

**THE IMPACT OF DIGITAL SCREEN TIME ON VISUAL ADHD  
SYMPTOMS AMONG COLLEGE STUDENTS**

**Dissertation submitted to**

**ST.TERESA'S COLLEGE (Autonomous)**

**ERNAKULAM**



**Affiliated to**

**MAHATMA GANDHI UNIVERSITY**

**In partial fulfillment of requirement for the**

**AWARD OF THE DEGREE OF MASTERS OF SCIENCE IN  
HOME SCIENCE (BRANCH A) CHILD DEVELOPMENTM**

**By**

**MARIYA THARES XAVIER**

**(Register No.AM22HCD009)**

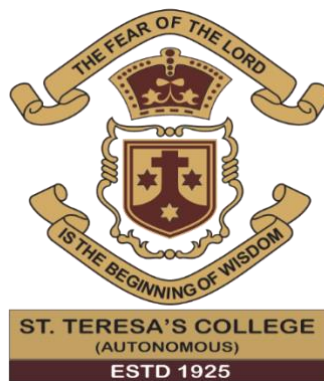
**Department of Home Science and Centre for Research**

**APRIL 2024**

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**'Certified as bonafide research work'**

**Signature of Head of the Department**

**Signature of the Guide**

# **CERTIFICATE**

This is to certify that the thesis entitled “**The impact of digital screen time on visual ADHD symptoms among college students**” is a research work carried out by MARIYA THARES XAVIER under my guidance and supervision.

**Signature of Head of the Department**

**Signature of the Guide**

**Nisha vikraman**

Assistant professor

Department of Home Science

St. Teresa's College (Autonomous)

Ernakulam

## **DECLARATION**

I hereby declare that the thesis entitled **“The impact of digital screen time on visual ADHD symptoms among college students”** is a bonafide record of research work done by me during the course of study, under the supervision and guidance of nisha vikraman, assistant proferssor, Department of Home Science, St. Teresa's College (Autonomous) Ernakulam.

Place: Ernakulam

MARIYA THARES XAVIER

Date:

## **ACKNOWLEDGEMENT**

First and foremost, my wholehearted indebtedness to Almighty God for the blessings, love and care, I experienced during my project work.

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Mariya Thares Xavier

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# **INTRODUCTION**

## **Chapter 01**

### **INTRODUCTION**

The neurodevelopmental disorder known as attention deficit hyperactivity disorder (ADHD) is typified by executive dysfunction leading to excessive and pervasive symptoms of inattention, hyperactivity, impulsivity, and emotional dysregulation that impair in multiple contexts and are otherwise age-inappropriate. A person with ADHD may be mostly inattentive, meaning that their attention span is primarily affected. Additionally, it may be hyperactive-impulsive in nature, leading to more of this activity than any other symptom. There is a combination of both in people with mixed ADHD. A higher prevalence of certain medical disorders is seen in ADHD sufferers. Behavioral disorders, learning difficulties like dyslexia, and anxiety or depression are a few instances of these. Visual impairment is a coexisting condition that is less well understood. ADHD is characterized by severe difficulties with maintaining focus, persevering toward objectives, avoiding side trips, controlling excessive task-irrelevant activity (hyperactivity), and controlling thoughts, feelings, words, and behaviors that are either out of social bounds or at odds with one's long-term objectives and overall well-being. Adulthood may be affected by ADHD. Adults with ADHD sometimes go undiagnosed. Difficulties in relationships, at work, or at home may result from the symptoms. As people age, their symptoms may change. For instance, hyperactivity may manifest as severe restlessness. With the increasing pressures of maturity, symptoms may worsen.

Chronic ADHD causes problems with organization, impulse control, and attention span maintenance. The almost of our childhood, youth, and early adult years utilize the school environment, those who have with ADHD students can difficulty to manage their student life.

This may be shown in going behind on assignments, feeling as you are always behind your peers, getting poor marks, and having low self-esteem.

Visual attention problems may result from ADHD. Those who suffer from certain visual disorders, such as attention deficit hyperactivity disorder (ADHD), These include visual issues such as condition and closure insufficiency, which make it difficult to maintain eye coordination when looking at close objects.

Attention deficit hyperactivity disorder, or visual ADHD, mostly impacts an individual's ability to absorb visual information. It may show itself as a hard time maintaining concentrate on visual tasks, a tendency to get easily sidetracked by visual stimuli, or an impulsive switching of attention between visual aspects. This may have an effect on a number of facets of daily life, such as social relationships, job productivity, and academic achievement. Typically, medication, therapy, and behavioral treatments customized to each patient's requirements are used in conjunction for treatment.

A variety of difficulties might arise for students with visual ADHD, such as issues focusing on visual tasks, trouble adhering to visual instructions, trouble organizing visual information, and a propensity to become easily distracted by visual stimuli in their surroundings. This may hinder their capacity to learn in conventional classroom environments, necessitating the need of customized interventions or adjustments to meet their educational needs.

Due to the increased demands of academic courses and the requirement for continuous concentration during lectures, reading assignments, and study sessions, visual ADHD in college students can provide particular issues. These people could find it difficult to maintain their attention when reading visual materials like textbooks, slideshows, or presentations, which makes it harder for them to comprehend and remember the content. Distractions in the classroom, such as activity, bright lighting, or visual clutter, can also make symptoms worse and make it harder to study.

College students with visual ADHD, which primarily manifests as inattentive presentation, might exhibit a variety of symptoms. Typical symptoms include the following:

Difficulty focusing during class or when studying, which frequently results in dozing off or daydreaming. Having trouble keeping track of or organizing visual information, as that found in

charts, diagrams, or graphs. Often forgetting where you put visual items, such as assignments or notes. Impulsively switching focus between different visual stimuli, making it difficult to remain focused. Time management issues leading to procrastination or unfinished activities for assignments involving images. Difficulty maintaining focus when doing visually demanding tasks, such as watching presentations or reading textbooks.

These symptoms can greatly impact academic performance and may require intervention or support from campus resources. According to research from the National Center for Biotechnology Information, around 2 to 8 percent of college students in the U.S. have ADHD. However, these figures are largely based on studies that relied on self-reported symptoms or diagnoses from limited samples of students at specific campuses, rather than comprehensive assessments with nationally representative groups.

Further studies show that Bipolar disorder is about six times more common in adults with ADHD than those without it. Moreover, approximately 33% of students with ADHD drop out of high school, which is more than double the rate of those without ADHD. Additionally, only 15% of individuals with ADHD complete a four-year degree. Globally, roughly 2.8% of adults have ADHD, although this number may be underestimated due to underdiagnosis and lack of awareness.

In the U.S., research suggests that approximately 4.4% of adults have ADHD, with higher rates among men (5.4%) than women (3.2%), and higher prevalence among white individuals compared to other ethnic groups. It's estimated that 8.1% of U.S. adults will experience ADHD symptoms at some point in their lives, often starting in childhood. Adults typically display milder ADHD symptoms compared to children.

The aim of this thesis is to investigate the relationship between screen usage and the emergence or worsening of symptoms related to visual attention deficit hyperactive disorder (ADHD) among college students. This study aims to ascertain the impact of prolonged screen exposure on the manifestation of visual indicators of ADHD. The aim is to provide insight into how screen usage might influence the onset and management of visual ADHD.

### **Objectives:**

- To investigate the connection between screen time and visual symptoms of ADHD.

- To determine screen usage habits and demographic patterns.
- To evaluate the function of media types and content.
- ▣ Comparing patterns of visual attention while working on screen tasks.

All of these goals work together to Provide a more thorough knowledge of the complex relationship between younger people's use of technology and cognitive development by examining how screen time affects visual symptoms of ADHD.

## **Relevance**

The study found a beneficial connection between screen time and the risk of ADHD, which has been confirmed by the present meta-analysis's results. Continuous exposure to screens may be a major factor in youngsters development of ADHD. As a result, in order to stop youngsters from developing ADHD, screen time must be reduced daily.

In recent years, Increase the areas to access the technologies in young people. But it's shows that the positive and negative correlation between the usage of electronic devices in youngsters. The characteristics of video, content, and co – viewing can also play a role to influencing. Parental time on the screen and the lack of devices in bedrooms have been shown to greatly decrease screen time, according to the Centers for Disease Control and Prevention (CDC) and other organizations/studies . The best ranges for discretionary screen time are 0.5–1 hours per day for children ages three to seven, 1 hour for children ages 7 to 12, 1.5 hours for children ages 12 to 15, and 2 hours for children ages 16 and over.

Students with ADHD are going to find it difficult to focus, pay attention, listen, or work hard on their assignments. In addition, youngsters with ADHD may be anxious, unfocused, talk too much, or disturb the class. Youngsters who have ADHD may also experience learning challenges that lead to difficulties in the classroom.

Youngsters cognitive ability to think and mental health are further affected when they spend more time on gadgets and less time participating in offline social and physical activities. However the studies show's that the excessive screen time is negatively affect the bodily functioning, development and their academic performance of youngsters. It's affect the cognitive abilities and disturbed their sleeping patterns etc. The full time using of electronic devices delayed their speech.



Exploring the impact of screen time on visual ADHD among college students is pertinent as it delves into the implications of technology on attention and cognitive functions, especially within a demographic heavily dependent on screens for academic and social engagements. Uncovering these effects can guide efforts to cultivate healthier screen behaviors, ultimately enhancing academic success and overall welfare.

# **Review of literature**

**Chapter 02**

**REVIEW OF LITERATURE**

Literature of review is a text of scholarly paper, which includes the current knowledge including substantive findings, as well as theoretical and methodological contributions to a particular topic. Literature review are secondary sources, and do not report new original experimental work. These act as a basis for research in nearly in every academic field. The review of literature for the thesis title – “ The impact of screen time on Visual ADHD Symptoms in college students” is discussed under the following headings:

## 2.1 Prevalence and Trends of ADHD

## 2.2 Neurobiological Mechanisms

## 2.3 Cognitive Effects

## 2.4 Academic Performances

## 2.5 Intervention Strategies

## 2.6 screen time patterns

## **2.1 Prevalence and Trends of ADHD**

Journal of Attention Disorders (2024) The link between ADHD and visual impairment has not been studied much, even when it comes to age and ADHD medication programs. The aim of this study is to look at trends in visual problems in young ADHD students. The study methods is deidentified patient records were examined in the TriNetX database. Depending on the medication they took and their ADHD status, patients under the age of 22 were grouped into cohorts. They evaluated the prevalence of visually impaired individuals in several groups. This study was resulted More than a million patients were studied. According to their followers without ADHD, the group of people with ADHD showed greater rates of all visual problems. The use of medications was shown to have a little effect, with non-stimulants linked to a greater incidence of all outcomes.

The importance of this study, Based on clinical settings and administrative data, adult attention-deficit/hyperactivity disorder (ADHD) evaluation and treatment are becoming more common in

the US. Data on adult ADHD diagnostic patterns within racial and ethnic groups, however, are limited. To find out trends in the prevalence and incidence of adult ADHD diagnosis among 7 racial/ethnic groups over a period of 10 years, including related demographic traits, mental health diagnoses, and negative consequences. Social and clinical samples have been used to estimate the prevalence of ADHD in adults. Based on the World Mental Health Surveys 5, 2.8% of adults in 20 countries reported general ADHD prevalence, with higher numbers noticed in countries with more wealth. It was determined that 5.2% of adult US households tested for nationally representative household surveys had adults with ADHD. ( JAMA Network open. 2019)

(J Glob Health. 2021) reported that Given their present status, the prevalence of adult attention-deficit hyperactivity disorder (ADHD) has not been reported. The goal of the study was to use a systematic review and meta-analysis to find out the prevalence of adult ADHD worldwide in the overall population. As adults aged, there was a decrease in the prevalence of both symptoms of adult ADHD and persistent adult ADHD with a childhood start. The prevalence of symptoms of adult ADHD was 6.76% and persistent adult ADHD was 2.58% in 2020, reflecting the social makeup of the world. This means 139.84 million and 366.33 million affected adults around the world, respectively, in 2020.

## **2.2 Neurobiological Mechanisms**

Alex Jadidian (2015) Attention deficit hyperactivity disorder (ADHD) was previously considered that it was mainly a childhood disorder, with symptoms reducing as a person looked at adulthood. However, research began to gain traction in the 1990s demonstrating a significant proportion of children with ADHD continued to meet diagnostic criteria into adulthood although clinical presentation may change. In addition, some studies suggest that individuals can meet symptom criteria for ADHD as adults without meeting criteria as children. Current epidemiological studies have estimated the prevalence rate for adults with ADHD to be 2.5%–5%.<sup>12</sup> It is important to note that adults with ADHD are not a homogeneous group.

Stephen V. Faraone (2023) In his Study shows that The common neurodevelopmental neurological condition known as attention-deficit/hyperactivity disorder (ADHD) is characterized by hyperactivity, impulsivity, and difficulties focusing. Reduced adaptive functioning, low academic performance, low self-esteem, social skill problems harmful and aggressive behavior, and

accidental impairment are some of these indications. The condition is more likely to take place when genes and the environment, or their combination, are present. Studies involving neuroimaging have shown youngsters with ADHD had slightly smaller thickness of the cortex and subcortical brain area volumes, but not adults or adolescents.

Attention deficit hyperactivity disorder (ADHD) frequently persists into adulthood. A reduction in visual short-term memory (vSTM) storage capacity was recently suggested as a potential neuro-cognitive endophenotype, i.e., a testable marker of an individual's liability for developing ADHD. This study aimed at identifying markers of the brain abnormalities underlying vSTM reductions in adult ADHD. We combined behavioral parameter-based assessment with electrophysiology in groups of adult ADHD patients and healthy age-matched controls. Iris Wiegand (2016).

### **2.3 Cognitive Effects**

Journal of Attention Disorders (2015) In Frances Prevatt, his aim of the study was to find out how anxiety affected college students with ADHD, mostly in terms of cognitive functioning. Compared with students without ADHD, students with ADHD reported much greater amounts of anxiety. The correlation between anxiety and inattention in the ADHD group was similar to the relationship between anxiety and hyperactivity or impulsivity. According to life in general, students with ADHD expressed feelings of being more anxious about their academic performance. The level of anxiety did not differ by gender; however, college students said they felt more anxious than high school students. It was found that anxiety and inattention talked in a way that improved the outcome of students on cognitive ability tasks when they had higher anxiety levels but a lower lack of attention.

Franklin C. Brown (2015), A common concept of attention deficit hyperactivity disorder (ADHD) is the development of cognitive problems (e.g., inattention, poor inhibition). However, based on irregularities in reaction time and processing speed, recent studies showed that cognitive inefficiency may be the underlying cause of many symptoms related to ADHD. This study examined if it was similarly abnormal to evaluate cognitive inefficiency in a non-timed manner. A set of 23 participants with ADHD and 23 controls were tested using a set of subtests related to both egocentric and allocentric visual memory. The factors that played a role in allocentric visual memory were identified by a factor assessment. On the allocentric but not egocentric conditions,

the ADHD group did much more serious work. Working memory, mental rotation, timed tasks, or visual perception were not related to allocentric visual memory. The discussion of further study directions and how those results supported the concept of cognitive inefficiency for different signs of ADHD completed this study.

Matthew A. Jarrett (2014) the study was examined the link between college students' self-reported information and laboratory measures of neuropsychological outcomes and symptoms of ADHD and slow cognitive tempo (SCT). The most significant determinants of self-reported EF were SCT symptoms and unresponsive symptoms of ADHD; SCT was the strongest determiner of self-organization and problem solving, while lack of attention was the strongest predictor of time management and motivation. Emotional regulation was associated with SCT, but not inattention. There was no relationship observed between the performance of tests and the self-reported symptoms. Regression analyses and between-group analyses are mostly accepted.

## **2.4 Academic Performances**

Journal of attention disorders (2020) According to the National Institutes of Health (2010), ADHD has become more commonly recognized as a serious psychological condition with long-term consequences. This study aimed to collect published data on the long-term impact of ADHD on learning (determined by achievement tests) and academic performance (academic performance) in academic settings. This study was resulted When the IQ difference was corrected, the findings of test scores for achievement (79%) and academic performance (75%), accordingly, were worse in those with untreated ADHD compared to non-ADHD controls. Concluded the study ADHD has negative effects on academic performance as time passes. Compared to academic performance, more than half of achievement test outcomes improved after treatment. With combined treatment, both consistently improved.

The findings indicated that in order to further enhance academic success, support services for students with ADHD should start before they even graduate into college and concentrate on improving executive functioning abilities and depressive symptoms. Having a college education can lead to financial gain, professional achievement, and overall happiness. Obtaining a degree may be made difficult by mental health issues such as attention-deficit/hyperactivity disorder (ADHD). George J. DuPaul (2021)

Dr. Eugene Delay and Dr. Alexandra S. Potter (2016) College- level learning involves cognitive flexibility, or the ability to modify behavior or cognitive action in response to different contexts. This study evaluated cognitive flexibility in college students with and without ADHD using the Wisconsin Card Sorting Task (WCST) in the fMRI and compared task performance to academic performance to find out if there was a link. They observed that the ADHD group performed worse on the WCST for the number of perseverative errors and that this performance was directly connected with GPA, indicating that deficiencies in cognitive flexibility have an adverse effect on academic achievement. In addition, compared to controls, the study found that individuals with ADHD had less activation in the frontal cingulate cortex and inferior and superior frontal gyri; this could indicate that a neural network is implicated in these abnormal behaviors.

## **2.5 Intervention Strategies**

Patrick A. LA Count (2015) The objective of the study was to explain the impact of an OTMP (organization, time management, and planning) skills training intervention on college students who expressed higher than average levels of academic impairment and ADHD symptoms. The end of study resulted Similar to the comparison group, the intervention group participants displayed a significant improvement in their assessments of academic impairment, hyperactivity/impulsivity, and inattention. Compared to their baseline assessment, individuals in the intervention group also showed improvement in their use of OTMP skills. Study concluded shows the college students' academic impairment and ADHD symptoms may be improved by an intervention based on organizational abilities.

Macquarie University, Faculty of Human Sciences, School of Education, (2015) Higher education (HE) institutions have to consider the increasing number of students enrolling with attention deficit hyperactivity disorder (ADHD), and further research is required to understand the educational needs of these students (Weyandt & DuPaul, 2008). Using a narrative methodology, the lived experiences of four female university students who had actually been diagnosed with ADHD were studied in this research. According to this research, the women students taken part in the study supported their learning with a variety of strategies. These included methods for time management, visual-spatial methods, determines to help focus, and strategies to encourage people to seek higher education. The study shows how these strategies are related to one another and developed through a complex relationship of contextual components like diagnosis, medication, increased self-

awareness, stability, and external support. Instead of being isolated or fixed in time. This is significant information that could help improve student performance in the classroom.

The study (2022) should focused on student intervention should be cheap and quick. Systemic, time management, and planning (OTMP) skills were the main focus of this mostly behavioral treatment because they are most directly related to the executive function deficits characteristic of ADHD and to the demands of college. We developed such an intervention specifically for college students with ADHD. Included were academic study strategies as well as psychotherapy about ADHD and the administration of drugs. According to t-tests comparing pre- and post-intervention scores, there were statistically significant improvements in inattention symptoms, total ADHD symptoms, impairment of self-concept, in general impairment, and the use of planning, time-management, and planning skills. These study results show that this new treatment has potential.

## **2.6 Screen Time Patterns**

In 2020 study Roselia Juan, results of the research indicate that the scheming group might have exhibited a trend of incorrect answers and that people with ADHD—especially on difficult tasks—take longer to locate an image than people without a history of the disorder. Overall, the results obtained indicate a better understanding of visual attention response patterns in ADHD and a step towards the development of simple-to-use, pleasant methods for observing effort.

Study if higher education students' self-perceived degrees of hyperactivity and attention problems are related to high levels of screen time usage. The 4816 participants in this study were 75.5% female and had an average age of 20.8 years. A strong connection between groups of the overall score of self-perceived attention problems and hyperactivity levels, as well as the individual domains, was found using multivariable ordinary regression models.





# **METHODOLOGY**

## **CHAPTER – 03**

### **METHODOLOGY**

“Research methodology refers to how a researcher systematically designs a study to ensure valid and reliable results that address the research aims, objectives, and research questions” (Kerryn Warren, 2020). The methodology adopted for the study titled “**THE IMPACT OF DIGITAL SCREEN TIME ON VISUAL ADHD SYMPTOMS AMONG COLLEGE STUDENTS**” is given under the following headings.

#### **3.1 Nature of the study**

#### **3.2 Selection of Area.**

### **3.3 Sampling Procedure.**

### **3.4 Selection of Sample.**

### **3.5 Selection of Tool.**

### **3.6 Collection of Data.**

### **3.7 Analysis of Data.**

## **3.1 Nature of the study:**

In this study, which is survey-based, participants' thoughts and opinions about the correlation between screen usage and visual ADHD are collected through the use of questionnaires.

## **3.2 Selection of Area:**

The St. Teresa's College Ernakulam district was the chosen area for the survey. Ernakulam was specifically chosen as the research region for this study due to its varied demographics and urban landscape. Ernakulam is a suitable spot for doing this research because of its easy accessibility. The urban location makes it easier to conduct a comprehensive study of how screen time affects college students' visual ADHD symptoms. It also provides important background for understanding the more general context of child development in urban Kerala and, by additionally, India.

## **3.3 Sampling Procedure:**

The survey technique was selected as the study's methodology. This method is used to collect data in a systematic way. Convenient sampling was the sample technique chosen. This non-probability sampling method selects participants based on their interest and availability. Students at the College of St. Teresa's provided the samples. Identification of participants takes place using easily accessible internet channels.

## **3.4 Selection of Sample.**

The sample selected included 100 college students within the age group of 18-25 above years for assessing the impact of digital screen time on visual ADHD symptoms among college students.

### **3.5 Selection of Tool**

The most important part of research is the selection of an appropriate tool. The tool used for the survey was a self-structured questionnaire. The questionnaire comprised nine subsections about demographics, Digital screen usage, symptoms of visual ADHD, impact of academic performance, study environment, mitigating measures, coping mechanism, and final thoughts. Regarding the questionnaire, it consists of both close ended question and open ended questions. The close ended questions just required the students to choose the suitable answer from the options and the open ended questions required the respondents to write their responses in detail, the medium of the questionnaire was English, the questions in order to make it easily understandable by students. A copy of the questionnaire is given in Appendix I.

### **3.6 Collection of Data**

An online survey was used to connect with the participants. One of the students was informed of the purpose and importance of the study, and their confidentiality was maintained. Following consent, the Google Forms questionnaire was distributed and requested to be completed. When the respondents finished filling out the surveys, they turned them in.

### **3.7 Analysis of Data**

The data collected from the survey were compiled and analysed using the Statistical Package for the Social Sciences (SPSS) and are presented in the chapter 'Result and Discussion' with appropriate tables and figures. The data obtained was consolidated, and due to the categorical nature of the variables involved. Through this statistical method, the correlations among the variables were revealed.



# **RESULT AND**

# **DISSCUSSION**

## **Chapter 04**

### **RESULTS AND DISCUSSION**

This chapter mainly deals with result and discussion of data. This research made tabulation and various graphical representations of data collected from the respondents and its interpretation.

The result and discussion under the following headings:

#### 4.1 Demographic profile of the respondents

4.1.1 Age composition of the respondents

4.1.2 Gender composition of the respondent

#### 4.2 Digital screen usage

4.2.1 distribution of the respondents what device do you primarily use for screen based activities

4.2.2 Distribution of the respondents based on the average how many hours per day do you spend looking at screen

4.2.3 Distribution of the respondents have you ever had problem with your eyes

4.2.4 distribution of the respondents specify the nature of the issue

4.2.5 do you experience eye strain or discomfort after prolonged screen usage

#### 4.3 Symptoms of visual ADHD

4.3.1 Have you ever had an ADHD diagnosis

4.3.2 difficulty maintaining focus on task

4.3.3 Easily distracted by irrelevant stimuli

4.3.4 Impulsivity acting without thinking

4.3.5 Difficulty organizing task and activities

4.3.6 Forgetfulness

4.3.7 Difficulty following through on instruction or task

#### 4.4 Impact of academic performance

4.4.1 Distribution of the respondents how perceive your digital screen usage effects your academic performance

4.4.2 Distribution of the respondents missed assignments or deadlines due to excessive screen time

4.4.3 Distribution of the respondents excessive screen time negatively affects my ability to concentrate and learn.

#### 4.5 Study environment

4.5.1 Distribution of the respondents conducive study environment to minimizing visual distraction

#### 4.6 Mitigating Measures

4.6.1 Distribution of the respondents take break or following the rule during screen use

#### 4.7 Coping Mechanism

4.7.1 Distribution of the respondents strategies used to manage screen time related symptoms

4.7.2 Distribution of the respondents resources or support available for managing digital screen time related

4.7.3 Distribution of the respondents have you utilized any of the resources or support system

#### 4.8 Final Thought

4.8.1 Distribution of the respondents correlation between your screen time habits and visual ADHD symptoms

### **4.1 Demographic profile of the respondents**

The sample of the study consisted of college students in the age group of 18 to 25years above. This section details the frequency and percent of variables regarding the demographic profile of the respondents.

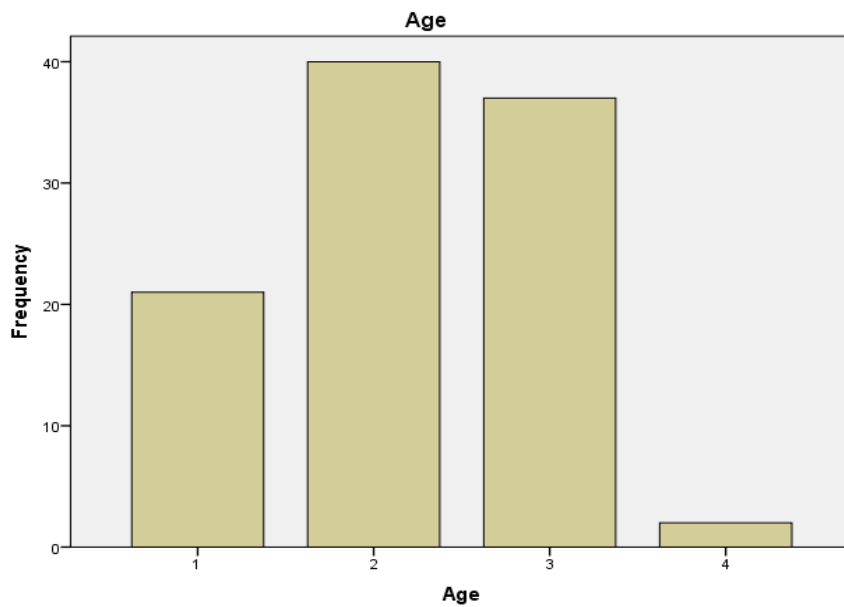
**Table 1**

**Age composition of the respondents**

Valid	Frequency	Percent
-------	-----------	---------



1	21	21.0
2	40	40.0
3	37	37.0
4	2	2.0
Total	100	100.0



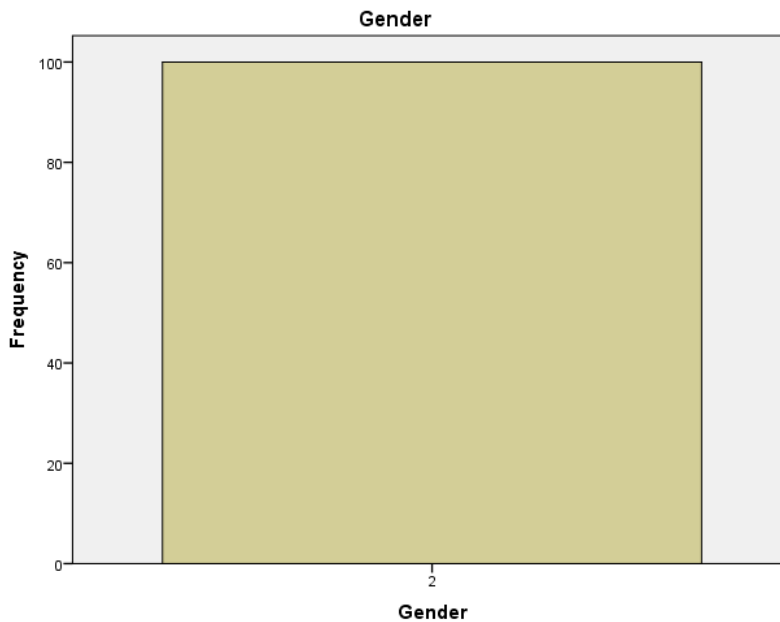
**Figure 1. age composition of the respondent**

As indicated from Table 1, with regard to the age category, 21 percent of the respondents belonged to the age group of 18 – 20 years, 40 percent belonged to the age group of 20 -22 years, 37 percent belonged to the age group 22 – 24 years and 2 percent belonged to the age group of 25 above.

**TABLE 2**

**Gender composition of the respondents**

Valid	Frequency	Percent
2	100	100.0



**Figure 2**

**gender composition of the respondents**

the table (table 4.1.2) and the graph (figure 4.1.2) shows the distribution of respondents based on gender. The table and graph shows that total 100 percent respondents are females.

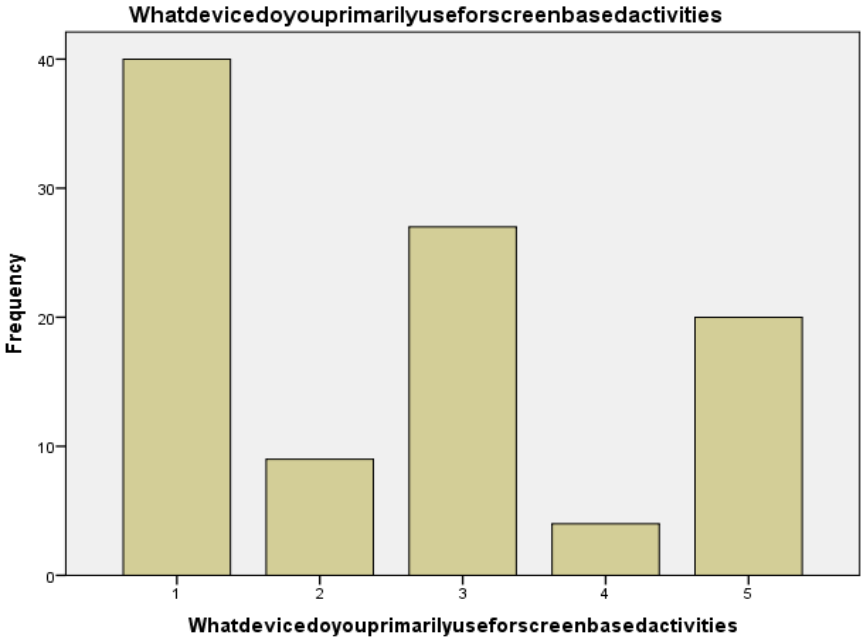
**TABLE 4.2 Digital screen usage**

The following section details frequency and percentages of variables regarding the digital screen usage of the students.

**TABLE 2**

**distribution of the respondents what device do you primarily use for screen based activities**

Valid	Frequency	Percent
1	40	40.0
2	9	9.0
3	27	27.0
4	4	4.0
5	20	20.0
Total	100	100.0



**Figure 2**

**distribution of the respondents what device do you primarily use for screen based activities**

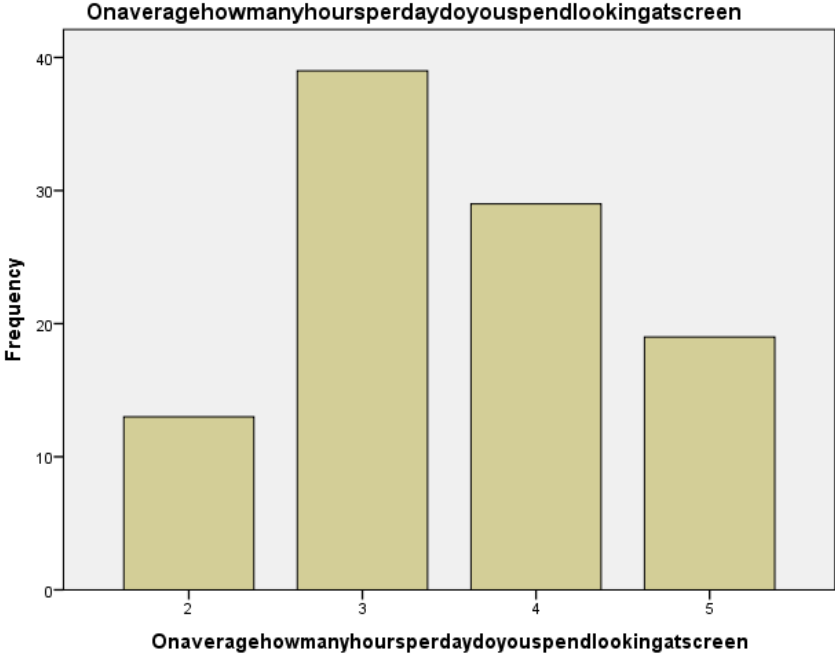
Above the table (table 4.2.1) and graph (figure 4.2.1) shows that the distribution of the respondents based on the opinion about the primary use for screen based activities the table and the figure shows from the 100 respondents 40 percent of respondent use Smartphone (1), 9 percent

of respondents use tablet (2), 27 percent of respondents use laptop (3), 4 percent of respondent use desktop (4), 20 percent of respondents use television (5).

**TABLE 3**

**Distribution of the respondents based on the average how many hours per day do you spend looking at screen**

Valid	Frequency	Percent
2	13	13.0
3	39	39.0
4	29	29.0
5	19	19.0
Total	100	100.0



**Figure 3**

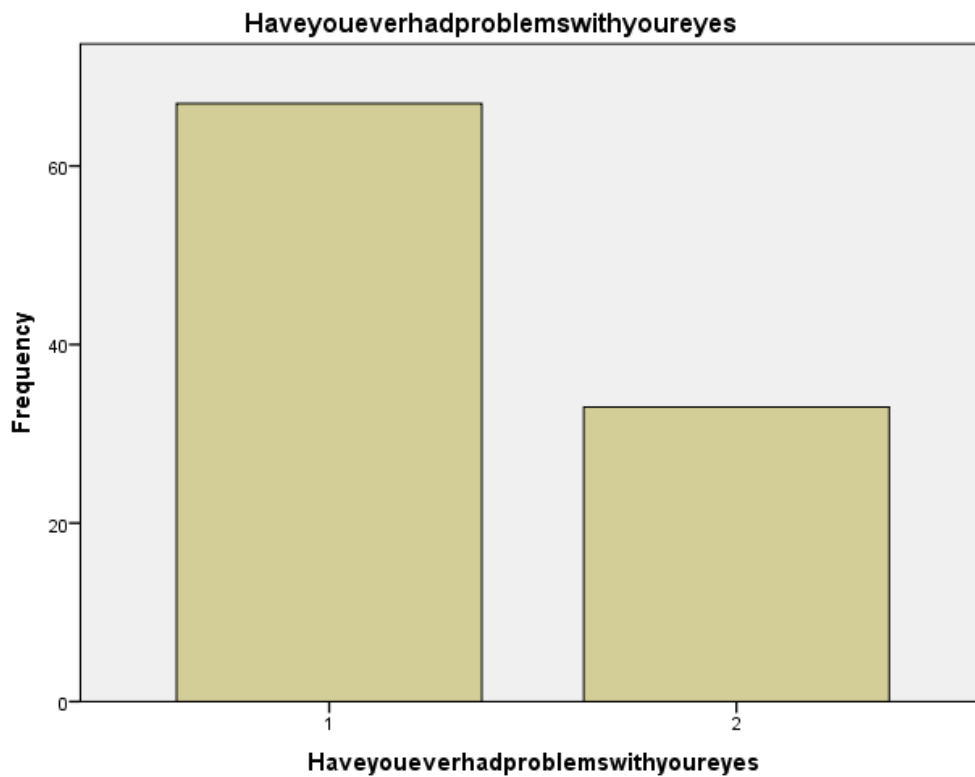
**Distribution of the respondents based on the average how many hours per day do you spent looking at screen**

This table (table 4.2.2) and graph (figure 4.2.2) shows that from the total 100 respondents spend looking at screens are 13 percent of the respondents 1 – 2 hours (2), 39 percent of the respondents 2 – 4 hours (3), 29 percent of the respondents 4 – 6 hours (4) and 19 percent of the respondents more than 6 hours (5).

**TABLE 4**

**Distribution of the respondents have you ever had problem with your eyes**

Valid	Frequency	Percent
1	67	67.0
2	33	33.0
Total	100	100.0



**Figure 4**

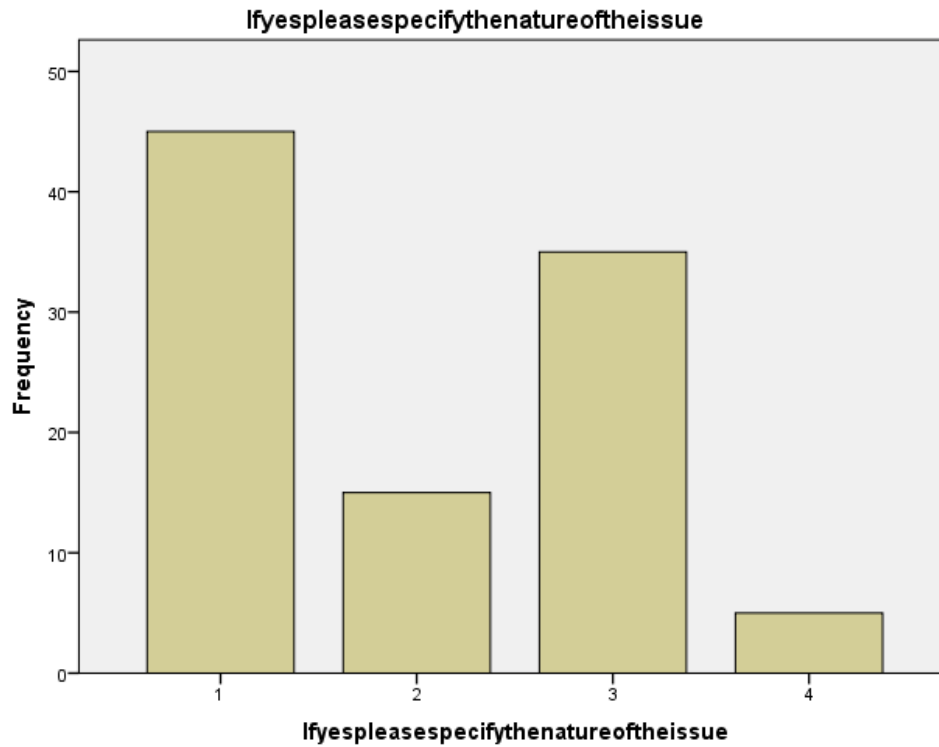
**distribution of the respondents have you ever had problem with your eyes**

Above the table (table 4.2.3) and graph (figure 4.2.3) shows that the distribution from the total 100 respondents have they ever had problem with their eyes 67 percent of the responds are Yes (1) and 33 percent of the responds are No (2).

**TABLE 5**

**distribution of the respondent specify the nature of the issue**

Valid	Frequency	Percent
1	45	45.0
2	15	15.0
3	35	35.0
4	5	5.0
Total	100	100.0



**Figure 5**

**distribution of the respondents specify the nature of the issue**

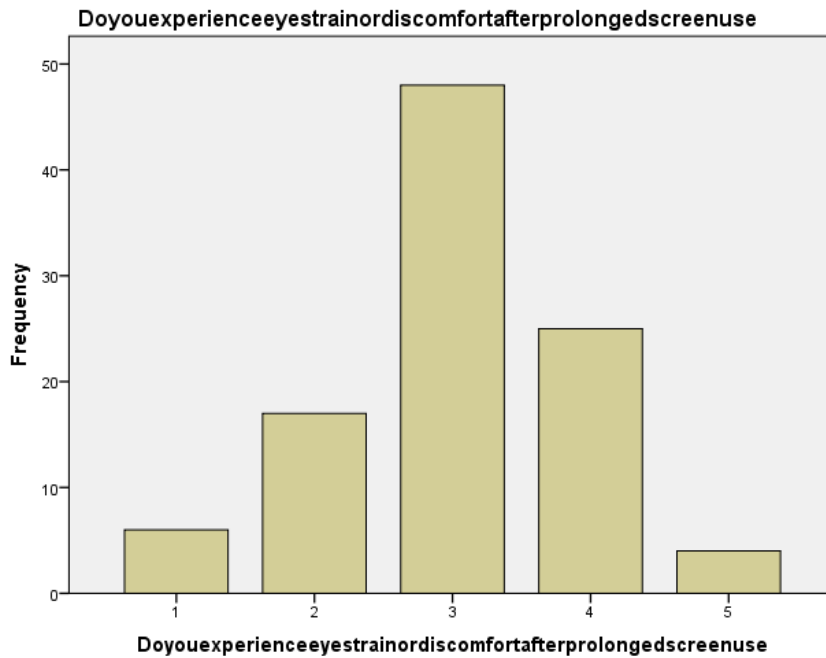
Above the table (table 4.2.4) and graph (figure 4.2.4) shows that the distribution of the respondents specify the nature of the issue from the 100 response 45 percent of the responds headache (1), 15 percent of the responds eyestrain (2), 35 percent of the responds low vision (3) and 5 percent of the responds redness of the eyes.

**TABLE 6**

**do you experience eye strain or discomfort after prolonged screen usage**

Valid	Frequency	Percent
1	6	6.0
2	17	17.0
3	48	48.0

4	25	25.0
5	4	4.0
Total	100	100.0



**Figure 6**

**do you experience eyestrain or discomfort after prolonged screen use**

Above the table (table 4.2.5) and graph (figure 4.2.5) shows that respondents have experienced eyestrain or discomfort after prolonged screen use shows that 6 percent of the responds are Never (1), 17 percent of the responds are Rarely (2), 48 percent of the responds are Sometimes (3), 25 percent of the responds are Often (5) and 4 percent of the responds are Always (6).

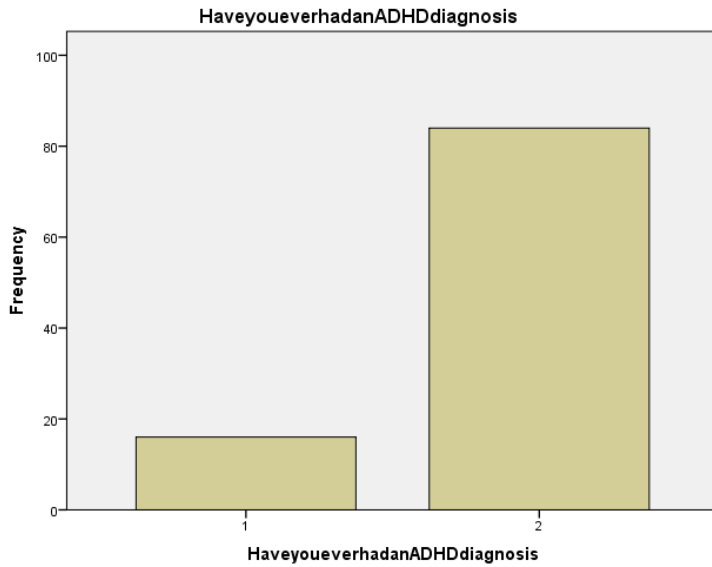
**4.3 Symptoms of visual ADHD**

**TABLE 7**



**Have you ever had an ADHD diagnosis**

Valid	Frequency	Percent
1	16	16.0
2	84	84.0
Total	100	100.0



**Figure 7**

**Have you ever had an ADHD diagnosis**

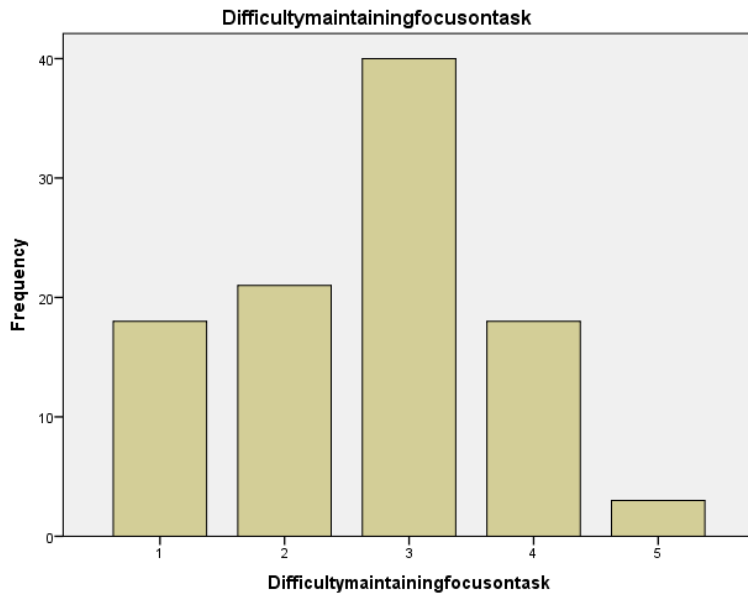
ADHD diagnosis of the respondents (table 4.3.1) and (figure 4.3.1) shows that 16 percent of the respondents responds Yes (1) and 84 percent of the respondents responds No (2).

**TABLE 8**

**Difficulty maintaining focus on task**

Valid	Frequency	Percent
1	18	18.0

2	21	21.0
3	40	40.0
4	18	18.0
5	3	3.0
Total	100	100.0



**Figure 8**

**difficulty maintaining focus on task**

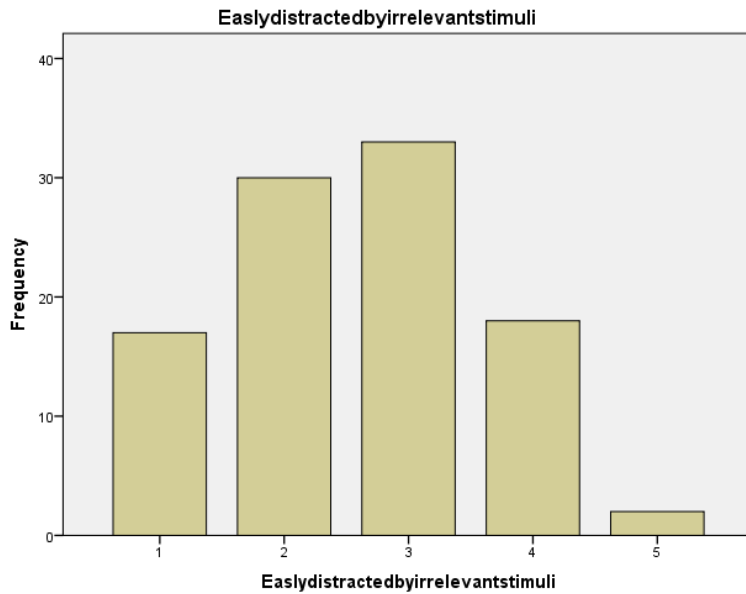
Respondents responds table 4.3.2 and figure 4.3.2 shows that 18 percent of the responds are Never (1), 21 percent of the responds are occasionally (2), 40 percent of the responds are sometimes (3), 18 percent of the responds are often (4) and 3 percent of the responds are always (5).

**TABLE 9**

**Easily distracted by irrelevant stimuli**

Valid	Frequency	Percent
1	17	17.0

2	30	30.0
3	33	33.0
4	18	18.0
5	2	2.0
Total	100	100.0



**Figure 9**

**Easily distracted by irrelevant stimuli**

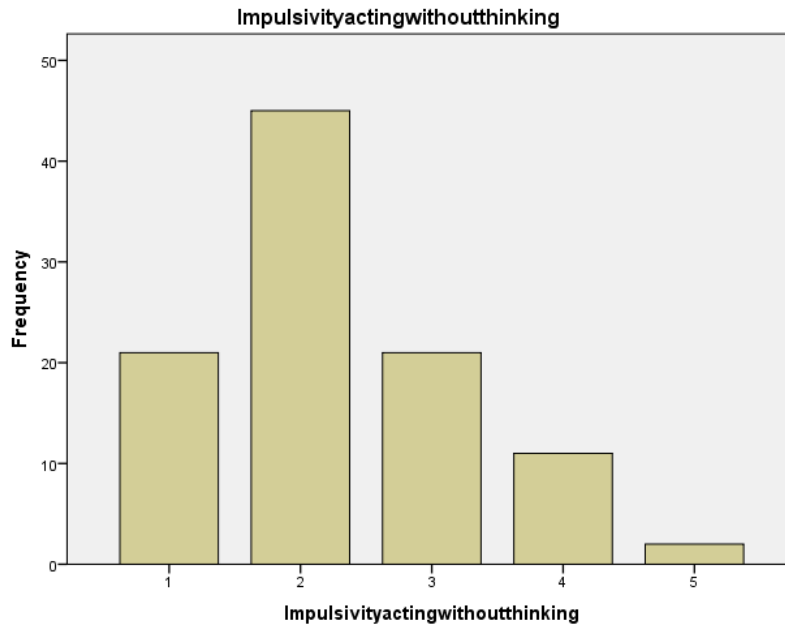
In this table 4.3.3 and figure 4.3.3 shows that 17 percent of the respondents are never (1), 30 percent of the respondents are occasionally (2), 33 percent of the respondents are sometimes (3), 18 percent of the respondents are often (4) and the 2 percent of the respondents are always (5).

**TABLE 10**

**Impulsivity acting without thinking**

Valid	Frequency	Percent
1	21	21.0

2	45	45.0
3	21	21.0
4	11	11.0
5	2	2.0
Total	100	100.0



**Figure 10**

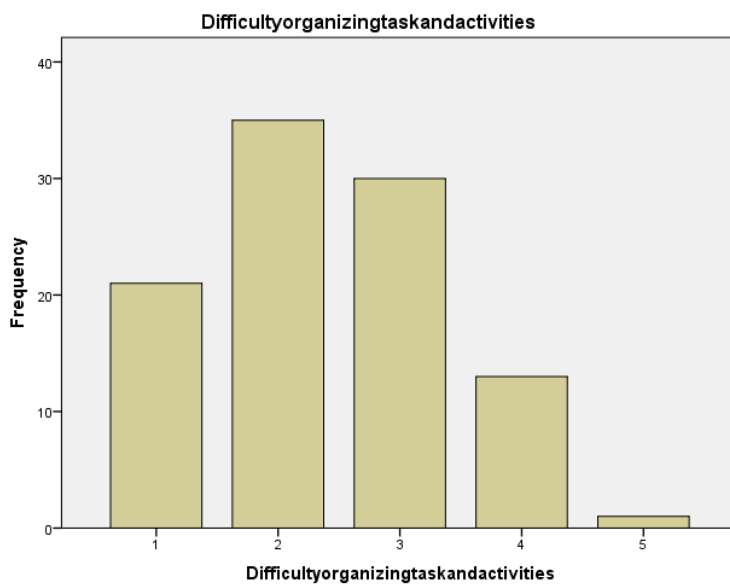
**impulsivity acting without thinking**

Above this table 4.3.4 and figure 4.3.4 shows that the respondents 21 percent of the responds are never (1), 45 percent of the responds are occasionally (2), 21 percent of the responds are sometimes (3), 11 percent of the responds are often (4) and the 2 percent of the responds are always (5)

**TABLE 11**

**Difficulty organizing task and activities**

Valid	Frequency	Percent
1	21	21.0
2	35	35.0
3	30	30.0
4	13	13.0
5	1	1.0
Total	100	100.0



**Figure 11**

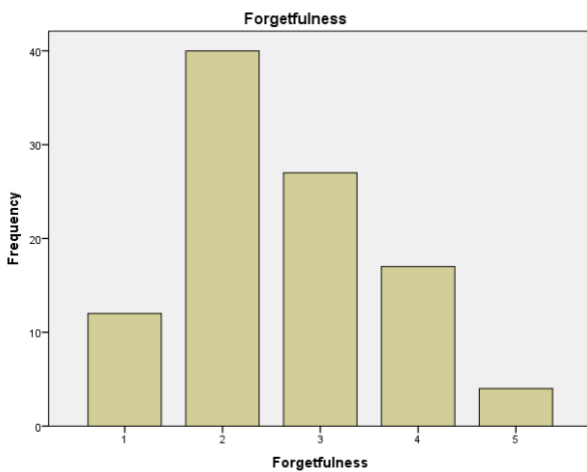
**difficulty organizing task and activities**

Above this table (table 4.3.5) and graph (figure 4.3.5) shows that 21 percent of the responds are never (1), 35 percent of the responds are occasionally (2), 30 percent of the responds are sometimes (3), 13 percent of the responds are often (4) and 1 percent of the responds are always (5).

**TABLE 12**

**Forgetfulness**

Valid	Frequency	Percent
1	12	12.0
2	40	40.0
3	27	27.0
4	17	17.0
5	4	4.0
Total	100	100.0



**Figure 12**  
**forgetfulness**

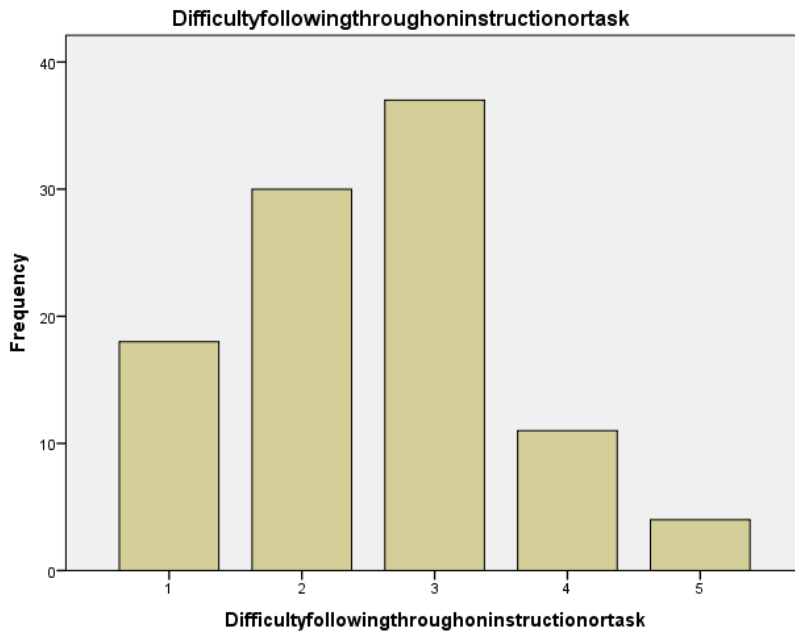
Above this table (table 4.3.5) and graph (figure 4.3.5) shows that 12 percent of the responds are never (1), 40 percent of the responds are occasionally (2), 27 percent of the responds are sometimes (3), 17 percent of the responds are often (4) and the 4 percent of the responds are always (5).

**TABLE 13**

**Difficulty following through on instruction or task**

Valid	Frequency	Percent
-------	-----------	---------

1	18	18.0
2	30	30.0
3	37	37.0
4	11	11.0
5	4	4.0
Total	100	100.0



**Figure 13**

**difficulty following through on instruction or task**

Above this table (table 4.3.6) and graph (figure 4.3.6) shows that 18 percent of the responds are never (1), 30 percent of the responds are occasionally (2), 37 percent of the responds are sometimes (3), 11 percent of the responds are often (4) and 4 percent of the responds are always (5).

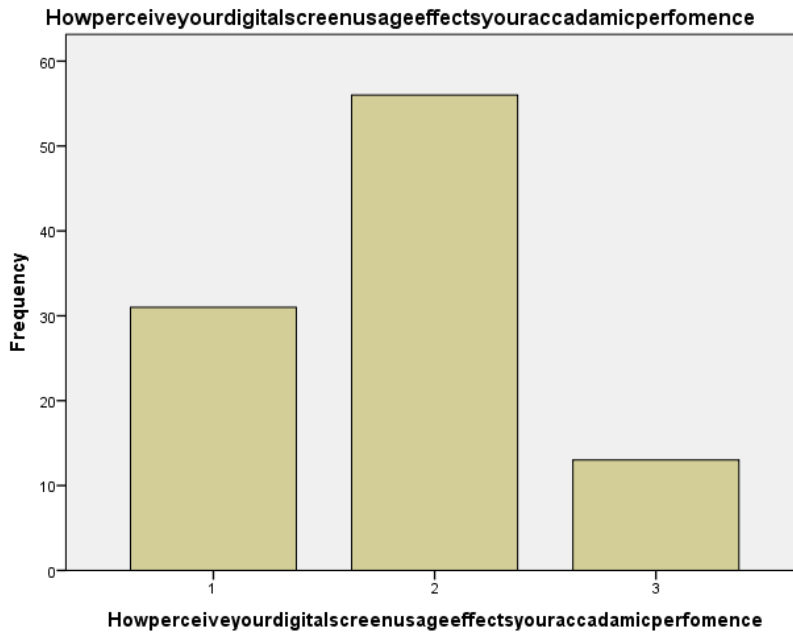
**TABLE 4.4 Impact of academic performance**

In this sample of the study detailed the frequency and percentage of the variables regarding the impact of academic performance.

**TABLE 14**

**Distribution of the respondents how perceive your digital screen usage effects your academic performance**

Valid	Frequency	Percent
1	31	31.0
2	56	56.0
3	13	13.0
Total	100	100.0



**Figure 14**

**distribution of the respondents how perceive your digital screen usage effects your academic performance**

Above this table (table 4.4.1) and graph (figure 4.4.1) the distribution of the respondents how perceive your digital screen usage effects your academic performance shows that 31 percent of the

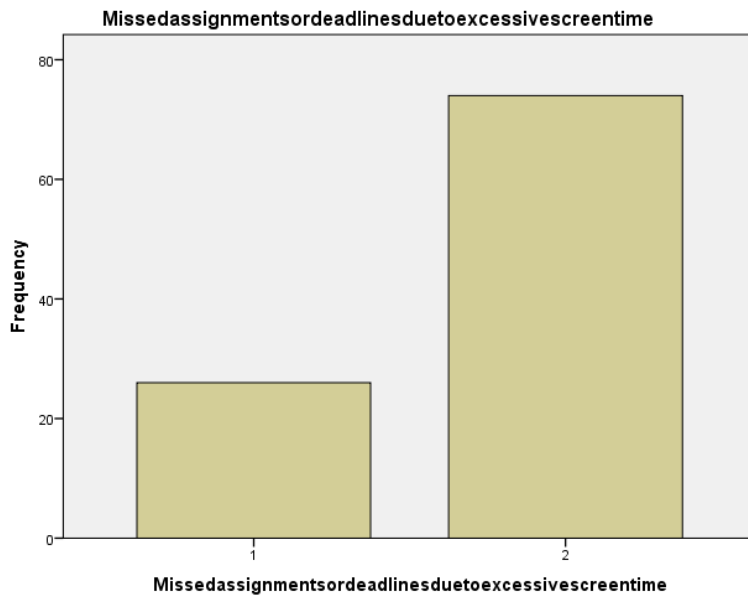


responds are positively (1), 56 percent of the responds are negatively (2) and 13 percent of the responds are no noticeable impact (3).

**TABLE 15**

**Distribution of the respondents missed assignments or deadlines due to excessive screen time**

Valid	Frequency	Percent
1	26	26.0
2	74	74.0
Total	100	100.0



**Figure 15**

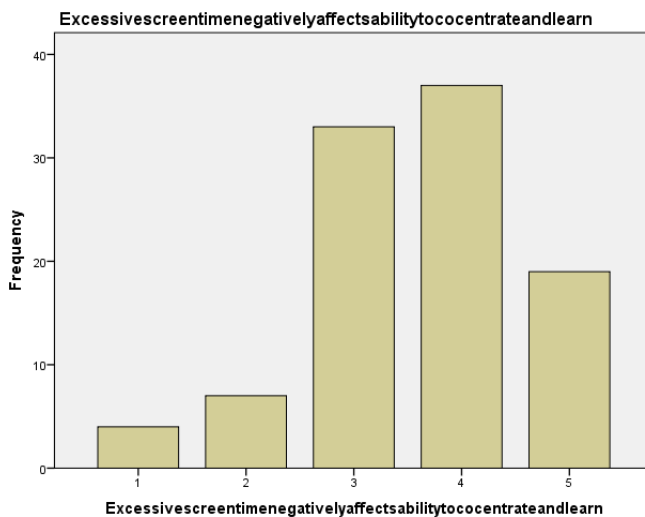
**distribution of the respondents missed assignments or deadlines due to excessive screen time**

Above the table (table 4.4.2) and graph (figure 4.4.2) the distribution of the respondents missed assignments or deadlines due to excessive screen time shows that 26 percent of the responds are yes (1) and 74 percent of the responds are no (2).

**TABLE 16**

**Distribution of the respondents excessive screen time negatively affects my ability to concentrate and learn.**

Valid	Frequency	Percent
1	4	4.0
2	7	7.0
3	33	33.0
4	37	37.0
5	19	19.0
Total	100	100.0



**Figure 16**

**distribution of the responds excessive screen time negatively affects ability to concentrate and learn**

Above the table (table 4.4.3) and graph (figure 4.4.3) the distribution of the respondents excessive screen time negatively affects ability to concentrate and learn shows that 4 percent of the responds strongly disagree (1), 7 percent of the responds are disagree (2), 33 percent of the responds are

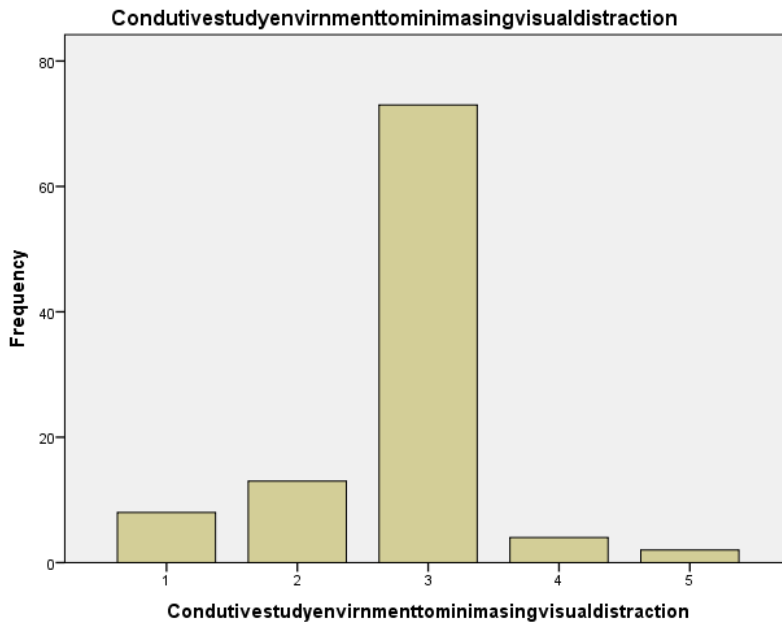
neutral (3), 37 percent of the responds are agree (4) and 19 percent of the responds are strongly agree (5).

**TABLE 4.5 Study Environment**

**TABLE 17**

**Distribution of the respondents conducive study environment to minimizing visual distraction**

Valid	Frequency	Percent
1	8	8.0
2	13	13.0
3	73	73.0
4	4	4.0
5	2	2.0
Total	100	100.0



**Figure 17**

**distribution of the respondents conducive study environment to minimizing visual distraction**

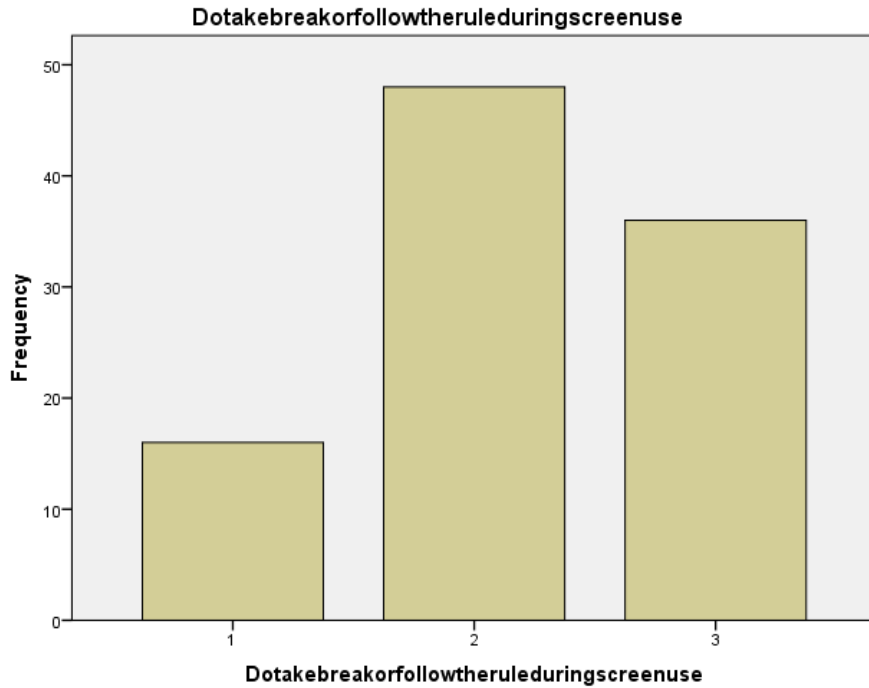
Above this table (table 4.5.1) and graph (figure 4.5.1) the distribution of the respondents conducive study environment to minimizing visual distraction shows that 8 percent of the responds are very conducive (1), 13 percent of the responds are conducive (2), 73 percent of the responds are neutral (3), 4 percent of the responds are not conducive (4) and 2 percent of the responds are not applicable (5)

**TABLE 4.6 Mitigating Measures**

**TABLE 18**

**Distribution of the respondents take break or following the rule during screen use**

Valid	Frequency	Percent
1	16	16.0
2	48	48.0
3	36	36.0
Total	100	100.0



**Figure 18**

**distribution of the respondents take break or following rule during screen use**

Above the table (table 4.6.1) and graph (figure 4.6.1) the distribution of the respondents take break or following rule during screen use shows that 16 percent of the responds yes (1), 48 percent of the responds are no (2) and 36 percent of the responds are sometimes (3).

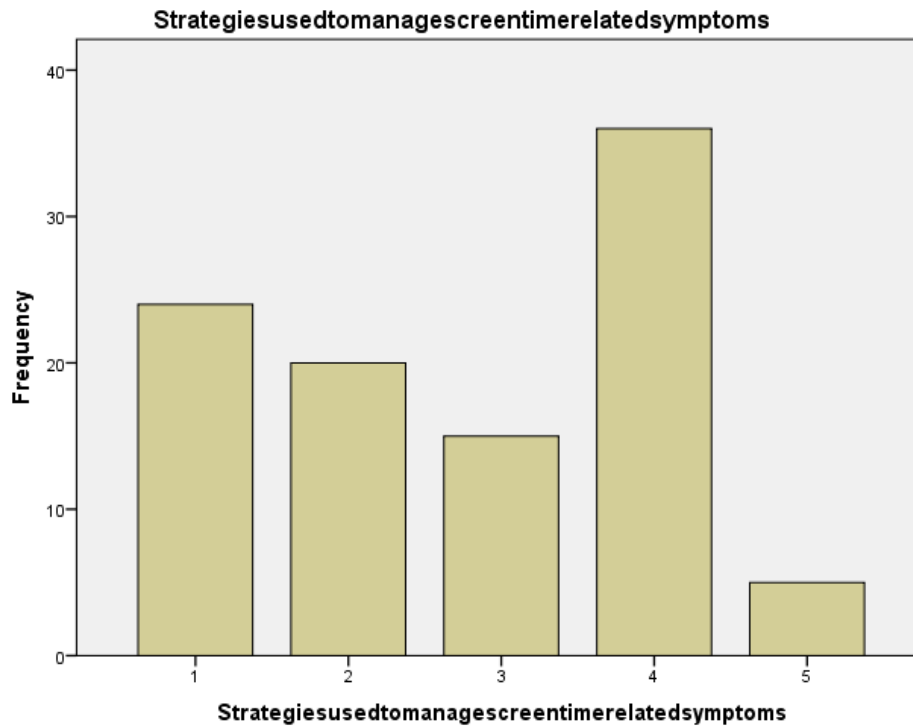
**TABLE 4.7 Coping Mechanism**

**TABLE 19**

**Distribution of the respondents strategies used to manage screen time related symptoms**

Valid	Frequency	Percent
1	24	24.0
2	20	20.0
3	15	15.0

4	36	36.0
5	5	5.0
Total	100	100.0



**Figure 19**

**distribution of the respondents strategies used to manage screen time related symptoms**

Above the table (table 4.7.1) and graph (figure 4.7.1) the distribution of the respondents strategies used to manage screen time related symptoms shows that 24 percent of the responds are taking breaks regularly (1), 20 percent of the responds are using blue light filters (2), 15 percent of the responds are practicing eye exercise (3), 36 percent of the responds are settings screen time limits (4) and 5 percent of the response are none of the above (5).

**TABLE 20**

**Distribution of the respondents resources or support available for managing digital screen time related**

Valid	Frequency	Percent
1	18	18.0
2	82	82.0
Total	100	100.0



**Figure 20**

**distribution of the respondents resources or support available for managing digital screen time related**

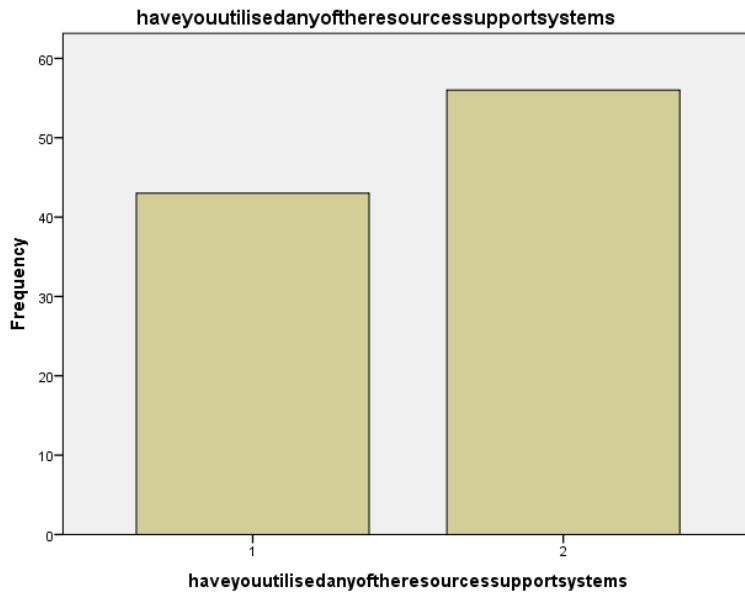
Above the table (table 4.7.2) and graph (figure 4.7.2) the distribution of the respondents resources or support available for managing digital screen time related shows that 18 percent of the responds yes (1) and 82 percent of the responds are no (2).

**TABLE 21**

**Distribution of the respondents have you utilized any of the resources or support system**

Valid	Frequency	Percent
-------	-----------	---------

	1	43	43.0
	2	56	56.0
	Total	99	99.0
Missing	System	1	1.0
Total		100	100.0



**Figure 21**

**distribution of the respondents have you utilized any of these resources or support system**

Above the table (table 4.7.3) and graph (figure 4.7.3) the distribution of the respondents have you utilized any of the resources or support system shows that 43 percent of the responds are yes (1) and 56 percent of the responds are no (2).

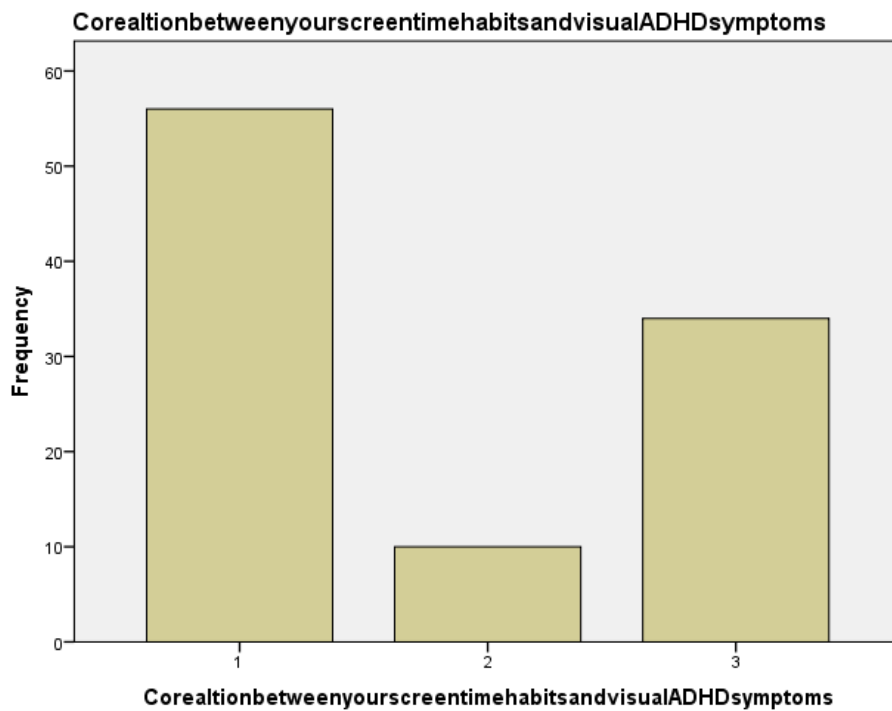
**TABLE 4.8 Final Thought**

**TABLE 22**



**Distribution of the respondents correlation between your screen time habits and visual ADHD symptoms**

Valid	Frequency	Percent
1	56	56.0
2	10	10.0
3	34	34.0
Total	100	100.0



**Figure 22**

**distribution of the respondents correlation between your screen time habits and visual ADHD symptoms**

Above the table (table 4.8.1) and graph (4.8.1) analyze the correlation between the respondents screen time habits and visual ADHD symptoms shows that 56 percent of the respondents are

responds yes (1), 10 percent of the respondents are responds no (2) and the 34 percent of the respondents are respond unsure (3).

# SUMMARY AND CONCLUSION

## **Chapter 05**

### **SUMMARY AND CONCLUSION**

The study on “the impact of digital screen time on visual ADHD symptoms among college students” was conducted St. Teresa’s college Ernakulam.

#### **5.1 Aim**

To study “the impact of digital screen time on visual ADHD symptoms among college students”

#### **5.2 Objectives**

- To investigate the connection between screen time and visual symptoms of ADHD.
- To determine screen usage habits and demographics patterns.
- To evaluate the function of media types and content.

- Comparing patterns of visual attention while working on screen tasks.

### **5.3 Sample**

The sample selected were 100 college students (St. Teresa's college Ernakulam) within the age group 18 – 25 above, the 100 respondents are females.

### **5.4 TOOL**

Questionnaire method was the tool used to collect data. The questionnaire comprised nine subsections; questionnaire included open ended and close ended questions. The close ended questions just required the students to choose the suitable answer from the options and the open ended questions required the respondents to write their responses in detail.

### **5.5 Finding**

The findings of the study can be summarized as follows:

#### **➤ Profile of the students**

Understanding the demographics profile of the respondents through the age and gender. The data revealed that the sample primarily consisted of 100 college students within the age group of 18 – 25 above. The majority of respondents of the age group 20 – 22 years. The gender distribution indicate mainly females participants. This demographic pattern provides valuable insight into the characteristics of the population under study, and to find more interpretation of the findings in later sections.

### ➤ **Digital screen usage**

the digital screen usage is second section. In this section evaluated the respondents of majority are primarily used screen based activities is 40% of the respondents are Smartphone's, 9% of the respondents are tablet, 27% of the respondents are the laptop, the least percent was desktop (4%) and 20% percent of the respondent used television.

The respondents were spending average hours for looking at screen was 13% of the respondents were 1 -2 hours, the majority of the respondent spending 2 – 4 hours (39%), 29% of the respondents were 4 – 6 hours, and the 19% of the respondents more than 6 hours.

The digital screen usage respondents had eye problems the majority of the respondents of 67% answered yes and at the rest of the respondents of 33% was no.

The 45% of the respondents specify the nature of the issue was headache, 15 % of the respondents was issued eyestrain, 35% of the respondents was low vision and the 5% of the respondents was redness of the eyes.

The respondents was experienced discomfort of the eye after prolonged screen usage showed that 6% of the respondent answered never, 17% of answered rarely, majority answered sometimes 48%, 25% answered often and least was answered always 4%.

### ➤ **Symptoms of visual ADHD**

Significant variation have been found in symptoms of visual ADHD. The respondents was responds for the ADHD diagnosed 16% was yes and the majority of 84% responds was diagnosed ADHD. The respondents shows that difficulty to maintaining focus on task majority was answered sometimes 40% and least was answered always 5%.the students were easily distracted by irrelevant stimuli least are responded always 2% and majority

responded 33% was sometimes. Their impulsivity acting without thinking the majority was responded 45% occasionally and least was answered 2% always. The student had difficulty to organizing task and activities majority was responded 35% occasionally and least was responded 1% always. The respondents had forgetfulness in students 40% are majority responded occasionally and least responded was always 4%. The students were responded following difficulty through on instruction or task was majority responded 37% were answered sometimes and 4% was the lowest responded 4% were answered always.

### ➤ **Impact of academic performance**

The student was perceive their digital screen usage effects students academic performance was majority responded 56% of negatively, the least 13% was no noticeable impact. The students missed assignments or deadlines due to excessive screen time least were responded 26% was yes and the most of the answered no 74%. The students excessive screen time negatively affects their ability to concentrate and learn were most of the student responded 37% was agree and 4% were strongly disagree were lowest responses.

### ➤ **Study environment**

The respondents were responded conducive study environment to minimizing visual distraction were fined 73% of the students responded neutral and 2% of the students responded.

### ➤ **Mitigating Measures**

The students take break or following the rule during screen usage least responded 16% yes and most of the students 48% were answered no.

### ➤ **Coping Mechanism**

The respondents strategies used to mange screen time related symptoms were fined 36% was students responded settings screen time limits and 5% is the lowest response from the students with none of the given options. The students resources or support available for managing

digital screen time related was 18% of the students were responded yes and 82% was respond no.

### ➤ **Final Thoughts**

The final thoughts of students were fined correlation between screen time habits and visual ADHD symptoms were founded 56% of the students were responded yes and lowest response from the students answered no 10%.

### **Conclusion**

In conclusion, this study investigates at how the impact of digital screen time on visual ADHD symptoms among college students between the age group of eighteen to twenty five above . the result shows the correlation between the screen time and the symptoms of visual ADHD. The results shows that students who use screens for two to four hours per day and most of them primarily used screen was smart phone's. Additionally, the screen based activities impact the students academic performance. Students had forgetfulness, difficulty to focusing and impulsivity are shown in their usage of screens.

Across the board, the testimony of necessity controlling the screen time habits in college students was encouraged. Due to the reducing screen time can help the students to concentrate their academic and their overall performance. This research given perceptive information for college students and help to reduce the impact of excessive usage of screen.

### **Limitation**

Despite its valuable result, the study has several limitations. the information is based on self reported statistics. This research doesn't take the respondent name , structure of the family, socioeconomic status. The limitations indicate that attention should be used when transferring the results to more general settings and analyzing the information.

## **Recommendations**

To reduce the strain on their eyes, advise college students to cut back on the amount of time they spend using screens in general, including TVs, laptops, tablets, and cellphones. Encourage the use of regular breaks to provide eyes a chance to rest and avoid fatigue during study or screen time sessions. Encourage the use of blue light-blocking glasses or filters to limit exposure to light wavelengths from digital devices that may be disruptive. Urge students to keep excellent posture, regulate the brightness and contrast of their screens, and make sure their study space has enough lighting, among other appropriate visual hygiene practices.



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# **APPENDIX**

## **Appendix I**

### **QUESTIONNAIRE TO CHECK THE IMPACT OF DIGITAL SCREEN TIME ON VISUAL ADHD SYMPTOMS AMONG COLLEGE STUDENTS.**

#### **Demographic profile :**

1. Age:
2. Gender:

#### **Section 1:**

##### **Digital Screen Usage**

3. On average, how many hours per day do you spend looking at screens (e.g., smartphones, tablets, computers, TVs)?
  - Less than 1 hour
  - 1-2 hours
  - 2-4 hours
  - 4-6 hours
  - More than 6 hours
4. What devices do you primarily use for screen-based activities? (Select all that apply)
  - Smartphone
  - Tablet
  - Laptop
  - Desktop computer

- Television
  - Other (please specify): \_\_\_\_\_
5. Have you ever had problems with your eyes?
- Yes
  - No
6. If yes, please specify the nature of these issues
- Headache
  - Eyestrain
  - Low vision
  - Redness of the eyes
7. How often do you experience eye strain or discomfort after prolonged screen use?
- Never
  - Rarely
  - Sometimes
  - Often
  - Always

## **Section 2:**

### **Symptoms of Visual ADHD**

8. Have you ever had an ADHD diagnosis?
- Yes
  - No
9. Over the past month, how often have you experienced the following symptoms during or after using digital screens? Please rate each item on a scale from, Never to Always.
- 9.1 Difficulty maintaining focus on tasks
- Never
  - Occasionally
  - Sometimes
  - Often
  - Always
- 9.2 Easily distracted by irrelevant stimuli
- Never
  - Occasionally
  - Sometimes
  - Often
  - Always

### 9.3 Impulsivity (acting without thinking)

- Never
- Occasionally
- Sometimes
- Often
- Always

### 9.4 Difficulty organizing tasks and activities.

- Never
- Occasionally
- Sometimes
- Often
- Always

### 9.5 Forgetfulness

- Never
- Occasionally
- Sometimes
- Often
- Always

### 9.6 Difficulty following through on instructions or tasks

- Never
- Occasionally
- Sometimes
- Always

## **Section 3:**

### **Impact on Academic Performance**

10. How do you perceive your digital screen usage affects your academic performance?

- Positively
- Negatively
- No noticeable impact

11. Have you ever missed deadlines or assignments due to excessive screen time-related symptoms?

- Yes
- No

12. Rate your level of agreement with the following statement: "Excessive screen time negatively affects my ability to concentrate and learn."

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

#### **Section 4:**

##### **Study Environment:**

13. How conducive is your study environment to minimizing visual distractions?

- Very conducive
- Conducive
- Neutral
- Not conducive
- Not applicable

#### **Section 5:**

##### **Mitigating Measures:**

14. Do you take breaks or follow the 20-20-20 rule (every 20 minutes, look at something 20 feet away for at least 20 seconds) during screen use?

- Yes
- No
- Sometimes

#### **Section 6**

##### **Coping Mechanisms**

15. Which of the following strategies do you use to manage screen time-related symptoms?

- Taking breaks regularly
- Using blue light filters
- Practicing eye exercises
- Setting screen time limits
- None of the above

16. Are you aware of resources or support available for managing digital screen time-related symptoms on your campus?

- Yes
- No

17. If yes, have you utilized any of these resources or support systems?

- Yes
- No

**Final Thoughts:**

18. Do you believe there is a correlation between your screen time habits and visual ADHD symptoms?

- Yes
- No
- Unsure

19. Additional comments or observation regarding the impact of screen time on your visual well-being?



