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

In the contemporary digital era, screen time has become an integral part of our daily lives. From smartphones and tablets to computers and televisions, screens surround us, offering a gateway to information, entertainment, and social connectivity. While the technological advancements have undoubtedly enriched our lives, concerns about the potential adverse effects of excessive screen time have gained prominence.

This brings us to a critical aspect of our modern lifestyle: the awareness individuals have about the implications of their screen time and how this awareness may influence their desire to reduce it. As our lives become increasingly intertwined with technology, understanding the factors that drive individuals to re-evaluate and limit their screen time is of paramount importance.

**Alarming Average Screen Time Statistics (2024).**

Screen time has become a part of our daily life. Many people do not realize that they spend too many hours on their phone, computer and other internet connected screens. This study aim to provide insights and disclose various aspect of screen time, providing a deeper understanding of the prevalence, patterns and impact of screen usage in daily life.

**Average Screen Time Stats 2024**

Snapshot of the average time individual spend engaged with the screen in 2024

* Globally, on average people spend 6 hours and 68 minutes (418 mins) screen time per day
* Daily screen time has increased by 50 minute (13%) per day since 2013
* 49% of under 2-year-olds interact with smartphones
* Gen Z spend around 9 hours screen time per day

**Average Screen Time Overview**

A comprehensive look at the overall screen time patterns, shedding light on the primary activities that contribute to these statistics.

* Average person spends 40% of their waking hours on an internet-connected screen
* 30% (2 hours 56 minutes) increase between 2019 and 2021

**Screen Time changes Over time**

Tracking screen time habits over the years, explore the factors influence this changes and their implication for our daily lives. An overwhelming majority of individuals are connected to the internet. The average time spent online through our screens is consistently increasing. Nevertheless, this upward trend in time spent is not uniform for all. In fact, certain countries have experienced a decline between 2021 and 2022.

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**Average Screen Time by Region**

Taking a global perspective, analyse screen time variation across different regions, discover culture and environmental factors. Screen time varies significantly by region, South Africa has the highest average screen time consumption among 43 countries. Brazil, Colombia and The Philippines each average **10+ hours per day.**

Below chart shows data of top 20 countries most active screen time users. On average, people spent **44%** of their waking hours looking at a screen. In South Africa, the figure is closer to 70%. While in Japan, this number is far lower at just 28%. Thailand has 20% difference in favour of mobile screen time. Portugal has the largest different in favour of computer screen time of 10%.

A graph of a number of people

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**Screen Time by Age**

The chart highlights age-specific trend and behaviours. In general, there is a strong positive correlation between age and the percentage of children utilizing electronic devices. The least interactive screen time activity, such as watching TV starting from the ages of 3-4 years and continues at a relatively constant level. On the contrary, more engaging and potentially demanding devices like desktop computers, laptops, and gaming consoles exhibit a consistent increase in usage as age progresses. It comes as no surprise that younger individuals dedicate more time to screen activities than the average population. In fact, recent research indicates that Gen Z spends approximately 9 hours per day on screen-based activities, which is about 2 hours more than global averages.

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**Pros and Cons of Digital Technologies:**

Digital Technologies empowers instant access to a world of info and real-time global connections. It streamlines processes, sparks innovation, and offers diverse entertainment options. Plus, it lets us work or study from anywhere with an internet connection . The . The technologies open doors to endless info and global connections, making work and learning flexible. It supercharges efficiency but sparks challenges like privacy concerns, unequal access, and job worries. Balancing the perks and pitfalls is key for a balanced digital future.

**Impact of digital technologies**

Findings from a survey conducted with over 2,000 US adults indicate that productivity occupies less than half of their screen time. Moreover, 41% acknowledge the difficulty of managing their screen time effectively.

Around 21% of parents feel guilty about how much time their children spend time on screen. Excessive screen time can lead to some serious problems such as concentration, social and emotional skills. Many studies indicates that there is no significant correlation between screen time and academic performance. However, excessive screen time has impacts on individual health including eyes strain, sleep deprivation, obesity, lower self-esteem, delayed learning and behavioural problems in young children. A study shows that limiting social media use to maximum 30 minutes per day can reduce depression and improve well-being.

**Mid-Term Project: Personal Awareness and Desire to Reduce Screen Time**

Before delving into the outcomes of our study, it is imperative to express our gratitude for the invaluable contributions of the 46 participants who actively engaged with our questionnaire. This group, representing our sampled individuals, is fundamental to our exploration of the intricate relationship between screen time awareness and behavioural choices.The diverse perspectives shared through the survey provide a rich source of information, allowing us to draw meaningful conclusions and gain insights into the factors influencing screen time decisions. Let's now examine the key findings derived from this collective input, shedding light on the patterns and trends that emerged from our study.

**Demographic Information**

Among the 46 survey respondents, 27 identified as female, 18 as male, and 1 as other. The majority of participants fall within the age group of 25-54, indicating a prominent representation from this demographic in the study.

A graph of age and gender distribution

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The occupational distribution of respondents reveals a majority of 30 individuals in full-time employment, followed by 6 students, 5 self-employed, 3 retirees, and 2 each for part-time employed and stay-at-home parents.

A graph with numbers and text

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**Screen Time Pattern**

The box plot visually represents the distribution of screen time hours for different age groups, showing the central tendency (median) and the spread of the data (interquartile range) along with the minimum and maximum values.

**A chart of a distribution of time

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**A graph of different colored bars

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The violin shape provides insights into the density of screen time hours for each occupations. The box plot inside the violin gives a summary of the central tendency and spread of the data. Any individual points or beyond the whiskers represents an outlier. In student group there is a missing data that screw the violin shape to negative value.

A graph showing different occupations

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

The chart represents the distribution of responses regarding the desire to reduce screen time across different awareness levels.

The 'Extremely aware' and 'Very aware' categories have higher counts of 'Yes' responses, suggesting a stronger desire to reduce screen time among individuals with higher awareness. The 'Not aware at all' category has relatively lower 'Yes' responses, indicating that those less aware may be less inclined to reduce screen time.

This visualization helps to compare the distribution of responses across different awareness levels and provides insights into how awareness may influence the desire to reduce screen time.

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**Motivation to Reduce Screen Time**

The chart visually represents the primary reasons why people want to reduce their screen time. It appears that the most important motivation for reducing screen time is to improve overall well-being. Other motivations seem to have relatively uniform importance, meaning that they are not significantly different from each other.

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**Perceived Challenge in Limiting Screen Time**

The donut chart provides a visual representation of the distribution of perceived difficulty levels in reducing screen time.

Approximately 45% of respondents find reducing screen time challenging, while around 26.5% perceive it as very challenging. Additionally, 18.4% report a neutral level of difficulty, and 10.2% find it easy to reduce screen time.

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**Anticipated Challenges**

The chart shows particular difficulties or obstacles individuals foresee when it comes to reducing screen time.   
Individuals anticipate challenges in reducing screen time, with predominant factors being work requirements, followed by entertainment habits, social obligations, fear of missing out, and a lack of alternative activities.

A graph with a number of blue and white bars

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The heatmap represents the distribution of anticipated challenges and difficulty levels. The darker colours highlight areas where there is a higher count, while lighter colours indicate lower counts. The observation aligns with the expected interpretation, emphasizing the challenges individuals face in reducing screen time, particularly in the context of work requirements and entertainment habits.

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**Current Approach to Reduce Screen Time and Interest in Tools and Supports for Managing Screen Time**

Below visualization aims to depict the relationship between the desire to reduce screen time and the interest in available resources, offering a comprehensive view of how these factors are distributed within the dataset.

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**Preference on Screen Time Reduction Tools and Resources**

The majority of individuals express a preference for technology solutions, such as apps and tools, among various options like educational resources, community-based programs, personalized coaching or counselling, and other alternatives. This suggests a strong inclination towards leveraging digital tools for support and intervention in efforts to reduce screen time.

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**Statistical Testing**

**1.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.*

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Given that the p-value is 0.0472, which is below the significance level of 0.05, we can conclude that there is a significant association between awareness level and the desire to reduce screen time. This suggests that awareness level plays a role in influencing the inclination to reduce screen time among the surveyed individuals.

**2.Association between awareness level and average hours spending on screen.**

Pearson correlation coefficient

To understand the strength and direction of the relationship between two continuous variables, awareness and average hours. This statistical measure helps quantify the degree of correlation between these variables, providing insights into how changes in one variable may be associated with changes in the other.

A screenshot of a computer code

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The Pearson correlation coefficient of 0.1066 between awareness and average hours indicates a positive correlation. A positive correlation suggests that as awareness levels increase, there tends to be a slight increase in the average hours spent on screens. However, the correlation coefficient of 0.1066 is relatively small, signifying a weak correlation. In practical terms, this means that while there is a discernible positive trend, the relationship between awareness and average hours is not very strong. It's important to note that correlation does not imply causation, and the observed association may be influenced by other factors. The small correlation coefficient suggests that changes in awareness may only explain a limited portion of the variability in average hours spent on screens.

Further investigation and consideration of additional variables are essential to gain a more comprehensive understanding of the factors influencing screen time. Additionally, the correlation coefficient alone does not establish the direction of causation or provide insights into the underlying mechanisms driving the observed relationship.

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

Chi-Square Test

*Null Hypothesis: There is no significant association between age, gender, occupation, and the choice of strategies to reduce screen time.*

*Alternative Hypothesis = There is a significant association between age, gender, occupation, and the choice of strategies to reduce screen time.*

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P-value is higher than 5%. It suggests that we do not have enough evidence to reject the null hypothesis (fail to reject). The null hypothesis implies that the distribution of strategies is independent of the demographic variables (age, gender, occupation). In other words, the choice of strategies does not depend on or vary systematically with different demographic characteristics.

However I would like to recheck the hypothesis. This analysis excluded “Full-Time Employed” category. The decision is driven by the observation that it has the highest count, which could

disproportionately influence the distribution of choices in strategies to reduce screen time. By removing this category, we aim to ensure a more balanced representation of other groups

and prevent potential bias in our analysis of screen time reduction strategies. The result remains same, p-value is lower than 5% significant level. There is no significant association between occupation and the choice of strategy in reducing screen time.

Consequently, we can confidently affirm that tailoring resources and support for screen time reduction based on demographic characteristics is not warranted. 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.

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**Summary**

The statistical analyses conducted reveal key insights into the relationships between demographics, awareness level, chosen strategies, and average screen time.

**Awareness Level and Desire to Reduce Screen Time:**

The findings indicate that people who are open to cutting down on their screen time tend to have notably different average screen usage compared to those who are not interested in reducing it. This highlights distinct patterns in how these two groups use electronic devices.

**Awareness Level and Screen Time:**

There is no significant association between awareness level and average screen time spending. While a weak positive correlation was observed (0.1738) between awareness and average screen time, it's essential to recognize that awareness alone may not significantly influence screen time habits.

**Demographics and Strategies:**

No discernible link was found between age, gender, occupation, and the strategies chosen to reduce screen time. This implies that interventions don’t have to be customized solely based on demographic profiles.

**Strategic Recommendation**

Based on the summary of the Pearson correlation coefficient (0.1738) between awareness and average hours spent on screens, several recommendations can be considered:

**Education and Awareness Campaigns:**

Boost awareness through educational campaigns about the impact of screen time on overall well-being.

Share information on healthy screen practices and the importance of balancing screen use with other activities.

**Targeted Interventions:**

Design interventions tailored to individuals with lower awareness levels to promote a more balanced approach to screen time. Integrate awareness-building components into existing programs aimed at reducing excessive screen time.

**Technological Solutions:**

Explore and promote tech tools aiding awareness and moderation of screen time habits.

**Further Research and Contextual Analysis:**

Conduct additional research to comprehend factors influencing screen time, considering age, occupation, and lifestyle.

**Promote a Holistic Approach:**

Highlight a holistic approach, encouraging balance between screen time and other activities for physical and mental health.

**Encourage Self-Monitoring:**

Encourage individuals to self-monitor their screen time and reflect on the relationship between their awareness levels and screen usage patterns.

These suggestions can be adapted based on the specific needs and characteristics of the target audience, ensuring a more tailored and effective approach. Further qualitative research may provide deeper insights for more precise recommendations.

**Dashboard**

An interactive dashboard on the project finding can be found via the link below

<https://public.tableau.com/app/profile/tarinee.meesters/viz/midtermproject_awarenesssanddesiretoreducescreentime/Dashboard1?publish=yes>

A screenshot of a computer screen

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**Reference:**

<https://explodingtopics.com/>

<https://www.commonsensemedia.org/sites/default/files/research/report/8-18-census-integrated-report-final-web_0.pdf>

<https://www.activesgcircle.gov.sg/activehealth/read/screen-time/what-are-the-negative-side-effects-of-too-much-screen-time#:~:text=When%20it%20comes%20to%20young,minutes%20spent%20watching%20the%20TV>

<https://aifs.gov.au/resources/short-articles/too-much-time-screens>

<https://www.mayoclinichealthsystem.org/hometown-health/speaking-of-health/children-and-screen-time>

<https://journalistsresource.org/education/screen-time-children-health-research/>

<https://www.comparitech.com/tv-streaming/screen-time-statistics/>

<https://www.pewresearch.org/internet/2020/07/28/childrens-engagement-with-digital-devices-screen-time/>

<https://datareportal.com/reports/digital-2022-time-spent-with-connected-tech>

<https://people.com/human-interest/average-us-adult-screens-study/>

<https://qz.com/quartzy/1459609/limiting-social-media-use-reduces-depression-say-researchers>

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