

A photograph of a crowded train station with a high, arched glass and steel ceiling. In the foreground, five people are walking and looking down at their smartphones. From left to right: a woman with long dark hair in a dark jacket, a woman with long blonde hair in a brown coat, a man in a dark jacket, a man in a dark jacket, and a man in a tan coat. The background is filled with other commuters, some blurred, creating a sense of a busy, modern transit hub.

**Personal Awareness and Desire to Reduce Screen Time**



## Agenda

- Overview of screen time statistics
- Demographic information
- Pros & Cons of digital technologies
- Project finding
- Statistical tests
- Summary and recommendations

## Overview of screen time statistics

- Average person spends **40%** of their **waking hours** on an internet-connected screen
- Globally, on average people spend **6.5 hours** of screen time per day
- Daily screen time has increased by **13% (50 minutes)** per day since 2013
- Gen Z spends around **9 hours** screen time per day, **38%** on social media



# The Average Screen Time

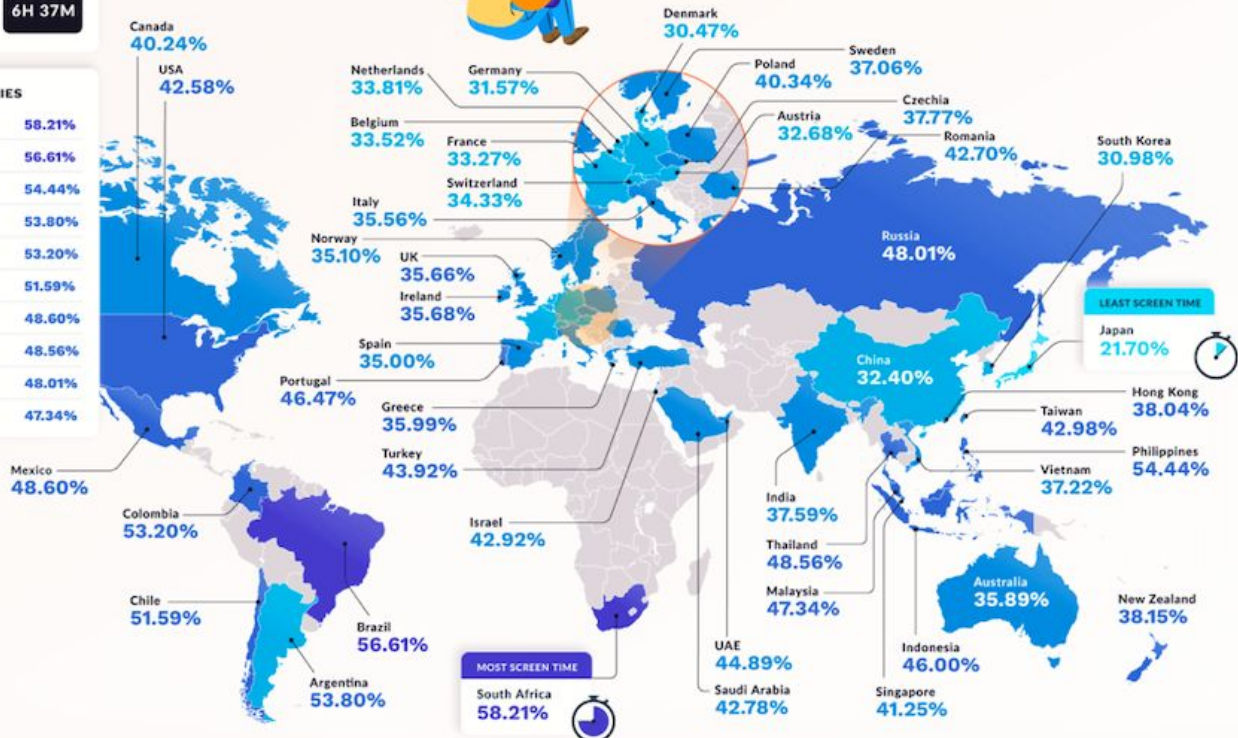
(% OF AWAKE HOURS) BY COUNTRY

WORLDWIDE  
AVG  
SCREEN TIME

6H 37M

## TOP 10 COUNTRIES

- 1 South Africa 58.21%
- 2 Brazil 56.61%
- 3 Philippines 54.44%
- 4 Argentina 53.80%
- 5 Colombia 53.20%
- 6 Chile 51.59%
- 7 Mexico 48.60%
- 8 Thailand 48.56%
- 9 Russia 48.01%
- 10 Malaysia 47.34%



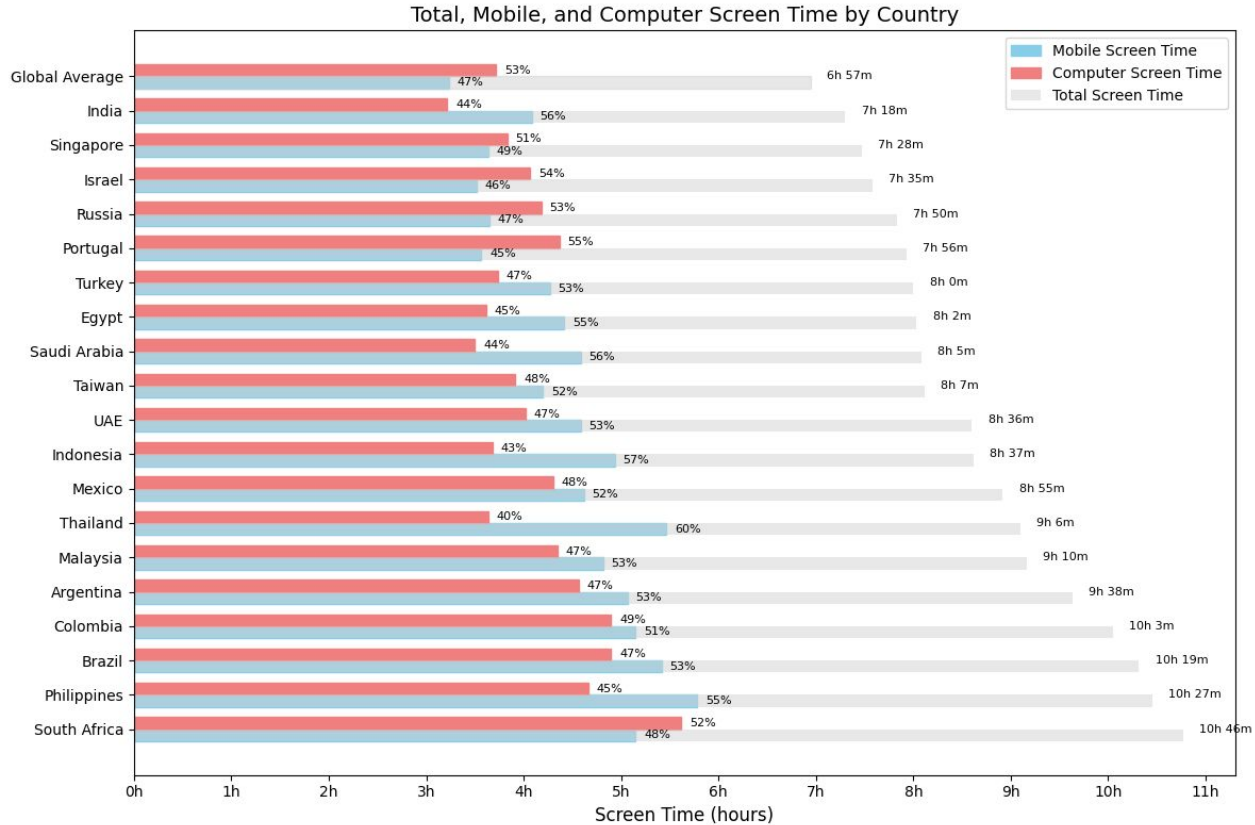
Are you a slave to your screen? According to our research, people spend an average of 6 hours and 37 minutes in front of screens. The question is, how does each country differ?

The country with the **highest average** screen time is **South Africa**, spending more than half the day on screens (**58.21%**). Surprisingly, even as one of the first countries to harness the power of technology and explore its benefits, according to News On Japan, **Japan** reportedly spends the **least** time scrolling (**21.70%**).

DAILY AVG SCREEN TIME (% OF AWAKE HOURS)



## Proportion of devices used in top 20 countries



- Thailand has 20% difference in favour of mobile screen time.
- Portugal has the largest different in favour of computer screen time of 10%.

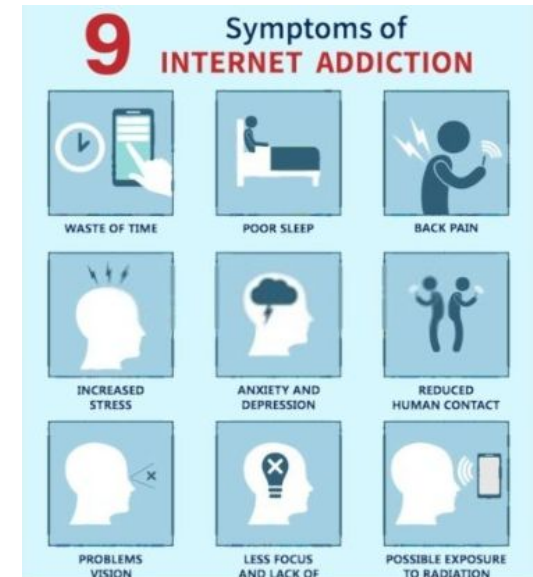
### Pros:

- Access to information, entertainment and social connectivity
- Real time communication
- Knowledge sharing
- Efficiency and productivity
- Remote work and Learning



### Cons:

- Privacy concerns
- Social isolation
- Information overload
- Physical and mental healths



# Awareness and Desire to Reduce Screen Time

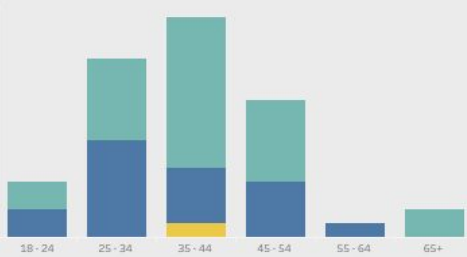
Participants  
46

Female  
27

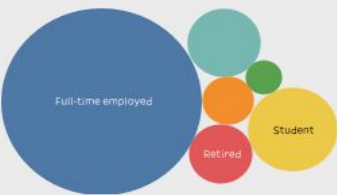
Male  
18

Other  
1

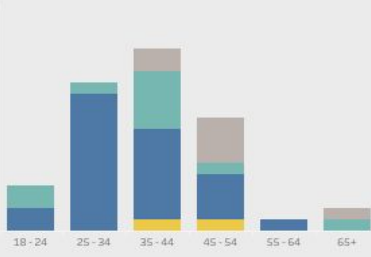
Distribution of Age and Gender



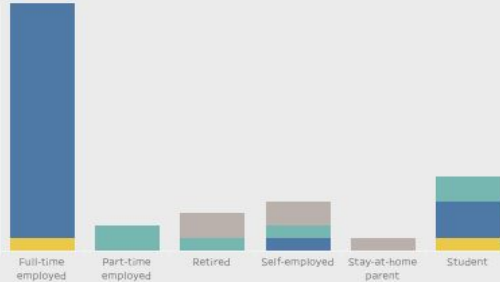
Distribution of Occupations



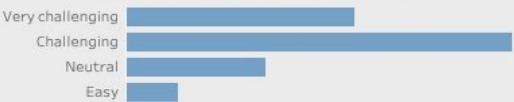
Average Hours per Age Groups



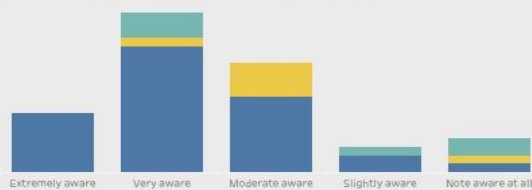
Average Hours per Occupation Types



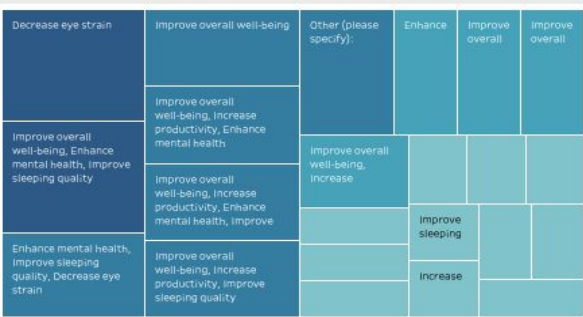
Perceived Challenges in Reducing Screen Time



Awareness and Desire to Reduce Screen Time



Motivation to Reduce Screen Time



Desire to Reduce..

- ☒ (All)
- ☒ No
- ☒ Not sure
- ☒ Yes

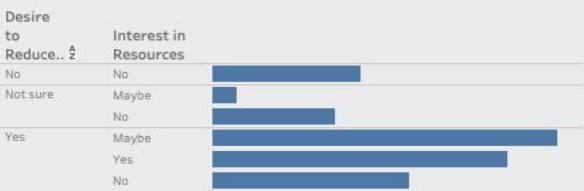
Interest in Resou..

- ☒ (All)
- ☒ Maybe
- ☒ No
- ☒ Yes

Anticipated Challenges



Desire to Reduce Screen Time vs Interest in Resources



Preferred Support Type





# Statistical Tests



1.. Association between awareness level and desire to reduce screen time:

Chi-Square Test

2. Association between demographic and the choice of strategies to reduce screen time.

Chi-Square Test

3. Association between awareness level and average hours spending on screen:

Pearson Correlation Coefficient



# Association between awareness level and desire to reduce screen time

## Chi-Square Test

*Null Hypothesis = There is no association between awareness level and the desire to reduce screen time among the surveyed individuals.*

*Alternative Hypothesis = There is a significant association between awareness level and the desire to reduce screen time among the surveyed individuals.*

```
from scipy.stats import chi2_contingency

contingency_table = pd.crosstab(df_screentime['Awareness'], df_screentime['Desire_to_Reduce_Screen_Time'])
chi2, p, _, _ = chi2_contingency(contingency_table)

print(f"Chi-Square statistic: {chi2}")
print(f"P-value: {p}")

if p < 0.05:
    print("There is a significant association between awareness level and the desire to reduce screen time.")
else:
    print("There is no significant association between awareness level and the desire to reduce screen time.")
```

Chi-Square statistic: 15.67415522214284, P-value: 0.04728861732645489

**P-value lower than 5% significant level. Reject the null hypothesis.**

**There is a significant association between awareness level and the desire to reduce screen time.**

**Awareness play a role in influencing decision to reduce screen time.**

# Association between demographic and the choice of strategies to reduce screen time

## Chi-Square Test

*Null Hypothesis: There is no significant association between demographic variables and the choice of strategies to reduce screen time.*

*Alternative Hypothesis = There is a significant association between demographic variables and the choice of strategies to reduce screen time.*

```
1 # Now I want to check each demographic characteristics separately.
2
3 contingency_table = pd.crosstab(df_screentime['Age'], df_screentime['Strategies'])
4
5 chi2_stat, p_value, _, _ = chi2_contingency(contingency_table)
6 print(f'Chi-square statistic: {chi2_stat}, p-value: {p_value}')
7
8
```

Chi-square statistic: 59.075367647058826, p-value: 0.9115204482559106

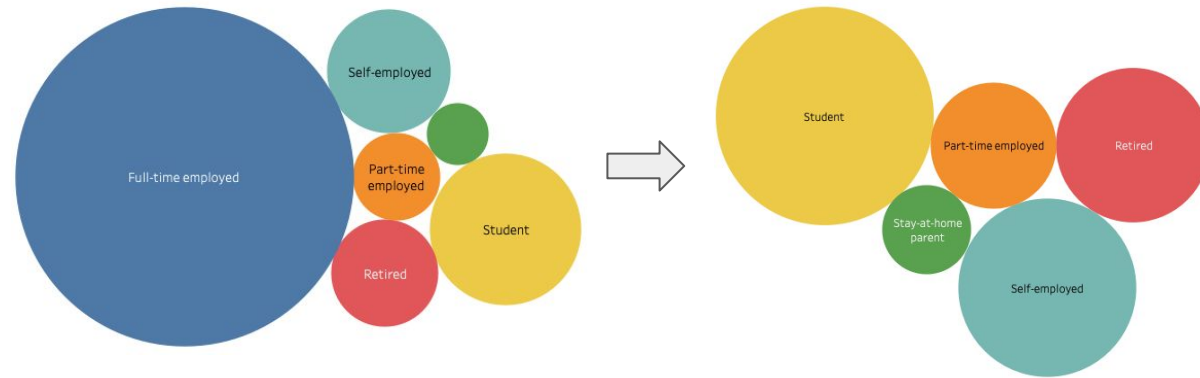
```
1 contingency_table = pd.crosstab(df_screentime['Gender'], df_screentime['Strategies'])
2
3 chi2_stat, p_value, _, _ = chi2_contingency(contingency_table)
4 print(f'Chi-square statistic: {chi2_stat}, p-value: {p_value}')
5
```

Chi-square statistic: 19.86764705882353, p-value: 0.9199422469832289

```
1 contingency_table = pd.crosstab(df_screentime['Occupation'], df_screentime['Strategies'])
2
3 chi2_stat, p_value, _, _ = chi2_contingency(contingency_table)
4 print(f'Chi-square statistic: {chi2_stat}, p-value: {p_value}')
5
```

Chi-square statistic: 68.53060344827587, p-value: 0.6877054036795615

**There is no significant association between demographic variables and strategies chosen to reduce screen time**



*Null Hypothesis: There is no significant association demographic variables and the choice of strategies to reduce screen time.*

*Alternative Hypothesis = There is a significant association between demographic variables and the choice of strategies to reduce screen time.*

```
1
2 df_screentime_filtered = df_screentime[df_screentime['Occupation'] != 'Full-time employed']
3
4 contingency_table = pd.crosstab(df_screentime_filtered['Occupation'], df_screentime_filtered['Strategies'])
5
6 chi2_stat, p_value, _, _ = chi2_contingency(contingency_table)
7
8 print(f'Chi-square statistic: {chi2_stat}, p-value: {p_value}')
9
```

Chi-square statistic: 25.674999999999997, p-value: 0.5909036968237458

The result remains same, p-value is higher than 5% significant level. There is no significant association between occupation and the choice of strategy in reducing screen time.

\*This outcome suggests that interventions to reduce screen time can be universally applied without the need for customization based on age, gender and occupational differences.

# Association between awareness level and average hours spending on screen

## Pearson Correlation Coefficient

```
1 from sklearn.preprocessing import LabelEncoder
2
3 label_encoder = LabelEncoder()
4 df_screentime['Awareness_encoded'] = label_encoder.fit_transform(df_screentime['Awareness'])
5 correlation_coefficient = df_screentime['Awareness_encoded'].corr(df_screentime['Avg_hours'])
6
7 print(f"Correlation Coefficient: {correlation_coefficient}")
8
9 # If the coefficient is close to 1, it indicates a strong positive correlation
10 # (as 'Awareness' increases, 'Avg_hours' also tends to increase).
11
12 # If the coefficient is close to -1, it indicates a strong negative correlation
13 # (as 'Awareness' increases, 'Avg_hours' tends to decrease).
14
15 # If the coefficient is close to 0, it indicates a weak or no linear correlation.
16
17 """In this case, there is a positive correlation but very weak.
18 We can conclude that there is no significant correlation between awareness and average hours spent on
19 screen time."""
20
21
```

Correlation Coefficient: 0.10665695240172762

There is a positive relation between awareness level and average hours but the relation is considered weak.  
The observed association may be influenced by other factors or random variation due to sample.





## Summary

**Screen Time Average:** On average 8 hours or more on screen

**Anticipated Challenges:** Work requirements and entertainment habits.

**Awareness and Desire:** Individuals aware of their screen time express a desire to control it, but many find it challenging.

**Motivation for Reduction:** Enhance overall well-being and decrease eye strain

**Preferred Support:** Technology solutions, particularly apps and tools.



# Recommendation

## **Technological Solutions:**

Screen reduction apps targets on people who are aware of their screen time rather than demographic characteristics

## **Encourage Self-Monitoring:**

Reflect on the relationship between awareness levels and screen usage patterns

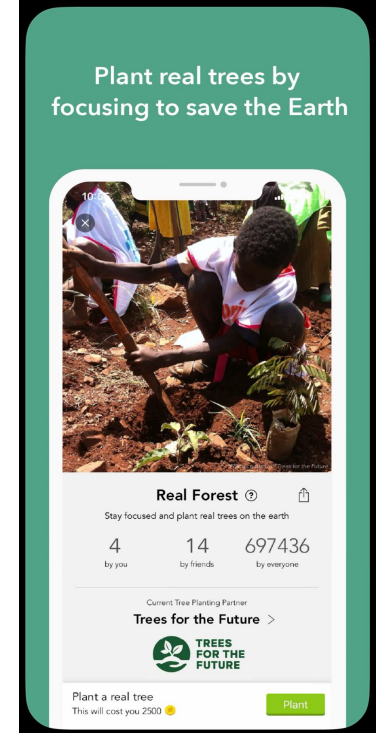
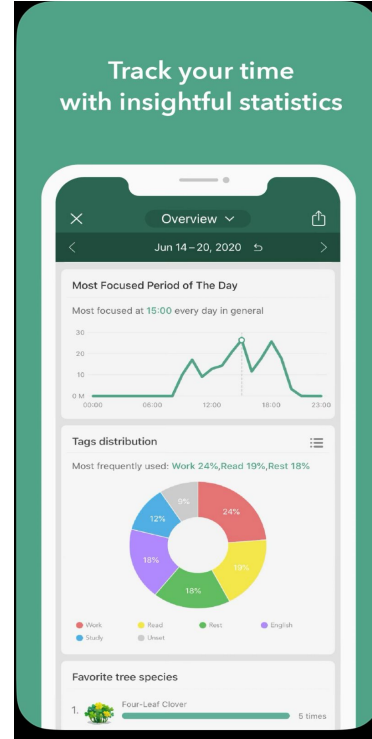
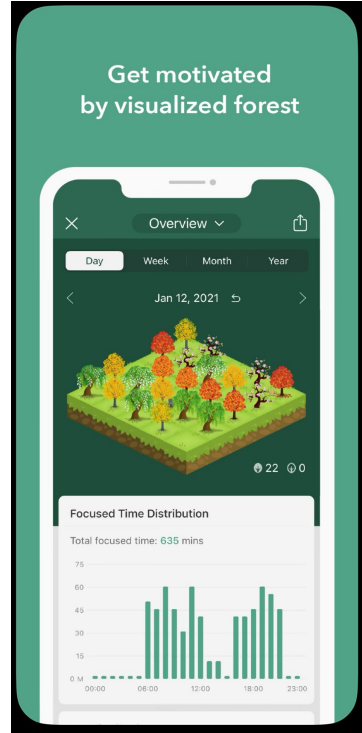
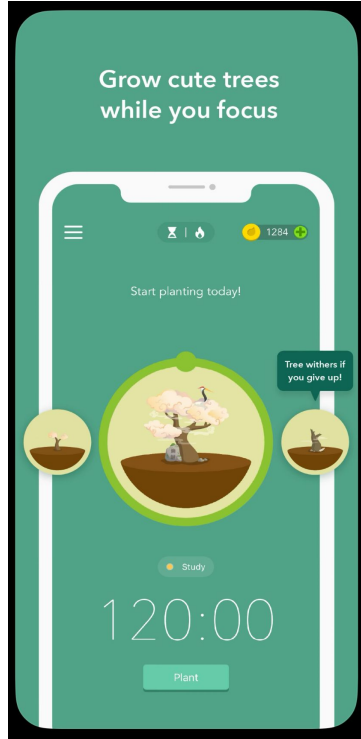
## **Education and Awareness Campaigns:**

Focus on healthy screen practices and impact of screen time on overall well-being

## **Further Research and Contextual Analysis:**

Conduct additional research to comprehend influencing factors such as lifestyle and culture

# Recommended Apps: Forest



**DO MORE THINGS  
THAT MAKE YOU  
FORGET TO CHECK  
YOUR PHONE**

- unknown

