

An Investigation into App Usage on Mobile Devices

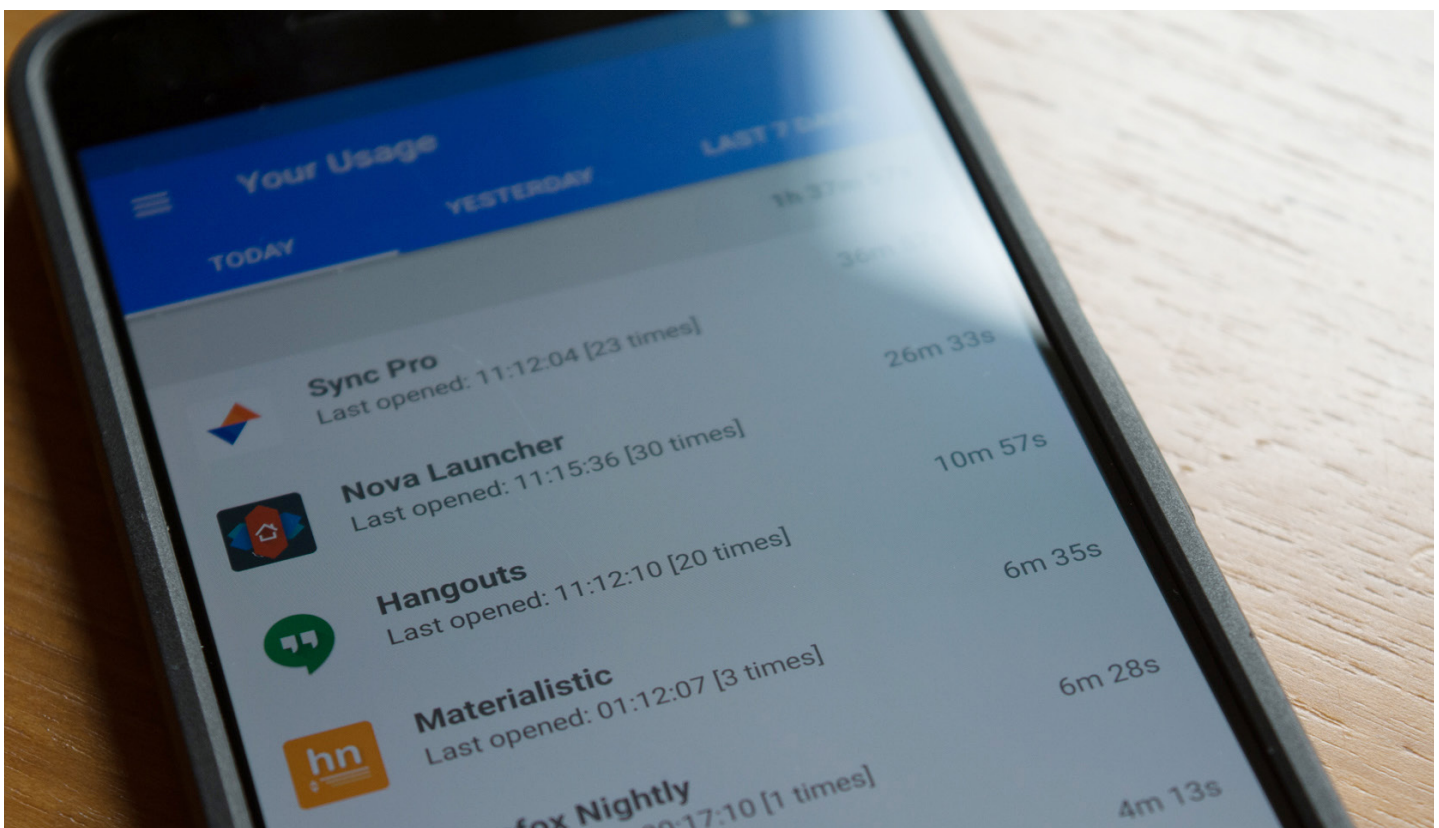
ABSTRACT

Mobile addiction has become a growing phenomenon that affects individuals and society. In this study, data will be collected from users to understand how they use their smartphones and tablets.

First, a survey on 86 participants was collected then analysed for further research, and data collection opportunities. Survey results found that 55% of respondents used social media the most when comparing to other categories, with 69% using their device the most during evenings. 58% of respondents said they were somewhat dependent, rating their usage as medium (normal).

To measure how people use their device, an Android app called Consume was developed. Data was collected from consenting participants over 29 days. During that time, 75 days' worth of data was collected from participants ($n=3$). Participants collectively spent 501.24 hours using 117 different apps.

Results found that participant usage progressively increased towards the weekend, with the highest usage spent during weekends. On average, participants spend 7.66 hours on their device on weekends, with one participant averaging 11.52 hours on Saturdays. When averaging out participant daily usage, and extending it to the rest of the year, it is expected that the participant with the highest usage will use their device for 33.57% of the year.



Consume: Proposed Android App

INTRODUCTION

Technology is deeply involved in modern day society. So much so, that we are becoming increasingly dependent on it in both our personal and working lives.

We are spending more time using technology, however it is important that to understand why we are using it for longer, its effect on our health (both physically and mentally), and the impact this may have on our lives.

Mobile addiction can be considered a form of psychological dependency to not only smartphones, but other kinds of technologies. Some of the behaviours shown in mobile addicts were similar to those affected by other addictions such as gambling and drug/substance abuse, however due to this addiction being of a non-chemical nature, it is categorised as a behavioural addiction.

In certain countries, mobile addiction has become a growing concern, that governments have started making changes in the efforts to reduce its effects on citizens, with countries like South Korea opening web addiction treatment clinics, France banning mobile phones in classrooms, now that children as young as three are affected.

AIM

The aim of this study is to understand how people use their smartphones and tablets, why are certain apps more addictive than others, and how technology has changed over the years to become what it is now.

This goal is not to solve the root causes of mobile addiction, or to diagnose dependent to having an issue, but to help them make sense of their usage, and how much time is being spent on this technology.

After providing the user with their data, it is down to them to act upon the results, should they choose to do so.

OBJECTIVES

To satisfy the aim, the following actions will be conducted:

1. Conduct an initial survey
2. Research mobile application, the cause, and effects to mobile addiction
3. Evaluate a popular mobile app for addictive practices
4. Develop an Android app that will collect usage data from consenting users
5. Analyse & compare collected data to survey results



FINDINGS (INITIAL SURVEY)

- **58%** of respondents said that they were somewhat dependent on their device, rating their usage as normal.
- **55%** said that Social Media was their most used app category, using app between **6-10** times per day.
- **69%** used their device the most during evenings.
- **55%** said their device *sometimes* runs out of battery
- **88%** said they have not used an app to monitor usage, **41%** were interested to try proposed app.

FINDINGS (APP DATA COLLECTION)

Data was collected for 29 days between dates, 19th March – 17th April. There were six active app users, three whom chose to remain participants, and others opting-out. From three active participants, 75 days of data had been collected. During this time, participants had collectively spent 501.24 hours using 117 applications.

The following outlines *some* of the findings:

- Apps were opened a total **22,698** times
- Data showed that participants used their device the most between **4:00 PM – 10:00PM**, followed by **midday**, then the early hours of morning **~5:00 AM**.
- Participants used their device the most during **weekends**, with usage on **Monday** and **Tuesday** still high.
- Participants check their device an average of **156** times per day (**6.64** hours usage), and **206** on weekends (**7.66** hours).
- On a given day, participants opened apps on average **308** times, reaching **337** on weekends.
- Participants averaged **23** opens on Social Media apps.
- Participants are expected to spend on average **27%** of the year on their device, with more dependent spending over **33%**.

CONCLUSIONS & RECOMMENDATIONS

- On reflection, the need to self-regulate ones' usage to these technologies would be beneficial.
- The tech industry will continue to find new ways to be more persuasive in getting your attention.
- Being in the proximity of your device can affect how well you perform.
- Further research should be carried out into behavioural addiction, to understand the compulsive need for reward.
- To include a larger number of participants to attain a more realistic sample.

