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CROSS-CULTURAL SMARTPHONE BEHAVIOR: A COMPARATIVE STUDY OF UNIVERSITY STUDENTS IN RUSSIA AND INDIA

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Annotation

This study provides a comparative overview of smartphone use patterns among university students in Russia and India. Key metrics include daily usage time, frequency of device unlocks, and weekly app usage. While the total time spent on smartphones is statistically similar, notable behavioral differences emerge Indian students tend to spend more time per application, while Russian students interact with

a wider variety of apps. The findings offer critical insights into user engagement, digital habits, and implications for app development and digital wellness programs.

Keywords: students, mobile phones, Internet, education.

ИСПОЛЬЗОВАНЕИЕ СМАРТФОНОВ В РАЗНЫХ КУЛЬТУРАХ: СРАВНИТЕЛЬНОЕ ИССЛЕДОВАНИЕ СТУДЕНТОВ УНИВЕРСИТЕТА ИЗ РОССИИ И ИНДИИ

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Аннотация.

В этом исследовании представлен сравнительный обзор моделей использования смартфонов студентами Крымского Федерального Университета из России и Индии. Ключевые показатели включают время ежедневного использования, частоту разблокировки устройства и еженедельное использование приложений. Несмотря на то, что общее время, проведенное за смартфонами, статистически сходно, выявляются заметные различия в поведении: индийские студенты, как правило, тратят больше времени на каждое используемое приложение, в то время как российские студенты взаимодействуют с более широким спектром приложений, тратя на каждое из них меньше времени. Полученные результаты позволяют получить представление о вовлеченности пользователей и их цифровых привычках.

Ключевые слова: студенты, мобильные телефоны, интернет, обучение.

Smartphone usage among university students has become a lens through which lifestyle, digital behavior, and even stress levels can be understood [3]. Studies have shown that not only the duration but also the pattern of interaction with smartphones plays a significant role in academic outcomes, mental health, and social interaction [4]. This article explores these patterns in students from Russia and India to understand cross-cultural variances and app engagement strategies.

Materials and methods of research. Data were collected from 24 male students from Russia and 24 from India; 39 female students from Russia and 27 from India. The average age was 20.36±0.48 years. Students anonymously provided data on the use of their smartphones during the week. In devices with the Android operating system, data was obtained through "settings" - "digital well-being". In the iOS system, the "screen time" function was used. Parameters recorded: average daily smartphone usage (minutes/day), daily unlock frequency, weekly time spent on top apps.

The obtained variation series were tested for normal distribution. Parametric

methods of statistical data processing were used using the applied statistical package MedStat.

The results of the research. The highest rates of mobile device usage and screen unlocks were found among girls from Russia (Table 1). Girls from India unlocked their phones the least.

This parameter was significantly lower when compared with both the results of Russian girls and the results of Indian boys. This indicates a greater focus on the actions being performed and less anxiety among Indian girls.

Table 1. Daily Usage and Unlock Frequency

Country	Gender	Average usage time (min/day)	Unlocks per Day
Indian Students	Male (n=24)	349.4±29.4	86.98±6.6
	Female (n=27)	361.0±30.9	60.82±3.6 **
Russian Students	Male (n=24)	370.9±37.1	84.12±7.0
	Female (n=39)	418.2±33.2*	96.96±8.8*

Note: * - significant differences between the results of girls from Russia and India ($p<0.05$); * - significant differences between the results of girls from Russia and India ($p<0.03$); ** - significant differences between the results of girls and boys from India ($p<0.05$).

Screen time among boys from India was minimal compared to the results of other groups, but the differences were not significant ($p>0.05$).

Assessing the duration of mobile device use, we identified the most popular applications. These included Instagram, YouTube, WhatsApp, Google Chrome, Drive, Telegram, VK (Social Media), Online Cinemas, TikTok, and Yandex Books. However, some applications were not used evenly (Table 2). For example, TikTok and Yandex Books were not used by students from India. Online Cinemas was used only by girls from Russia.

Table 2. Weekly App Usage Patterns (min/week)

App	Indian Students		Russian Students	
	Males	Females	Males	Females
Instagram	335.2±24.3	137.1±10.4 *	79.8±6.2 "	34.6±2.2 *
YouTube	290.4±21.5	215.2±20.4	88.3±6.9 '''	30.3±3.3 **
WhatsApp	233.1±19.7	286.3±20.3	51.0±4.1 '''	53.0±3.8 "
Google Chrome	198.2±16.0	22.6±1.2 *	42.0±4.4 "	43.1±3.0 '
Drive	67.0±5.3	106.1±10.8 *	38.5±1.6 '	13.0±0.8 * '''
Telegram	127.0±10.2	189.0±16.7	92.9±6.4 '	53.0±4.0 ** "
VK (Social Media)	87.0±6.0	21.0.±1.1 **	89.8±7.6	47.5±5.3 * "
Online cinemas	-	-	-	118.0±10.3
TikTok	-	-	129.0±10.4	75.0±3.2 *
Yandex Books	-	-	50.5±3.2	51.3±3.9

Note: reliability of differences in results among students from the same country * - $p<0.05$; ** - $p<0.01$. Reliability of differences in results among students of the same sex from different countries ' - $p<0.05$; " - $p<0.01$; ''' - $p<0.001$.

During the work, difficulties arose in determining the purpose of using applications during the day. Even taking into account that students provided us with data only on the three most frequently used applications per day, their diversity was so great that we had to combine them into 5 groups.

The "Communication" group of applications included social networks, instant messengers, video calling programs and phone calls themselves: WhatsApp, VK, Instagram, Snapchat, Telegram, Phone, Facebook, etc.

The "Games" group included: Drive, Numpuz, LudoKing, Yandex games, PlayCash, LastWar, FreeFire, Call of Duty, etc.

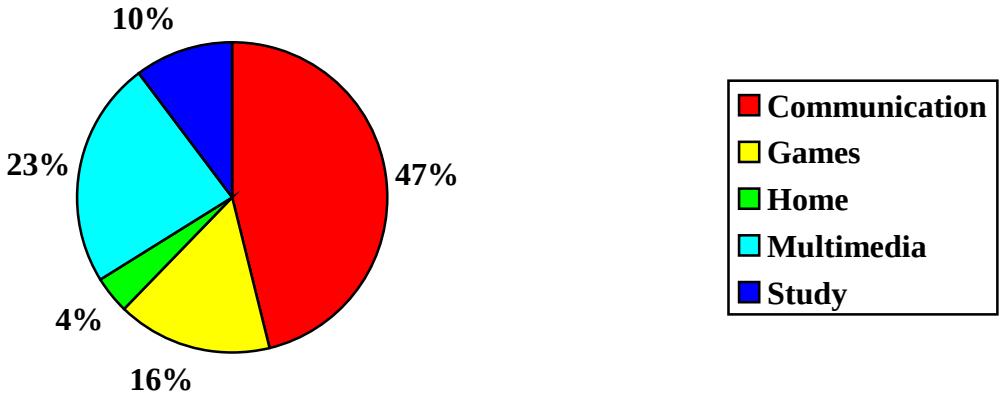
The "Multimedia" group includes: Youtube, Gallery, Camera, Music Player, VLC media player, Netflix, Hotstar, Wide, Capcut, VN Video Editor, Albums.app and other applications for working with photos, sound and video.

In the "Home" group, we combined financial applications, online stores and other programs useful in the household, for example, RNKB24/7, Pinterest, SOFAR, Wildberries, Avito, Ozon. Also included are applications related to religion, for example, 5te5 Namaz.

The Study group was represented by browsers, translators, text editors, LMS and other applications that, theoretically, can be used to search for educational information and work with it, such as Google Chrome, Translate, Chat GPT, Nimbus Note, Cerebellum, Moodle, WPS Office, Documents by Readdle, Mi Doc Viewer, pdf viewer.

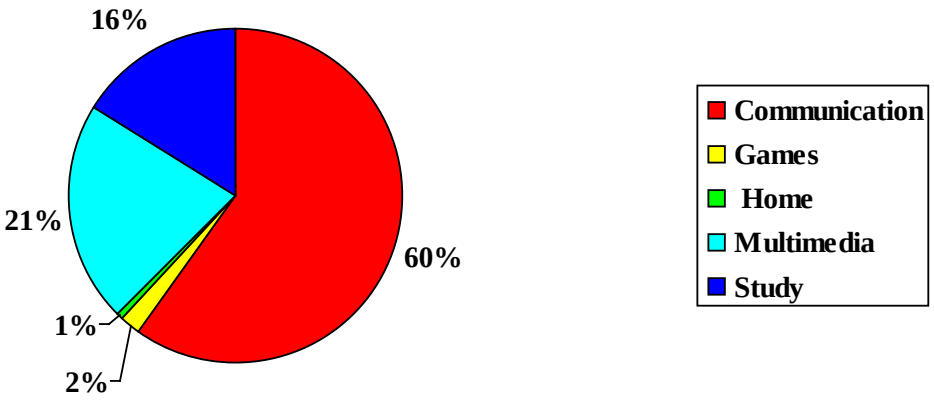
The results obtained for students from India are presented in Figure 1.

Figure 1. Applications by groups. Students India.



The applications that took up the most time were those in the “Communication” group for both Indian and Russian students (Figure 2).

Figure 2. Applications by groups. Students Russia



Discussion. Despite no statistically significant difference in screen time, usage patterns differ sharply. Indian students use fewer but more time consuming apps, with deep engagement on Instagram, WhatsApp, and YouTube. Russian students install more applications, indicating broader but shallower engagement consistent with Pavlova and Ivanov's findings [2] on multitasking behaviors in Russian youth.

The unlock frequency among Russian females (nearly 97/day) is far above that of Indian females, which may indicate habitual checking tied to social interaction apps like Telegram or VK. This aligns with previous studies on screen addiction and attention fragmentation among frequent smartphone users [1, 5].

Conclusion.

1. No significant difference in total usage time, but behavioral patterns differ drastically. Indian students are deep app users spending long durations on fewer apps. Russian students are broad users using a variety of apps for shorter periods.
2. Female students, especially in Russia, show higher phone engagement (usage + unlocks).
3. App choices reflect cultural content preferences WhatsApp dominates in

India; Telegram and VK in Russia.

4. These usage patterns can influence mental focus, academic performance, and digital health risks.

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