girls in this age group, however, were most distanced from any digital interaction. While they were mainly aware of social media platforms such as Instagram and YouTube, they lacked any meaningful engagement with the device and platforms, arising out of limited or irregular access and use of smartphone devices. While the younger girls aspired to use a smartphone more often, there is hesitation and a perception of the internet being a corrupting influence within themselves, a narrative popular to keep girls off any form of information which may give her 'ideas of freedom and agency', coupled with the intermittent access to the device.

In this study, we found that after passing out from school (around the age of 18 years), the girls begin to gain more access to smartphones, usually through one's own device or harder negotiations. These young women begin to explore the internet for information, seeking intimate relationships, and posing themselves to the world. This exploration, however, also results in scrutiny and control from family members, relatives, and other community members. Consequently, young women post certain pictures – on occasions and festivals wearing appropriate clothing – on certain 'permissible' apps such as WhatsApp status. Mostly, girls keep their Instagram handles private and share certain photos with their friends using Instagram Direct Messenger. As such, various negotiations take shape around the use of certain apps, which are deemed 'controversial' but also a window to the world for fulfilling personal aspirations.

Most respondents use YouTube channels and study circle apps like Physics Wala for supporting their studies. Low economic resources limit them to access only free videos available on the channels, which are limited. While some of the boys in both age groups are enterprising and trying to earn money through social influencing techniques of creating vlogs on YouTube on gaming, travel, etc., most girls are still unaware or underconfident to explore the digital space and opportunities owing to lack of economic resources, information, restricted mobility, fear of judgment and failure, and cultural norms controlling their behaviour. It indicates that while digital literacy is paramount for meaningful engagement with the digital landscape, it cannot be done without having a parallel conversation around gender norms and women's agency.

Young girls and women reported surveillance of their time and online presence, which resulted in limited use of apps and the ability to explore digital opportunities. The probability of violence, both online and offline, is another crucial barrier for girls and women's participation in the digitalization process.

The study also indicated that in the older cohort, there were more similarities in terms of the smartphone apps being used by both genders; their social and economic position play a role in determining what kind of app they use. This raises important questions about whether true equality or autonomy exists in the digital world. Are people genuinely free to choose from thousands of apps, or are their choices pre-determined by algorithms, directed by their multiple identities and influenced by their offline lives? There is a need for evidence-building on this to come up with design-related solutions for equitable participation in the digital world and economy.

The study also probed their support systems in case of trouble. Most girls and women responded by seeking support from their friends and female family members, and almost all respondents, including men and boys, were skeptical of going to the police. Kalyanpuri is a high-crime area, and the boys are often harassed or threatened by the police. The girls also shared that involving the police would also mean getting their parents involved and so try to resolve the problem on their own. Some of the respondents also shared that the police are often not responsive, and their patronising behaviour discourages them from approaching them. Despite this negative perception of the police, the cybercrime department of the police was also helpful when one of the girls complained about her morphed photographs on social media. Privacy and safety while using smartphone apps were of paramount importance to the young women and girls in the study. Some of the respondents pondered how the apps had a responsibility towards protecting the users, and others felt that the government was responsible for stopping any misinformation from spreading through online means. An area also

known for riots, there is a concern around misinformation resulting in large-scale violence, especially during heightened communal and regional tensions.

While this study was a short one, it provided rich data in the world of 'digital lives' that young people from resource-poor communities experience and aspire for. There is a need for a larger study and in various geographical locations to unpack the varied inequities that exist in access, use, and control of smartphone devices and platforms. From the community, there were concerns regarding economic frauds, which become a barrier for digital financial inclusion. For girls and women, given their limited access and use, this becomes a greater challenge. This also creates barriers to their participation in the growing digital economy. Further, experiences and perceived threats of gender-based violence also lead to controlled use and/or self-censorship when exploring the various platforms on smartphones.

Based on the findings and the felt needs of the participants of the study, we have put forth the following recommendations:

Targeted Digital Literacy Programs

Implement targeted digital literacy and skills training programs for women and girls, particularly in low-income and marginalized communities. For a truly gender-transformative digital literacy program, these need to be designed keeping in mind the context and user-specificities, based on the intersectional identities of the program's recipients (location, age, class, caste, race, religion, disability status, etc.).

Support for digital based grievance mechanisms (including only safety)

Girls and women often do not have access to any grievance mechanism when it comes to any problems they face using digital devices. They feel uncomfortable approaching their family members owing to the backlash they may encounter. A helpline designed to help girls and women redress their digital-based grievances will help them gain more confidence in navigating digital devices and platforms.

Designing programs to tackle gender and social norms around use of digital devices

It has been clear from the findings that controls around access and use of smartphones mimic offline gender and social norms in the community. Digital literacy programs need to be accompanied by programs around norms in the community, which will help tackle barriers to access and use of smartphone devices and platforms without hesitation.

In the context of the state and the market space, there is a greater need to adopt a more gender-transformative approach towards designing, implementation, innovation, and solutions. More gender-diverse teams will also help in devising specific and targeted solutions that will be successful. Some broad recommendations on these lines, based on the study aspects, are listed below:

Develop Gender-Inclusive Digital Policies

Create national and regional policies that specifically address gender gaps in digital access, skills, and representation. These policies should include incentives for organizations to promote gender equality in technology fields. This can be further supported by collecting and analyzing gender-disaggregated data on internet usage, digital skills, and tech employment to identify specific gaps and track progress.

Gender Lens in Technology Development

Adopt a gender-lens approach when developing new digital tools, ensuring they are accessible and relevant to both men and women.

User-centered and inclusive design

Encourage tech companies to involve women in the design, testing, and development of new technologies to ensure products are inclusive and meet their needs. When designing platforms by governments for streamlining processes, implementation of schemes, programmes, and policies, it is important to include stakeholders from the bottom-up in designing such platforms, followed by training on these platforms for seamless onboarding and work using such platforms.

Tackling technology-mediated Gender-based violence

Investment by the state and tech companies in designing a safe digital experience for girls and women, which is a high priority for women to be able to access digital opportunities. This would also include breaking the menace of fake news, which impacts and impedes women's lives unequally.

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Pictures

Boxes

Tables

Figures

Institute of Social Studies Trust

U.G. Floor, Core 6A, India Habitat Centre, Lodhi Road, New Delhi-110003
Tel : +91-11-4768 2222 | Email : isstdel@isstindia.org
Website : www.isstindia.org

facebook.com/ISSTDELHI | @of_isst