

Relationship between Screen Time and Anxiety in GenZ

Yoshi Sharma^{1*}, Dr. Anjali Sahai Srivastava²

ABSTRACT

The widespread adoption of smartphones, tablets, and computers has dramatically changed how we live and connect with others. The study explores the correlation between screen time and anxiety levels among individuals in the Generation Z population. Leveraging the Beck Anxiety Inventory, participants self-reported both their average screen time and average screen time excluding work hours. Statistical analysis was conducted using SPSS software, employing the Pearson correlation method to test hypotheses. The study comprised 117 participants, with a gender distribution of 60% females and 40% males. Findings revealed a positive association between overall screen time and anxiety. Additionally, a stronger correlation was observed between average screen time excluding work hours and anxiety, signifying heightened anxiety levels associated with leisure screen time.

Keywords: *Screen time, Anxiety, GenZ*

In recent years, people are using screens and devices more than ever. Smartphones, tablets, and computers have become a big part of our daily lives, from chatting and learning to entertainment and work. This increase in screen time is changing the way we live and connect with others. It's important to look at how this change might affect our mental health and well-being. Exploring this connection can help us understand the impact of our growing reliance on screens. A study by Khouja et al. (2019) stated that they “found associations between increased screen time, particularly computer use, and a small increased risk of anxiety and depression.”

Anxiety is a major concern for Generation Z, with a significant number of individuals experiencing anxiety disorders and symptoms. Examining the connection between screen time and anxiety helps to clarify a major component of the problem of anxiety among Generation Z, which is a big worry. Born at a time when digital connectedness was commonplace, Generation Z has a distinct relationship with screens—whether they be on computers, cellphones, or other gadgets. A possible contributing cause to the elevated levels of anxiety reported by individuals has been found as the continual exposure to screens.

Because social media and the digital world are so pervasive, Generation Z is always connected and must deal with the challenges of navigating virtual social dynamics and

¹BA (Hons) Applied Psychology, Amity Institute of Psychology and Allied Sciences, Noida, India

²Associate Professor – II, Amity Institute of Psychology and Allied Sciences, Noida, India

*Corresponding Author

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maintaining an online presence. Studies have shown a link between elevated anxiety levels and excessive screen use, especially on social media sites. (Coe et al. 2023)

Furthermore, extended screen usage might interfere with sleep patterns, particularly right before bed. Sleep disorders and mental health problems, such as anxiety, are intimately related. The hormone melatonin, which controls sleep, is inhibited by the blue light provided by screens, which may exacerbate anxiety symptoms.

Anxiety

Anxiety is a natural and adaptive response observed in humans under specific circumstances. It serves as a normal emotion, alerting individuals to potential threats and aiding in the management of challenging or perilous situations. However, if anxiety becomes excessive, persistent, and disrupts everyday functioning, it qualifies as an anxiety disorder.

Anxiety disorders encompass a range of mental health conditions characterized by heightened worry, fear, or apprehension. These disorders can manifest in various forms, such as generalized anxiety disorder (GAD), panic disorder, social anxiety disorder, specific phobias, and others. Each type of anxiety disorder presents distinct symptoms and triggers.

Typical symptoms associated with anxiety include: (WHO, 2023)

- Persistent and uncontrollable worry about diverse aspects of life, such as work, school, health, or relationships.
- A sensation of being on edge or unable to relax, indicating restlessness.
- Feelings of tiredness or exhaustion, even without significant physical exertion.
- Difficulty concentrating on tasks due to racing thoughts or preoccupation with worries.
- Increased irritability or impatience.
- Physical manifestations like muscle tension, trembling, or headaches.
- Difficulty falling asleep, staying asleep, or experiencing restless sleep.
- Going to great lengths to avoid situations that trigger anxiety, a behavior known as avoidance.

Generation Z

The generation that follows the Millennials is known as Generation Z, or simply Gen Z. Although there isn't a single, widely accepted definition of Gen Z, people who were born roughly between the mid-1990s and the early 2010s are usually included in this category. This generation grew up in an era of rapidly evolving technology, ubiquitous internet access, and a constantly shifting global environment.

Stressors That Generation Z Faces Most Often:

- **Academic Pressures:** Generation Z frequently experiences high academic standards and fierce competition, which can cause worry about grades, tests, and the need to ensure a prosperous future.
- **Social Media Influences:** The widespread use of social media brings with it certain pressures including the constant comparison to peers, cyberbullying, fear of missing out (FOMO), and pressure to live up to online norms.
- **Economic Uncertainty:** Stress is exacerbated by Gen Zers entering adulthood by economic issues such as a competitive job market, student loan debt, and uncertainty about future employment prospects.

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- Global Issues: Gen Z is concerned about the state of the world and their part in resolving these issues since they are exposed to global challenges like social justice issues, political unrest, and climate change.
- Mental Health Stigma: Despite growing awareness, there is still stigma associated with mental health, and members of Generation Z may find it difficult to ask for assistance or to be honest about their issues.

Screen time

The term "screen time" describes how much time a person spends utilizing digital gadgets like computers, tablets, smartphones, televisions, and other electronic devices (Wikipedia 2024). This phrase refers to a wide range of activities, such as using social media, working or studying on electronic devices, playing video games, viewing videos, and browsing the internet.

The optimal amount of time that Generation Z (or any other age group) should spend in front of a screen is a complicated topic that is always up for discussion. The American Academy of Pediatrics (AAP) offers broad recommendations, while recognizing that there isn't a single, universally applicable remedy. The following screen time guidelines are recommended by the AAP:

Children younger than 18 months: Refrain from using any screen media except video chat. When a Child is between the ages of 18 and 24 months old, select educational applications or content that will help them comprehend what they are viewing.

2 to 5 years old: Set a daily limit of one hour for screen usage, and have a caregiver co-view the show to assist the youngster understand the material.

Six years of age and up: Set consistent time limitations for using screens, making sure that screen time doesn't conflict with getting enough sleep, exercising, or engaging in other healthy activities.

Screen usage in general, especially on computers and cellphones, has become a need for day-to-day living. Concerns over screen time's effects on mental health are being raised by this increase. This connection clarifies a big part of the anxiety issues that members of Generation Z, who are constantly in front of screens, are concerned about. Cyberbullying, comparisons, and FOMO have been highlighted as triggers for the higher anxiety levels among Generation Z, which are attributed to the ubiquitous influence of social media and the problems of maintaining an online presence. Long-term screen use can also interfere with sleep patterns, especially right before bed, which can exacerbate mental health conditions like anxiety.

Generation Z's relation with Screen Time:

Screen time is a major factor in Gen Z's lifestyle, which has been greatly impacted by the digital age. Despite all of the advantages that technology offers, spending too much time in front of a screen can have negative effects on mental health and lead to stress.

Impact of Social Media: Because Gen Z uses social media heavily, they are exposed to well chosen depictions of other people's lives, which can lead to worry and inflated expectations. Extended screen usage can cause sleep disruption, which can worsen stress levels and have an adverse effect on general wellbeing. This is especially true before bedtime.

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Cyberbullying: The risk of cyberbullying is increased by the digital age, and it can have a serious psychological impact on members of Generation Z by producing stress and anxiety.

Fear of Missing Out (FOMO): Constant screen connectivity may exacerbate people's dread of missing out on trends or social events, making their life more stressful.

Health risks of excessive screen time

Spending prolonged periods engaging with screens presents a range of potential health risks that warrant consideration. One notable concern is the sedentary behavior often associated with extensive screen time. This sedentary lifestyle has been linked to increased risks of obesity, cardiovascular diseases, and metabolic disorders. Moreover, the physical discomforts that can arise from prolonged screen exposure are noteworthy. These discomforts may include musculoskeletal issues such as neck and back pain, as well as eye strain and headaches due to extended periods of visual focus.

Furthermore, excessive screen time has been associated with a variety of mental health concerns, including anxiety, depression, and stress. The constant barrage of information and stimuli from screens, especially on social media platforms, can contribute to feelings of loneliness, social isolation, and low self-esteem. These mental health issues can have profound effects on individuals' daily functioning and quality of life.

METHOD

Aim

To measure the relationship between screen time and anxiety in Generation Z.

Objective

- This study aims to investigate the association between Generation Z individuals' screen time usage and anxiety levels. The goal is to determine if more time spent in front of a screen is associated with higher anxiety levels.
- This study also aims to understand the effect of average screen time excluding working hours on anxiety levels.

Hypothesis

- Increased screen time will be positively correlated with higher levels of anxiety among Generation Z individuals.
- Average Screen time excluding working hours will have a stronger correlation compared with total average screen time among Generation Z individuals.

Design

The primary objective of this study is to investigate the correlation between anxiety levels and screen time among adult individuals. Additionally, the study aims to explore whether there exists a significant distinction in anxiety levels and screen time, excluding hours spent on work-related activities. Employing a quantitative research approach, the study utilizes the Beck Anxiety Inventory as a psychological instrument to quantify anxiety levels. Statistical analysis is conducted using the Pearson Correlation method using SPSS software. Data collection is facilitated through the distribution of questionnaires, with a total sample size of 117 participants. The sampling technique employed includes both probability sampling, where participants are randomly selected, and snowball sampling, wherein participants are encouraged to refer the questionnaire to others within their networks.

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Description of tool

Beck Anxiety Inventory (BAI), developed by Beck, Steer, Brown, and Epstein in 1988, is a self-administered survey designed to assess 21 prevalent somatic and cognitive symptoms associated with anxiety. It is a self-report measure of anxiety. It serves as a mechanism for gauging the intensity of an individual's anxiety manifestations.

Sample

The sample consisted of 117 Indian adults, ranging in age from 12 to 27 (Mean age = 19). The participants included were 60% females and 40% males.

Procedure

The consent form was created and disseminated to participants upon approval of the research proposal. Only individuals who consented were eligible to participate in the study. Each participant was informed that their involvement was voluntary, and they had the right to withdraw at any point if they felt uneasy. Additionally, assurances were provided that their personal information would remain confidential. Data analysis was conducted using SPSS software.

Participants were tasked with filling out standardized questionnaires, which included two scales each. To ensure clarity, each question was carefully explained in simplified terms to facilitate understanding. Any misunderstandings were promptly addressed and clarified.

The subsequent directions provided were: " Below is a list of common symptoms of anxiety. Please carefully read each item in the list. Indicate how much you have been bothered by that symptom during the past month, including today, by circling the number in the corresponding space in the column next to each symptom."

Statistical analysis

Correlation method was used. It was calculated using SPSS software.

RESULT TABLES

Table 1: Correlation - Average screen time and anxiety levels

		Average screen time	BAI Score
Average screen time	Pearson Correlation	1	.199*
	Sig. (1-tailed)		.016
	N	117	117
BAI Raw Score	Pearson Correlation	.199*	1
	Sig. (1-tailed)	.016	
	N	117	117

*. Correlation is significant at the 0.05 level (1-tailed).

The Pearson correlation coefficient of 0.199 between screen time and anxiety suggests a positive correlation between these variables. This indicates that as screen time increases, individuals are more likely to report higher levels of anxiety. In other words, those who spend more time engaging with screens tend to experience greater levels of anxiety. Notably, the correlation is significant at the 0.05 level ($p < 0.05$), indicating that this relationship is statistically meaningful.

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Table 2: Correlation - Average screen time excluding work hours and anxiety levels

		Average screen time excluding work hours	BAI Raw Score
Average screen time excluding work hours	Pearson Correlation	1	.261**
	Sig. (1-tailed)		.002
	N	117	117
BAI Raw Score	Pearson Correlation	.261**	1
	Sig. (1-tailed)	.002	
	N	117	117

***. Correlation is significant at the 0.01 level (1-tailed).*

The Pearson correlation coefficient between average screen time (excluding work hours) and anxiety is reported as 0.261 (where $p < 0.05$). This positive correlation suggests that as individuals spend more time engaging with screens, excluding work hours, their reported levels of anxiety tend to increase. In essence, this implies that those with higher screen time during leisure hours are more likely to experience heightened levels of anxiety.

Table 3: Mean and standard deviation

	Average screen time	BAI Raw Score
N	117	117
Mean	7.2393	16.5128
Median	6.0000	14.0000
Std. Deviation	3.41308	12.25140

DISCUSSION

The primary objective of this study is to examine the relationship between screen time and anxiety levels among individuals belonging to the Generation Z population. To assess anxiety levels, the Beck Anxiety Inventory was utilized, while participants self-reported both their average screen time and average screen time excluding work hours. The statistical analysis of the obtained raw scores was conducted using SPSS software, with Pearson correlation serving as the method to test the hypothesis. The study included a total of 117 participants out of which 60% were females and 40% percent were males.

The correlation analysis revealed a Pearson correlation coefficient of 0.199 between overall screen time and anxiety, indicating a positive association between these variables. This suggests that as individuals' screen time increases, so too does their likelihood of reporting higher levels of anxiety.

Moreover, when examining the correlation between average screen time excluding work hours and anxiety, a Pearson correlation coefficient of 0.261 was identified, with statistical significance noted at the $p < 0.05$ level. This finding suggests that as individuals spend more time engaging with screens during leisure hours, their reported levels of anxiety tend to increase.

Comparing the correlation coefficients, it is observed that the coefficient of 0.261 for average screen time (excluding work hours) is slightly stronger than the coefficient of 0.199 for overall screen time. This implies that the relationship between average screen time

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during leisure hours and anxiety is slightly more pronounced than the relationship between total screen time and anxiety.

Drawing from the findings of this study, it is recommended to limit screen time at home to two hours or less per day, as suggested by the National Heart, Lung, and Blood Institute in 2013. This recommendation underscores the potential impact of excessive screen time on individuals' mental well-being and highlights the importance of balancing screen-based activities with physical activity for overall health and wellness.

CONCLUSION

The study delves into the relationship between screen time and anxiety levels within the Generation Z demographic. Utilizing the Beck Anxiety Inventory, participants provided self-reports on both their average screen time and average screen time excluding work hours. Statistical analysis, facilitated by SPSS software, employed the Pearson correlation method to scrutinize the hypotheses. The research cohort comprised 117 individuals, with gender distribution skewing towards 60% females and 40% males.

Key findings illuminated a positive association between overall screen time and anxiety levels, substantiated by a Pearson correlation coefficient of 0.199. Additionally, a more robust correlation (0.261) emerged when analyzing average screen time excluding work hours, signifying heightened anxiety levels in conjunction with leisure screen time. These results underscore the detrimental impact of prolonged screen exposure on mental well-being, particularly among the digitally immersed Generation Z cohort.

In a similar study by Menezes et al. (2023), the results indicated a notable connection between screen time and anxiety as well as depression among neurotypical youth.

Limitations

- The study's sample size might be relatively small, which could limit the generalizability of the findings to a broader population.
- The study's cross-sectional design provides a snapshot of the relationship between screen time and anxiety levels at a single point in time, limiting the ability to establish causality or examine changes over time.
- The study relies on self-report measures for both screen time and anxiety levels, which could introduce bias and inaccuracies due to participants' subjective interpretations or recall errors.
- The study may not have adequately accounted for demographic variables such as age, gender, socioeconomic status, or cultural background, which could influence both screen time behaviors and anxiety levels.

Future recommendations

Future researchers could conduct longitudinal studies to track changes in screen time behaviors and anxiety levels over time. This would provide a more comprehensive understanding of the causal relationship between these variables. Including diverse samples in terms of age, gender, socioeconomic status, and cultural background would enhance the generalizability of findings and allow for a more nuanced exploration of the relationship between screen time and anxiety. Supplementing quantitative studies with qualitative research methods, such as interviews or focus groups, could provide deeper insights into individuals' experiences with screen time and anxiety.

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Conflict of Interest

The author(s) declared no conflict of interest.

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