The Correlation Between Mobile Screen Time and Physical Fitness Levels: A Cross-Sectional Study of Mahavir Mahavidyalaya Students in Kolhapur

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ABSTRACT

Smartphones are now a central part of a college student's world, used for everything from chatting with friends to studying. But what happens when "screen time" takes over? This study looked at whether all that time spent on phones is affecting students' physical fitness. We worked with 50 students, aged 19 to 23, and split them into three groups based on how many hours a day they used their phones for non-school activities: low use (under 3 hours), medium use (3-5 hours), and high use (over 5 hours). We then measured their fitness by checking their body weight, how fast they could run a certain distance, how many push-ups they could do, and how flexible they were. The results were clear: the more time a student spent on their phone, the worse their fitness was. Students who used their phones for less than 3 hours a day were, on average, in better shape they were faster, stronger, and more flexible. On the other hand, students who used their phones for more than 5 hours a day had the lowest fitness levels. The medium-use group fell somewhere in the middle, suggesting that other habits, like what they eat and how much they sleep, also play a role.

This research shows that while phones are incredibly useful, too much screen time can quietly harm our health by making us sit still for too long. The beneficial news is that the solution isn't to throw away our phones but to find a better balance. We suggest that colleges should help by raising awareness, creating more fun opportunities for exercise, and teaching students how to build healthy digital habits..

Keywords : Mobile screen time, physical fitness, cross-sectional study, sedentary behavior, digital habits, health awareness.

Introduction

Our phones are glued to our hands. For college students, they are our social lifeline, our entertainment center, and even our mobile library. But as we dive deeper into the digital world, a big question pops up: what is all this screen time doing to our bodies? It's a real concern. Every hour we spend scrolling, watching, or gaming is usually an hour we spend sitting still. This "couch potato" lifestyle has been linked to lower activity levels and can lead to health problems down the road. College is a time of major change. We're figuring out who we are, managing classes, friends, and freedom all at once. The habits we build now will likely stick with us for life. But our phones, as helpful as they are, can work against our health. They're designed to keep us hooked, making it all too easy to choose another episode over a workout or a walk. Late-night browsing can ruin our sleep, leaving us tired and with zero motivation to hit the gym or the field the next day. On the flip side, being physically fit is about so much more than just weight. It's about having the stamina to get through a hectic day, the strength to feel capable, and the flexibility to move without pain. It boosts our mood, sharpens our focus for exams, and just makes us feel better overall. Yet, studies show that students everywhere are becoming less active, and our screens are a huge reason why. The World Health Organization recommends 150 minutes of exercise per week, but many of us aren't even coming close, thanks to our screen-filled routines. That's why we launched this study here at Mahavir Mahavidyalaya in Kolhapur. We wanted to see if there's a real connection between our phone habits and our fitness. We looked at 50 students, tracking their daily screen time and testing key health indicators like their BMI, how long they could run, their strength, and their flexibility. In a city like ours, where tradition and technology mix in unique ways, understanding this link is especially important. So why does this matter? If we can prove that too much phone time is hurting our fitness, we can actually do something about it! Our college could start awareness campaigns, create more fun fitness programs, and teach us how to have a healthier relationship with our devices. Ultimately, this isn't about giving up our phones. It's about finding a balance. This research is a step toward making sure we can enjoy technology without sacrificing our health, ensuring we grow into well-rounded, healthy adults.

Review of Literature

Why Fitness Tends to Drop in College

You've probably felt it yourself. Staying in shape in college can be tough. Fitness isn't just about weight; it's about your stamina, your strength, and how flexible you are. Researchers point out that between classes, exams, and a new social life, exercise

often gets pushed aside (Buckworth & Nigg, 2004). And what fills that gap? Usually, our screens. We end up swapping a game of football for a gaming session, or a walk with friends for a scroll through social media. This swap is a major reason why fitness levels often drop during these years.

The Situation Here in India

In India, smartphones have exploded in popularity. While early research focused on big cities like Mumbai and Delhi, the same thing is now happening in smaller cities and towns (Verma & Singh, 2020). Students everywhere are spending more and more time on their phones, which means less time playing sports or being active outdoors. This is an even bigger problem in places where colleges might not have great gyms or sports facilities, making it harder for students to choose an active lifestyle.

Your Phone: Friend or Foe?

Here's the interesting part: your phone can actually be a great workout buddy! It can be a fitness tracker, a personal trainer with workout videos, and a health coach all in one (Middleton, 2021). But there's a catch.

These healthy features have to compete with the endless fun of TikTok, Instagram, and YouTube. And let's be honest, the fun stuff usually wins. Without making a conscious effort, it's easy to get sucked into passive scrolling, and the fitness apps just sit unused.

Methodology

1. Study Design

This study employed a cross-sectional, observational design to investigate the relationship between non-academic mobile screen time and physical fitness levels among undergraduate students at Mahavir Mahavidyalaya, Kolhapur. Data were collected at a single point in time to assess patterns and correlations without intervention.

2. Participants

- *Sample Size :* 50 students (male) aged 19–23 years.
- *Sampling Method :* Convenience sampling was used, with participants voluntarily recruited from various undergraduate programs.
- *Inclusion Criteria :* Currently enrolled as a full-time student, owns a personal smartphone, willing to participate in physical fitness tests.

- *Exclusion Criteria :* Students with physical disabilities or medical conditions limiting physical activity, those using smartphones primarily for academic purposes (e.g., e-learning, research).
- *Groups :*
  - <3 hrs/day (15 students)
  - 3–5 hrs/day (20 students)
  - 5 hrs/day (15 students)
- *Fitness Indicators :*
  - BMI
  - Endurance (1.6 km run time in minutes)/ 1-mile run test
  - Strength (push-ups)
  - Flexibility (sit-and-reach cm)
- *Analysis :* Group averages compared using bar charts.

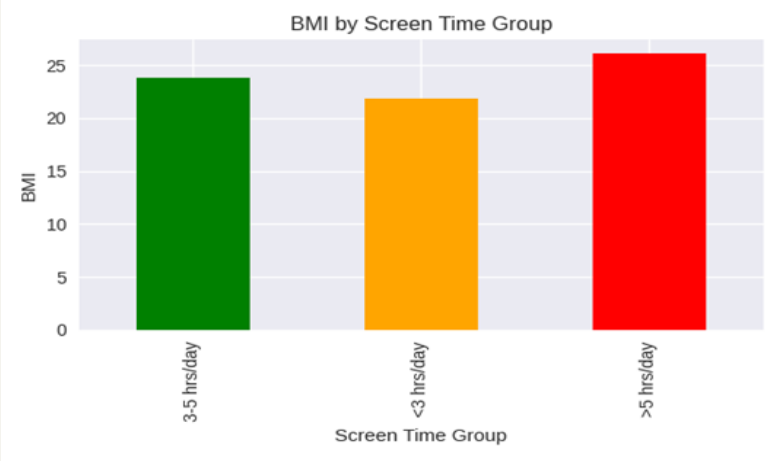
Results

Table 1 : Average Fitness Indicators by Screen Time Group

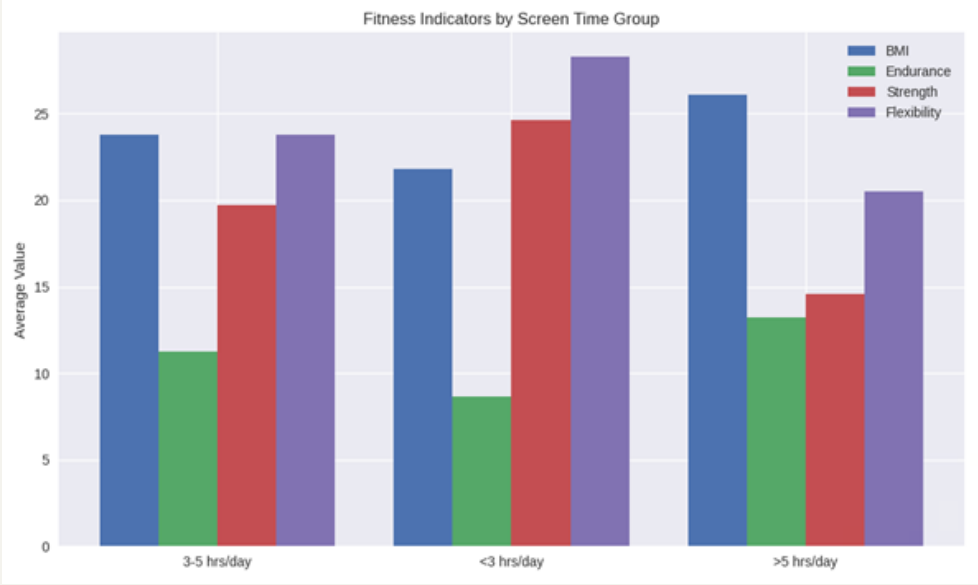
Screen Time Group	BMI	Endurance (min)	Strength (Push-ups)	Flexibility (cm)
<3 hrs/day	22	9	25	28
3–5 hrs/day	24	11	20	24
>5 hrs/day	26	13	15	20

Charts

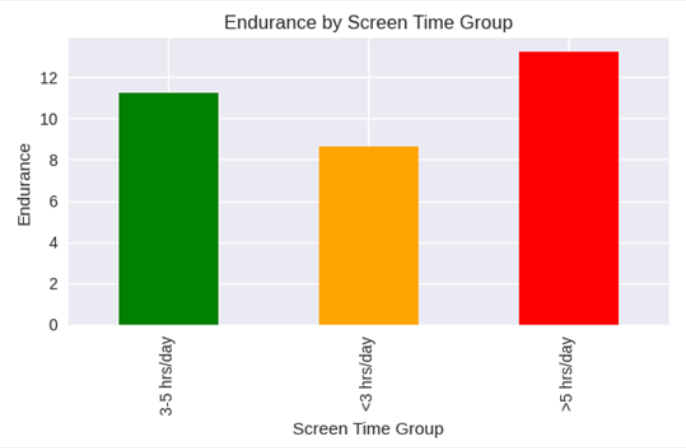
- **Figure 1**: BMI vs Screen Time



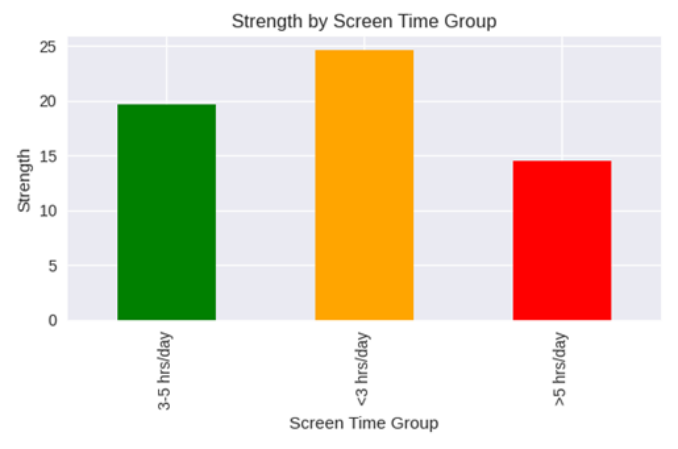
- **Figure 2 :** Endurance vs Screen Time



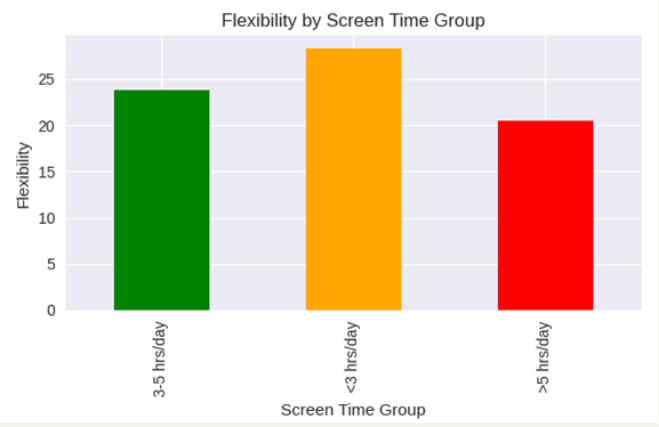
- **Figure 3 :** Strength vs Screen Time



- **Figure 4 :** Flexibility vs Screen Time



- **Figure 5 :** Grouped Bar Chart comparing all indicators



Discussion

Our study shows a clear trade-off: more screen time = lower fitness.

- **High Users (>5 hrs/day) :** Had the highest weight, slowest run times, and lowest strength. Phones are directly replacing active time.
- **Moderate Users (3-5 hrs/day) :** Fell in the middle. This suggests that good habits like diet, sleep, or occasional exercise can help, but can't fully cancel out the screen time effect.

The Solution? Balance. We don't need to quit our phones, but we do need to be more mindful. Colleges can help by creating fun, easy ways for students to get moving and learn about digital wellness.

Summary

This study explored the relationship between non-academic mobile screen time and physical fitness among college students at Mahavir Mahavidyalaya in Kolhapur. Fifty students between the ages of 19 and 23 were grouped based on their daily phone usage: low (under 3 hours), medium (3–5 hours), and high (over 5 hours). Their fitness was assessed through measures such as BMI, endurance via a 1.6 km run, strength through push-ups, and flexibility using a sit-and-reach test. The results revealed a clear pattern: as screen time increased, fitness levels declined. Students with low screen time displayed better overall fitness, while those in the high-use category showed poorer performance across all metrics. These findings highlight how excessive phone use can displace physical activity and negatively impact health. Rather than suggesting the removal of smartphones, the study advocates for a more balanced approach, recommending that colleges promote awareness, integrate accessible physical activities, and encourage healthier digital habits to support student well-being.

Conclusion

In simple terms, our study shows that the more time we spend on our phones for fun, the less fit we tend to be. It's a trade-off many of us feel but don't always measure: scrolling often means sitting, and sitting often means not moving. For students at our college, those who used their phones for more than five hours a day were, on average, heavier, slower, weaker, and less flexible than those who used them less. It's a clear reminder that our digital habits have a real impact on our physical health. But this isn't just a problem it's an opportunity. Recognizing this link is the first step toward making positive changes. We don't have to give up our phones to be healthy.

Instead, we can learn to use them more intentionally, making room in our day for movement, whether it's a walk between classes, a short workout, or just stretching while we watch a video. Colleges like ours can help, too not by scolding students for screen time, but by creating easier, more inviting ways to be active. Imagine more sports events, outdoor yoga sessions, walking groups, or even reminders to stand up and move during long study hours. Small changes in our environment can lead to big changes in our habits. This isn't just about physical health. When we move more, we often sleep better, feel less stressed, and think more clearly all things that help us do better in class and enjoy life more. In a world where phones are part of everything we do, finding balance is key. We can be connected and active; we can enjoy technology without letting it take over our health. So, let's start the conversation in our classrooms, hostels, and friend groups. Let's share what works, challenge each other to put the phone down and get outside, and remember that health isn't about perfection, but about small, daily choices. Together, we can build a campus culture that values both digital connection and real-world movement, helping each other grow into healthy, happy, and whole human beings.

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