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*Effect of Screen Time on Adolescents Quality of Life*

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*by*

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

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# *Dedication*

*With great love and respect, dedicate  
this*

*work to my:*

*Parents and wife for always being there  
for help and*

*endless support.*

*Sisters and brothers for their love.*

*For everyone, help me*

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## Abstract

**Background:** Excessive screen usage has been associated with negative effects on health that lead to lower quality of life and deterioration in physical and psychological conditions.

**Objective:** To investigate the correlation between screen time screens and quality of life among adolescents.

**Methods:** A cross-sectional study was conducted with 387 secondary school students from Al-Najaf Al-Ashraf City, Iraq. Data were collected from February 24<sup>th</sup>, 2024, to May 25<sup>th</sup>, 2024, using a self-report questionnaire comprising demographic details, the KINDL questionnaire, and the Questionnaire for Screen Time of Adolescents. Descriptive statistics, the Pearson correlation coefficient, and linear regression analysis were used to analyze the data.

**Results:** The majority of participants (55.6%) reported using screens for over 10 hours per day, with 78% exhibiting a moderate level of QOL. Pearson correlation analysis revealed significant inverse correlations between daily ST and domains of physical well-being ( $P = 0.022$ ), emotional well-being ( $P = 0.029$ ), and everyday/school functioning ( $P = 0.002$ ) within the QOL framework. Regression analysis identified gender, age, marital status, grade, and mothers' education as influential factors on students' QOL.

**Conclusions:** This study establishes a correlation between elevated screen time and compromised physical, emotional, and school functioning among Iraqi adolescents.

**Recommendation:** The study recommended to reduce daily screen usage, raise awareness among students and parents, and promote physical activity. Schools and health organizations to implement programs that balance screen use with physical exercise.



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### **List of Abbreviations and Symbols**

<b>Items</b>	<b>Meaning</b>
AAP	American Academy of Pediatrics
ASD	Autism spectrum disorder
APP	Application
BMI	Body Mass Index
CVD	Cardiovascular disease
CDC	Centers for Disease Control and Prevention
CBT	Cognitive behavioral therapy
DES	Digital eye strain



EEG	Electroencephalogram
EM	Electronic media
et al.	et alias
Ex	Example
EUEM	Excessive use of electronic media
Fig	Figure
FDA	Food and Drug Administration
HRQoL	Health Related quality of life
HT	Height
Kg	Kilogram
Sig	Level of Significance
M.S	Mean of Score
NIGMS	National Institute of General Medical Sciences
NISC	Neonatal Intensive Special Care
NS	Non-significant
P value	Probability Value
QOL	Quality of life
QueST	Questionnaire for screen time in adolescents
ST	Screen time
S	Significant
SCT	Social Cognitive Theory
SNSs	social networking services
S.D	Standard Deviation
<i>M</i>	Statistical Mean
SPSS	Statistical package for social sciences
TV	Television
SEM	The Social Ecological Model

UNICEF	United Nations International Children's Emergency Fund
WT	Weight
WHO	World Health Organization
ANOVA	Analysis of Variance
D.F	Degree of Freedom
F	Frequency
HS	High significant
M.S	Mean of Score
NA	Not Available
NS	Not Significant
R	Correlation Coefficient
S	Significant
SD	Stander Deviation
SPSS	Statistical Package of Social Sciences
&	And
%	Percentage
$\leq$	Less than or equal
$\geq$	More than or equal

# **Chapter One**

## **Introduction**

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## Chapter One

### 1.1 Introduction

Adolescence is a crucial period of development characterised by notable alterations in physical, psychological, and social aspects. Although teenagers are commonly considered to be in good health, this period of growth is also linked to the appearance of risk factors that might have lasting effects on their overall well-being (Meade & Dowswell., 2016).

Digital devices have greatly impacted the lifestyle of young people. With the widespread use of electronic devices such as smartphones, tablets, and computers, teenagers are spending more and more time on screen activities (Santos et al., 2020). Excessive screen time (ST) has caused increasing concern among parents, educators, and healthcare professionals about its impact on adolescents' physical, psychological, and social well-being and quality of life (Belton et al., 2021; Zhu et al., 2023).

Screen time, as defined by the World Health Organization (WHO), is time spent passively watching screen entertainment (television, computer, mobile device). This definition excludes some active games that involve physical activity or exercise (WHO, 2020).

Screen time as defined by Santos & Reeve (2020) is referred in the literature as 'the summed exposure to devices capable of displaying video content' such as computers, televisions, smartphones, tablets and video game consoles. The classification of screen time falls under four categories: passive (e.g., watching TV), interactive (e.g., playing video games), social (e.g., using social media), and educational (e.g., using a computer for assignments) (Sanders et al., 2019).

Tremblay et al., (2017), reported that the term 'screen time' implies a quantification in hours that individuals spend facing screens every day irrespective of their physical movement or posture.

Television, DVDs, video games, and computers are all examples of things that fall under the category of screen time( Sweetser et al., 2012).

Spending too much time in front of screens has negative effects on health in many ways, including physical and mental well-being as well as quality of life (Saunders and Vallance., 2017).

Most young people spend their free time watching screens, on their smartphones, tablets, gaming consoles, or televisions (Twenge et al., 2019). As stated by the American Academy of Child and Adolescent Psychiatry (2021), children aged 8 to 12 in the United States spend an average of four to six hours per day in front of screens, while adolescents spend as much as nine hours per day.

Between 2009 and 2015, the average amount of time spent in front of screens increased by 42 minutes, according to studies that were representative of the whole US population (Twenge et al., 2018).

Arab adolescents, like those in developed countries, have high screen time due to access to electronic devices which reported the high levels of screen time among Arab teens, with girls being more sedentary than boys (Saquib, 2018).

With the advancement of medicine, health has become more important. In the areas of physical, psychological, and social health (Liu et al., 2019), current health services based on diseases ignore many of the health problems that adolescents suffer from (Meade & Dowswell., 2016).

Health-related quality of life (HRQoL) is a significant multidimensional concept that encompasses the emotional, physical and social aspects of an individual's life. It allows doctors and researchers to measure an individual's perceived functioning, in conjunction with traditional definitions of health status (Wong et al., 2021).

Health-related quality of life encompasses mental, physical, and social well-being. Assessing the quality of life in terms of health is



becoming increasingly acknowledged as a valuable measure of health outcomes and the efficacy of health services. However, it has not yet been completely exploited in the child and adolescent population (Meade & Dowswell., 2016).

Quality of life (QOL) has become a critical measure for the outcomes of people who suffer from problems related to mental and physical health, as well as for determining the different health levels of adolescents in multiple dimensions such as physiological, psychological, and emotional (Wong et al., 2021).

Quality of life in children and adolescents is considered a key health outcome as well as being multi-dimensional term useful for assessing an individual's perceived functioning (Wong et al., 2017). Several variables, including but not limited to age, gender, location, socioeconomic situation, smoking, level of physical activity, and ST, may impact life quality (Dong et al., 2020).

Health-related quality of life refers to the impact of disease and treatment on disability and daily functioning, as well as the impact of perceived health on an individual's ability to live a fulfilling life. More specifically, HRQOL measures the value of life length, influenced by impairments, functional states, perceptions, and opportunities, as well as sickness, injury, treatment, and policy (Haraldstad et al., 2019).

long periods of screen time are associated with lower levels of physical activity and an increased risk of obesity, poor nutrition, cardiovascular problems, a sedentary lifestyle, poor posture, and eye strain (Saquib, 2018; Verity et al., 2023; Abod & Bandar., 2023).

The situation might have significant consequences for long-term health among teenagers, leading possibly to higher likelihoods of chronic conditions including diabetes and cardiovascular problems (Nagata et al., 2023).

Adolescents with elevated screen time tend to have weaker control over emotions, inability to keep calm or avoid arguments and conflict, or display interest, resulting in lower participation levels of the activities others are engaging in and being unable to make friends easily, making it challenging for them. Previous studies have shown that long screen time may stimulate the neurobiological system, resulting in various behavioural and emotional problems; however, there is insufficient population-based evidence (Wiguna et al., 2024).

A decline in quality of life as well as worsening of physical and mental health are some of the harmful health outcomes linked to spending too much time in front of screens (Saunders & Vallance., 2017).

However, there still lurks a certain level of ambiguity and uncertainty surrounding the exact interpretation and evaluation of screen time because researchers use different terms and approaches to tackle this issue (Kaye et al., 2020). Television happens to be the most popular type of screen activity for kids while computer usage plus video gaming and gadget ownership are becoming more common among youngsters (Domingues-Montanari et al., 2017).

Physical inactivity due to screen time such as watching TV or playing video games and computer usage is linked with higher risks of several adverse health, social, and metabolic outcomes irrespective of age group (Zink et al., 2019) .

Prolonged ST is associated with lower levels of physical activity, higher risk of obesity, poor diet, cardiovascular problems, sedentary lifestyle, poor posture, and eye strain (Saquib, 2018; Abod et al., 2023). This can have serious implications for adolescents' long-term health outcomes, including an increased risk of chronic diseases such as diabetes and cardiovascular disorders (Nagata et al., 2023).

Additionally, excessive ST has been linked to poor sleep quality and disrupted circadian rhythms, which can further exacerbate physical health problems in adolescents (Lua et al., 2023; Alshoaibi et al., 2023). Moreover, excessive ST has been linked to mental health issues such as increased stress, anxiety, depression, loneliness, and impaired cognitive development in adolescents (Muppalla et al., 2023; Santos et al., 2023).

Screen time may interfere with adolescents' social interactions and diminish their sense of connectedness with peers and family members, leading to feelings of isolation and social withdrawal (Barthorpe et al., 2020). These negative effects on physical and mental health can, in turn, impact the overall QOL of adolescents, affecting their ability to engage in social interactions, academic performance, and overall well-being (Saunders et al., 2017).

The use of screen-based media devices within one hour before going to sleep was linked to a decreased QOL in children and adolescents (Wong et al., 2021).

A study has also found the multifaceted associations between ST and an array of health and academic metrics, illuminating the intricate interplay between digital engagement and developmental trajectories. The passage of COVID-19 into a pandemic has led to an era of unprecedented disruption, this has increased the dependence on computers and other screens for education, socialization. This has had a significant impact on the quality of life of adolescents recreation (Madigan et al., 2022).

However, a knowledge gap in the current literature is the lack of consistency in defining and measuring QOL in relation to ST in adolescents. Some studies have used subjective measures of QOL, such as self-reported satisfaction with life (Steiner-Hofbauer et al., 2023).

while others have used objective measures, such as academic performance or social relationships, this inconsistency makes it difficult to

draw definitive conclusions about the impact of ST on overall QOL in adolescents. Additionally, there is a lack of research on the long-term effects of excessive ST on QOL, as most studies focus on short-term outcomes (Yan et al., 2017).

Conflicts between previous studies also exist in terms of the direction and magnitude of the relationship between ST and QOL in adolescents. Some studies suggest that excessive ST is associated with poorer QO (Borras et al., 2011). While others find no significant relationship or even a positive association (Wang et al., 2023).

These conflicting results may be due to differences in study design, sample characteristics, measurement methods, and control variables. Due to these knowledge gaps, and since adolescents are uniquely susceptible to the negative effects of screen exposure, (Tundia and Thakrar, 2023). It is important to understand the relationship between ST and quality of life (QOL) during adolescence. This understanding can help identify strategies to mitigate the potential negative effects of screen use on overall well-being and QOL (Nedjar-Guerre et al., 2023).

Understanding the complex relationship between screen time and adolescents' quality of life is crucial. This research can inform strategies to promote healthy technology use, fostering positive screen time habits and ultimately leading to improved well-being for adolescents (Kaye et al., 2020).

## **1.2. Important of Study**

Adolescence is a crucial period of development characterised by notable alterations in physical, psychological, and social aspects. Although teenagers are commonly considered to be in good health, this period of growth is also linked to the appearance of risk factors that might have lasting effects on their overall well-being (Meade & Dowswell, 2016). At this point, technology becomes an integral part of the lives of young

people, with screen time involving the use of devices such as smartphones plus computers and televisions. Though technology undoubtedly has numerous benefits for learning, communication, and entertainment, there are emerging concerns about its possible effects on adolescent wellness, notably quality of life (Muppalla et al., 2023). An investigation into the Association between screen time and quality of life would be necessary in adolescents for many reasons, the first being that it addresses significant public health issues. Adolescents' exposure to screen time is progressively increasing, eliciting worries regarding adverse effects on their health and quality of life (Saunders & Vallance., 2017).

The children spend a considerable portion of their waking hours engaging in screen-based activities, with estimates averaging around eight hours per day in many cases. 7–9 This observation aligns with a 2015 newsletter from the American Academy of Pediatrics (AAP), which highlighted the outdated nature of current guidelines on screen time for children, calling for their revision. Notably, about 90% of parents reportedly do not adhere to the AAP's recommendations (Domingues-Montanari, 2017).

According to a statement by the American Academy of Child and Adolescent Psychiatry, children aged 8-12 years spend an average of 4-6 hours per day in front of screens, while adolescents in the U.S. engage in up to nine hours of screen time daily (American Academy of Child and Adolescent Psychiatry, 2021). The rise in screen-based technology use has been implicated in this increased screen time. National surveys conducted in the U.S. revealed an average daily increase of 0.7 hours in adolescents' use of screen-based technology from 2009 to 2015 (Twenge et al., 2018).

Lacy, (2012) founded that adolescents who reported watching 2-3 hours of television per day were 20–25% less likely to be classified as overweight compared to those watching four or more hours, while those



who watched one hour or less per day were 40% less likely to be classified as overweight.

The leisure-time screen-based sedentary behaviors (e.g., television, computer, video games) have been linked to various adverse cardiometabolic, social, and health outcomes in both youth and adulthood (Zink et al., 2019).

This study seeks to fill the void in this critical domain by delving into this significant public health concern to investigate any plausible linkages between time spent on screens and the standard of living. Screen time is connected with different health effects in teenagers, including physical and mental health and academic performance (Lee, 2020; Madhav et al., 2017; Nagata et al., 2023; Neophytou et al., 2023).

Quality of life (QOL) has become a significant indicator for people with various health issues, including adolescents. It encompasses a variety of metrics, including physical, mental, emotional, and social satisfaction. While healthcare advances have permeated into these areas, current disease-based approaches often disregarded critical issues in regards to health that adolescents face. As a result, studying their quality of life is of great importance (Dong et al., 2020).

The emerging topic of screen time and QOL that explore the connection between screen time and quality of life have recently emerged and found that screen time was inversely associated with QOL, specifically with regards to physical health (Saunders & Vallance, 2017).

A significant portion of screen time among young people is spent on passive or interactive consumption of media. Specifically, 78% of screen time for adolescent is dedicated to activities such as watching television, viewing videos, listening to music, reading, and playing video games (Rideout, 2018).

Health Related quality of life (HRQoL) is a holistic measure that includes physical, psychological, environmental, and social components of well-being. It's important for all populations to have adequate HRQoL, as it reflects the subjectively perceived well-being of various domains that are crucial to individuals (Costa et al., 2020). However, adolescence is typically characterized by alterations that negatively affect the HRQoL. Despite the increasing amount of evidence that links screen time to negative health outcomes, its prevalence still continues to increase. This poses a significant threat to public health, as many participants exceed the recommended thresholds (Saunders & Vallance., 2017).

## **1.2. Problem Statement**

The excessive consumption of screens by adolescents has become a significant public health issue. This necessitates a comprehensive study of the negative consequences of screen time on various health areas, including physical health, psychological well-being, and overall quality of life. Adolescents are engaging with screens at an excessive rate. This phenomenon extends beyond individual behaviour and has become a critical issue.

Concerns exist regarding the association between prolonged screen use and increased risk of depression, anxiety, cyberbullying, and addiction to online platforms and games. The displacement of real-world interactions and activities due to excessive screen time may negatively impact social development, emotional regulation, and cognitive skills, ultimately hindering an adolescent's overall well-being. The study will employ robust methodologies to establish the strength of the correlations between excessive screen use and quality of life.

Digital devices and media have been studied in different ways for many decades. However, much of what individuals are doing on their devices is new and has not been studied enough. Social media, a significant

component of screen time, is still relatively recent and evolving. The first generation of people to grow up in a digital society are just now young adults; therefore, it makes sense that the impacts are not yet evident. With more time and investigation, the long-term impacts may become more visible. With the age and speed of technological advancement, it is inevitable to avert all its effects. However, a deeper understanding of them can help clinicians and policymakers make more informed decisions.

The study will delve deeper to understand the content and context of screen time that contributes most significantly to adverse health outcomes.

By pinpointing the specific types and durations of screen use that pose the most significant risk, this research will pave the way for the development of effective strategies to promote healthy digital habits among adolescents.

This investigation is crucial to gaining a deeper understanding of the multifaceted consequences of excessive screen time on adolescent health. The findings will be instrumental in guiding future research and informing the development of preventative.

#### **1.4. Study Objectives**

1. To assess screen time among adolescents in secondary school
2. To assess the QOL of adolescents, spend time on screen.
3. To examine the effect of screen time on adolescents QOL.
4. To investigate the correlation between QOL and adolescent socio-demographic factors.

#### **1.5. Research Questions**

Is there a significant correlation between adolescents' screen time and their quality of life?

## **1.6. Definition of terms**

### **1.6.1. Screen Time**

#### **A. Theoretical Definition**

Screen time is considered the number of hours per day that individuals spend on screens while either exercising, standing or sitting (Tremblay et al., 2017).

#### **B. Operational Definition**

A total amount of time spent with electronic devices that have screens, including computers, smartphones, tablets, televisions, and other devices. This will be measure by using the questionnaire for screen time of adolescents.

### **1.6.2. Quality of life**

#### **A.Theoretical Definition**

A significant multidimensional concept that encompasses the emotional, physical and social aspects of an individual's life. It allows doctors and researchers to measure an individual's perceived functioning, in conjunction with traditional definitions of health status (Wong et al., 2021).

#### **B.Operational Definition**

Defined as the subjective evaluation of an individual's well-being across various dimensions, such as physical health, emotional state, self-esteem, social relationships, and school functioning. These dimensions can be assessed by using the KINDL questionnaire.

# **Chapter Two**

## **Review of Literature**

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## Review of Literature

### 2.1. Overview of Adolescent Screen Time

At the touch of a fingertip, calling, texting, streaming, video chatting, surfing the web, and browsing social media are all commonplace these days. Modern technologies have brought significant advancements to society, from enhancing learning to building communities. How technology is used to entertain is vast. Although television watching has declined recently, engagement in other types of leisure technology has increased on mobile devices (Lee, 2019). Since smartphones became broadly available a decade ago, the production and engagement of digital devices have increased significantly (Sheppard & Wolffsohn, 2018).

The ubiquitous presence of technology in modern life has drastically altered how adolescents interact with the world. Screen time, encompassing smartphones, tablets, computers, televisions, and gaming consoles, has become a defining feature of adolescence. (Santos et al., 2023). While screens offer educational opportunities, social connections, and entertainment, concerns are rising about their potential impact on overall well-being (Sanders et al., 2019; Delgado-Floody et al., 2020; Stiglic & Viner, 2019).

Existing research paints a complex picture. Studies suggest links between excessive screen time and various aspects of adolescent quality of life. Sleep patterns, physical activity levels, and obesity risk are all potentially impacted by screen time, displacing physical activity and disrupting sleep (Nagata et al., 2023; Saquib, 2018; Abod et al., 2023; Kamaleddine et al., 2022).

Mental health concerns like depression, anxiety, and cyberbullying also show connections to screen time (Santos et al., 2023; Liu et al., 2019). Social media use has been linked to self-esteem and body image issues, potentially affecting emotional well-being (Barthorpe et al., 2020; Kim et

al., 2023). Additionally, research suggests that excessive screen time can displace opportunities for face-to-face interaction, hindering social development and potentially leading to feelings of loneliness and isolation (Muppalla et al., 2023).

Several potential mechanisms explain how screen time might influence quality of life. Screens can displace healthy habits like exercise and sleep, which are crucial for physical and mental well-being (Wong et al., 2021). Exposure to harmful content on social media, such as cyberbullying, unrealistic portrayals, or violent content, can negatively impact mental health. Furthermore, screen time can lead to attention difficulties, impulsivity, and difficulties with self-regulation, impacting academic performance and overall well-being (Liu et al., 2019; Muppalla et al., 2023). While existing research offers valuable insights, limitations remain. Longitudinal studies are needed to understand the long-term effects of screen time on adolescents' quality of life. Additionally, further research is needed to explore the impact of specific types of screen content and the influence of individual differences on vulnerability to screen time's effects. (Davis et al., 2019; Arendt et al., 2019; Wong et al., 2021).

Understanding the complex relationship between screen time and adolescents' quality of life is crucial. This research can inform strategies to promote healthy technology use, fostering positive screen time habits and ultimately leading to improved well-being for adolescents (Muppalla et al., 2023).

## **2.2. Concept of Screen Time**

Screen time has become highly complicated since the global expansion of electronic devices. While technology has surged to develop screen-based technologies with more youth using them, paradoxically, it has led to less interaction with nature. Consequently, this leads to adverse

psychological and overall wellness impacts on individuals (Muppalla et al., 2023).

Screen time is the term used as an umbrella for different activities involving electronic devices displaying visual content, ranging from smartphones, tablets, and computers to TVs and gaming consoles (Santos & Reeve, 2020).

Screen time is further examined by scientists based on the kind of user interactions. Passive activities like watching TV, interactive ones such as video games, social media where you can be part of a community virtually, or even education-based tasks where you use a computer for school work (Sanders et al., 2019).

The journey into exploring screen time is simple; it meanders through sharp obstacles born out of conflicting ideas and approaches. Some scholars draw rigid boundaries for screen time, only acknowledging mindless visual engagement void of any physical participation (Kaye et al., 2020). Others take a more inclusive stance, considering every source of flickering light on the wall irrespective of what casts those shadows (Ye et al., 2023).

In the midst of these convoluted efforts that impede simple comprehension, organizations like the WHO have come up with screen time recommendations. They chisel out statutes advocating zero screen exposure for children under two years old and for those who have not seen five sunsets, only one hour daily (WHO, 2019 ).

However, here lies the irony: even though these guidelines are delivered on stone tablets to every corner of the world where research is presumed to be regularly conducted, terms continue playing hide and seek. Time's evolution cannot be traced because different studies use terminologies inconsistently; thus, wading through this quagmire of terms thrown at us haphazardly participation (Kaye et al., 2020).



### **2.3. Historical Trends in Adolescent Screen Time**

Twenge et al. (2019) report revealed that total ST among adolescents nearly tripled from the late 1970s to 2016, with adolescents spending around 2.5 hours a day on screen time, primarily for television.

Not only television has been added to the screen activity landscape, but mobile devices and interactive media have also found their place in it. In today's world, children are often referred to as "digital natives" because they are born into a world constantly evolving with digital technology and mobile media. The age at which children start regular exposure to media has significantly dropped from four years in 1970 to four months today (Muppalla et al., 2023).

The increase in screen time has led to public health concerns as well. Obesity, attention and learning problems, and sleep disorders, are just a few of the issues that excessive screen time can lead to (Madigan et al., 2022).

The American Academy of Child and Adolescent Psychiatry, (2021) shows that children in America between 8 to 12 years spend between 4 and 6 hours every day glued to screens, while adolescents clock more than 9 hours daily.

A significant surge in screen time during the onset of the pandemic (Lua et al., 2023). Unraveling historical patterns about adolescents' screen time holds pivotal importance as it underpins the assessment of its effect on quality living life and wellness levels (Madigan et al., 2022).

#### **2.3.1. The Impact of the COVID-19 Pandemic on adolescent screen time**

With COVID-19 only adding fuel to the fire, more research is warranted on understanding its Impact; it can be summarized as follows: the destruction of this situation has a significant influence on children and families, young people who are often unoccupied with anything worthwhile

in their daily lives. High screen time in children and adolescents is associated with different adverse outcomes, which comprise difficulties in sleeping and low levels of physical activities, as well as language or communication issues, mental health disorders, and even academic underperformance (Madigan et al., 2022).

Moreover, the ST increased by half (52%) during the pandemic compared to previous levels. Amidst the easing lockdown restrictions, the average screen time continues to linger at elevated levels, a grim reminder of the lingering impact of the pandemic. However, studies reveal that we have not yet returned to the pre-pandemic levels regarding screen time consumption. In the third quarter of 2021, global average screen time was still 1.0% higher than recorded in the same quarter of 2020 (Lua et al., 2023).

It is worth noting that even before the pandemic era, research already painted a worrying picture regarding adolescents' screen time, a significant number were already drowning themselves in screen hours beyond what the World Health Organization recommended, which stands at two hours per day (Cheung et al., 2022). For instance, an s study on a vast sample in China in 2017 unveiled that nearly 35% of adolescents did not conform to this two-hour limit. The revelation echoes loud and clear: well before COVID-19 knocked at our doors, many young souls were treading far beyond the healthy boundaries of screen indulgence. (Hedderson et al., 2023).

### **2.3.2 Global trends of screen time**

The survey study by Lua et al. (2023) has an extensive range that covers 31 works from over 20 countries and presents a coherent increase in screen time among teenagers during the pandemic compared to before the pandemic across all documented countries , lot of research work in various

countries records a drastic jump in screen time coinciding with the outbreak of COVID-19's first wave in 2020, further underscoring this global trend.

Consequences of excessive screen time, have been caused because the pandemic environment introduces limitations in physical socialization and open-air activities. Adolescents might be led into using screens even more. It is essential to study the adverse effects of increased screen time in the future and later devise strategies that will promote healthy screen habits for a post-pandemic world (Stiglic & Viner, 2019).

#### **2.4. Potential Consequences of Excessive Screen Time**

Although the specific mechanisms and lasting impacts of screen time have not been definitively established yet (a question for research), there have been different adverse effects that have been identified through studies: possible consequences of excessive screen time among adolescents can completely colour all spheres of a teenager's life, including: About physical health, obesity plus cardiovascular disease (CVD) and musculoskeletal problems are some conditions that high screen exposure might be linked (Priftis & Panagiotakos, 2023).

Depression and anxiety, among other mental issues, can quickly worsen from conflicts between parents and their children due to excessive viewing of screens, which in turn contributes more harm to one's health without their knowledge (Zhu et al., 2023).

Behavioural problems such as sleep disturbances and unhealthy eating patterns could easily result from conflicts between parents and their children if attention is not given to reducing screen time at home since it has already been highlighted as an issue affecting quality relationship building (Priftis & Panagiotakos, 2023).

Saunders & Vallance,(2017) founded that quality of life declines sharply when satisfaction levels decrease significantly in different aspects after a negative impact on overall well-being, physical and mental, leading

to adverse outcomes such as decreased work or study performance capacity.

Addressing these dearth areas of knowledge is paramount if we develop evidence-based policies and interventions on healthy screen practices, which would later bolster adolescents' overall well-being, considering they live in a world where most of their activities are digitized. (Stiglic & Viner, 2019).

## 2.5. Categories of Screen Time

in Australian children Sanders et al, (2019) mentioned to classification of screen time to four types ;

**First: Educational and interactive screen time:** These categories have been shown to influence educational outcomes positively .

**Second: Passive screen time (TV):** Obesity levels are increased, poor dietary practices are associated with it as well as lower health-related quality of life due to the increased exposure to television viewing (Delgado-Floody et al., 2020).

**Third: Interactive screen time (video games):** Aggression is noted among some players, which could be due to actions taken in virtual worlds that they later implement in real-life situations, thus fueling aggression further (Panjeti-Madan & Ranganathan, 2023).

**Fourth: th Social media screen time :** During the period of COVID-19, more use of social media was linked to worse mental health outcomes, particularly affecting girls and individuals already having some mental health condition (Marciano et al., 2022).

An alternative viewpoint from Sweetser et al., (2012) offered two wider categorizations: Active screen time, cognitive or physical involvement with screens, like gaming or learning activities. Passive screen time, passive intake of information through screens, for instance watching TV or videos.

Different screen time categories are helpful to differentiate their impacts, which can be very different. While high ST in general, mainly passive watching, may harm one's health, other categories, such as educational or interactive ST, might help viewers positively. More research is still needed on gender-specific effects and intricate dynamics among ST, sleep quality, and content effects towards different dimensions of wellness (Kaye et al., 2020; Marciano et al., 2022).

Using a computer, tablet, phone, or television for educational or activity-related purposes defines non-recreational screen time (Murray, 2018).

Hwang, (2020) reported that the non-recreational screen time promotes knowledge, creativity, curiosity, mobility, and fitness. Screen time during school and homework gives children advantages in several areas, such as mathematics problem-solving, essay writing, scientific inquiry, artistic expression, and cultural understanding.

Simoes et al., (2022) asserted that adolescent with technological resources for educational purposes demonstrate superior academic performance and higher levels of engagement in their learning.

Arundell et al., (2022) reported that have demonstrated that technology can enhance students' comprehension of abstract concepts, improving their ability to retain and apply acquired knowledge. Additionally, it provides them access to an extensive array of tools and resources that would otherwise be unavailable.

These encompass internet databases, instructional applications, and virtual reality. This facilitates the expansion of their understanding in many fields while also fostering the cultivation of analytical reasoning and the ability to solve complex problems (Dauw, 2016).

## **2.6. Significance and Implications of the Study**

Adolescence is a crucial period of development characterised by notable alterations in physical, psychological, and social aspects. Although teenagers are commonly considered to be in good health, this period of growth is also linked to the appearance of risk factors that might have lasting effects on their overall well-being (Meade & Dowswell, 2016)

Technology becomes an integral part of the lives of young people, with screen time involving the use of devices such as smartphones plus computers and televisions. Though technology undoubtedly has numerous benefits for learning, communication, and entertainment, there are emerging concerns about its possible effects on adolescent wellness, notably quality of life (QOL) (Muppalla et al., 2023).

An investigation into the association between screen time and quality of life would be necessary in adolescents for many reasons, the first being that it addresses significant public health issues (Dong et al., 2020).

Adolescents' exposure to screen time is progressively increasing, eliciting worries regarding adverse effects on their health and quality of life which seeks to fill the void in this critical domain by delving into this significant public health concern to investigate any plausible linkages between time spent on screens and the standard of living (Saunders & Vallance, 2017).

Screen time is connected with different health effects in teenagers, including physical and mental health and academic performance. While specific connections between screen time and quality of life span different areas of well-being, this is still an emerging field that does not replace the data identified by previous studies. This research paper aims to provide these relationships without contributing new information and only replacing valuable insights identified before (Smith et al., 2020; Madhav et al., 2017; Nagata et al., 2023).

To develop interventions that promote healthy technology use and thus enhance adolescents' quality of life, we need a clear picture of the interplay between screen time dynamics and quality of life components. This information will be highly beneficial for parents, educators, healthcare providers, and policymakers in designing interventions that would help adolescents take responsibility for their use of technology in a manner that fosters positive impacts on their quality of life (Dong et al., 2020; Zhu et al., 2023).

Further investigations should seek to understand how different types and contexts of screen time are related to specific components or indicators of adolescent well-being using available measures identified from this review (e.g., psychological health) since those might be informative on what drives each part of well-being among adolescents (Madigan et al., 2022).

The research on QOL and screen time will contribute to widening the existing knowledge scope and uncovers the loopholes in the unexplored sectors of current studies. A focus on the relationship between screen time and quality of life would pinpoint areas demanding more research efforts, this approach ensures that future undertakings delve into understanding the complex interplays and likely moderators influencing the effects of screen time on adolescent health (Nedjar-Guerre et al., 2023; Tundia & Thakrar, 2023).

## **2.7. Effect of Screen Time on Health**

An individual's quality of life is not just about the physical aspect but also the mental, emotional and social well-being, key indicators of adolescent health. The disease-centric paradigm falls short in dealing with systemic health issues; however, quality of life is influenced by individual, societal and ecological elements all at once (Dong et al., 2020).

### **2.7.1. Effect of screen time on physical health**

Research has been conducted on the effect of screen usage on the health of several demographic groups, such as children, adolescents, and university attendees. Excessive screen time has been linked to detrimental impacts on melancholy, anxiety, (BMI), sleep quality, physical inactivity, and eating habits, according to research (Kamaleddine et al., 2022).

According to Saunders and Vallance, (2017) sedentary behaviour originally denoted a lack of physical exercise, including low-intensity and infrequent physical activity. screen time is often the major contributor to overall sedentary time among children and youth.

Screen-based sedentary activity, or low-energy activities like watching TV and using computers, is becoming a more significant public health problem for adults and much more so for children (Braig et al., 2018).

The more children deviates from their siblings regarding screen time, the worse their HRQOL; conversely, the higher the average amount of time spent on screens by all family members, the worse the child's behavior. Research on screen time and suggestions should consider family contextual elements (Tooth et al., 2021).

Some evidence from systemic reviews reveals associations between screen time and cardiovascular disease, diabetes, and metabolic syndrome in adults (LeBlanc et al., 2017). For children, a large amount of evidence suggests a relationship between screen time and risk of obesity (Coombs & Stamatkis, 2015; Pappas, 2020; Saunders & Vallance, 2017).

More television time during childhood has predicted future consequences such as obesity in adulthood as well (Lua & Chia, 2023).

Increased screen time was strongly related to increased BMI, but only for those in the higher range. High schoolers with higher BMIs showed more increases with screen time, while those in the lower range did



not show significant increases. The researchers suggest that interventions to reduce screen time for overweight and obese individuals may help reduce obesity in adolescents' decline (Mitchell et al., 2013).

Stamatakis et al., (2015) included over 4000 adolescents ages 4 to 15 in England to analyze sedentary behavior such as television viewing and obesity. Participants answered questions about the average duration in minutes they spent watching TV, DVDs, or videos and time they spent doing other non-TV viewing activities like doing homework, playing a video game, or drawing. Younger children answered the questionnaire with parental guidance. Their findings reveal both time watching TV and sitting in a day are positively related to obesity.

Dry eye syndrome is common health problem among university students. The time university students spend working with video display terminals increases in the synchronous hybrid learning environment, as does the prevalence of dry eye complaints. It should not be overlooked that dry eye might have a negative impact on academic performance and their overall quality of life (Abdulmannan et al., 2022).

#### **2.7.1.1. Sleep disturbances related screen time**

Sleep is a convoluted biological and behavioural phenomenon with implications that run deep into physical wellness, mental well-being, cognitive development, and learning capacities for children and adolescents (Saunders & Vallance, 2017). The US National Sleep Foundation recommends that teenagers aged 14–17 years should target between 8–10 hours of sleep each night, while young adults in the 18–25 age bracket are better off with an average of 7–9 hours; indeed, this level of sleep is deemed necessary for health and developmental needs (Maurya et al., 2022).

The relationship between screen time and sleep disorders has been a topic of extensive research by scholars. Excessive screen time, which is

predominantly common among children and adolescents, disrupts normal sleep cycles, including the quality and quantity of sleep, leading to a myriad of behavioral and physiological complications. Consider this example: a study revealed a straightforward correlation where higher usage of screens among youth led to more instances of sleep interruption; these disturbances have been identified as contributing factors to increased levels of mental health issues for individuals (Parent et al., 2016).

A study of the effects of internet and social media use on sleep among 500 Baghdad secondary school students found that most of the students were around 16 years old, The time span given seems very long. 201-300 hours per month is almost 7-10 hours per day, which is a large part of the day. Excessive screen time has been linked to symptoms such as morning fatigue, nightmares, and difficulty sleeping. The results suggest that the impact of digital technology on adolescent sleep quality needs to be addressed (Al-Shatari, 2023).

Wong et al., (2021) reported that increased screen exposure, decreased rest hours, and lack of physical engagement were contributory factors to a reduced quality of health-related life. On the other hand, De-Sá et al., (2023) drew attention to the adverse impact of smartphones on adolescent sleep quality, they established a connection between use of smartphones at night resulting in insufficient sleep and mental health problems among adolescents. Both researches underline the significance of overseeing screen time along with fostering healthy sleep practices; this is pivotal for young individuals' overall well-being.

Parent et al., (2016) conducted a study that revealed a relationship between screen time and disruptions in sleep patterns: children who spend more time on screens tend to experience poor-quality sleep which consequently leads to negative behaviors being exhibited by the child during wakefulness hours.

An association between the number of hours adolescents and youths spend using their smartphones and insomnia symptoms, this emphasizes the importance of controlling screen time, particularly during the evening hours, which is vital in enhancing the quality of sleep and thus promoting overall health among young individuals (Maurya et al., 2022).

Excessive screen light can reduce the production of melatonin levels affecting sleep, whereas deficiency of other neurotransmitters, such as dopamine, acetylcholine, gamma-aminobutyric acid (GABA), and 5-hydroxytryptamine (5-HT), was also observed in children who had internet addiction in urban left-behind children, which also causes physical and psychological symptoms (Sarfraz et al., 2023).

Nearly 20% of the monthly time students spend browsing the web. A connection has been identified between high usage of social media and reduced sleep among high school children; the deprivation of sleep results in increased drowsiness throughout the day, unexplained morning fatigue, and even nightmares, all contributing factors that stem from this issue are alarming (Al Shatari., 2023).

## **2.7.2. Mental Health Impact**

### **2.7.2.1. Association with Anxiety and Depression**

Mental health issues are typically paramount during one's adolescence which is also considered a critical period. Globally, 14% of young individuals between the ages of 10 and 19 undergo such challenges. The common problems include depression, anxiety, and behavioral disorders with suicide rated as the fourth major killer among those aged 15-19. Today's teenagers are called digital natives for a reason: they are deeply connected to electronic media which is largely delivered through screen-based devices like smartphones that have become a part of their daily routine (Santos et al., 2023).

Mental health is the emotional, psychological, and social functioning that allows people to deal with adversities, make decisions, and interact in their environment ,many factors contribute to mental health including internal or innate factors such as brain chemistry and genetics, and external factors such as life experiences, trauma, social relationships, and community interactions. Mental health is important at every age and is closely associated with physical health as well. Both physical and mental health influence each other and are critical components to overall well-being (CDC, 2021).

The prevalence of mental health crises is steadily increasing. Suicide, which ranks as the tenth leading cause of death in the United States, has risen by 35% between 1999 and 2018. Although mental health concerns are widespread and represent a significant issue across the country, the underlying causes remain largely unidentified. Given the rapid advancement of technology and the continued rise in mental health challenges, excessive screen time has been identified as a potential contributing factor (Hedegaard et al., 2020).

Mental health is important at every age and is closely associated with physical health as well. Both physical and mental health influence each other and are critical components to overall well-being .Unfortunately, though, many people struggle with mental health. In 2021, the CDC released statistics stating that about 20% of adults will suffer from mental illness each year. Additionally, 20% of children, have or have had an experience with mental illness (CDC, 2021).

As little as 2 hours of screen time per day can lead to depressive or anxious symptoms in adolescence, with teenagers having the highest frequency of emotional problems , For instance, passive social media use can lead to social isolation and upward social comparison, which can lower emotional well-being (Zink et al., 2019).

Despite evidence linking screen-based sedentary behaviours to poorer health outcomes in children and youth under 18, their prevalence is rising, nearly half exceeding the public health recommendation of 2 hours or less per day (Saunders et al., 2017).

Too much screen usage may cause psychological issues, low emotional stability, anxiety, and despair (Pandya & Lodha, 2021). Other research links screen usage to poorer mental health (Lee Smith, 2020; Neophytou et al., 2021) and depression (Madhav et al., 2017). Video games and watching movies may cause new-onset Obsessive-compulsive disorder in early teenagers (Nagata et al., 2023).

Teenagers spend more time online and connecting. Mobile device and social media use has reached record highs, raising fears that this continual connectedness is damaging teenagers' mental health (Odgers et al., 2020).

Children and teenagers who used screens more were less mentally healthy. High-screen users were likelier to have poor emotion control (not keeping cool, fighting too much, being difficult to get along with), unable to finish activities, reduced curiosity, and difficulties forming friends (Twenge & Campbell, 2018).

This unique risk factor threatens public health due to the increasing incidence of screen usage in children (Saunders & Vallance, 2017).

The study has focused on the Influence of social media on mental health, specifically regarding self-esteem, body image, and psychological well-being which emphasized the possible adverse impacts of social media on these elements. For example, the utilization of social media has been linked to issues of body image, social comparison, and its Influence on mental well-being (Barthorpe et al., 2020).

The comprehensive review yielded consistent findings, concluding that the type, usage, and content of screens had an impact on the

Association between mental health issues and screen time. The correlation between the decline in mental well-being among teenagers and their screen usage is mainly influenced by the specific goal of screen use rather than the amount of time spent on screens. Engaging in online learning or using screens for non-recreational purposes is not associated with mental health (Santos et al., 2023).

A study conducted in Canada to explore the relationship between adherence to the Canadian 24-hour Movement Guidelines (physical activity, sedentary time, and sleep) and flourishing. they found that meeting the sedentary time guideline was not linked to flourishing in both girls and boys. additionally, meeting more guidelines did not correlate with higher flourishing scores after adjusting for depressive symptoms and other factors (Patte et al., 2020).

Teenagers' use of social media platforms like Facebook, Instagram, and Twitter has been linked to poor mental health and well-being. Excessive social media use can lead to the fear of missing out and worsen internalizing symptoms like depression and anxiety. While technology may also be used by adolescents to cope with these symptoms, a stronger relationship was found between increased screen time and higher depression scores (Santos et al., 2023).

Screens are a critical issue in children's neurodevelopment. Screens put the children at high risk of developing Autism spectrum disorder (ASD). The children who are exposed to more screen time than other children showed symptoms of ASD-like difficulties in communication, delayed language skills, delayed cognitive and learning abilities, and inappropriate emotional reactions. Additionally, the exposure of children to screens at an early time in their life makes them at high risk of developing ASD than other children who are exposed later. This is

because the first year of life is critical in children's development, and they should be away from exposure to any screen (Sarfraz et al., 2023).

A study on the relationship between screen behavior and depression, while taking into account sleep and exercise, discovered that the increased use of newer forms of screen activities (e.g., social media and online games) was associated with a greater likelihood of depression, particularly among junior high school girls who have higher prevalence rates. Paradoxically, however, it was found that watching more TV was actually related to lower depression levels (Kidokoro et al., 2022).

The researchers wanted to know how mental health problems like sadness, anxiety, and self-injury relate to how active or inactive people are. More depressed symptoms were observed in the group of males who engaged in minimal physical activity and had high levels of sedentary behavior, whereas greater levels of anxiety were observed in the same group of girls. Those who engaged in less physical exercise and more sedentary behavior exhibited a higher risk of self-injury (Liu et al., 2019).

A study was conducted to adolescents between the ages of thirteen and fifteen. The aim of study was to investigate how the use of social media is related to self-harming, depression and an individual's sense of value. In their findings, they discovered that more time spent on social media resulted in a greater chance of self harm as well as lower self esteem and depression especially for females. The research pointed out considerable connections during the week days when using social media that resulted into negative mental health outcomes (Barthorpe et al., 2020).

The teenagers were more likely to self-harm or show signs of depression if they spent more than three hours a day on social media. On the other hand, boys did not show this correlation. Surprisingly, there was no significant association between mental health issues and participating in activities like gaming and viewing TV/videos. Consequently, the study

highlights the fact that screen usage has different impacts on the mental health of men and women (McAllister et al., 2021).

Kjellenberg et al., (2022) performed a research to analyze the interconnection between physical activity, involvement in sports, time spent on screens, and the psychological condition. They discovered that girls who stated they spend five hours or more watching screens showed significantly higher levels of anxiety in comparison with those spending less time viewing screens. This relationship still held after adjustment for moderate and vigorous physical activities suggesting that there is a strong connection between screen time and anxiety among adolescent girls.

#### **2.7.2.2. Effect of screen time on self-esteem**

An individual's sense of self-worth, or the evaluative emotional component of their self-concept, plays a vital role in their social and existential functioning, including their ability to fit in with their peers and find purpose in their lives (Heatherton & Wyland, 2003).

The Influence of social networking sites (SNSs) like Facebook on social environment has been substantial and far-reaching. The detrimental effects of frequent Facebook usage on one's well-being are caused mainly by participating in upward social comparisons on the network (Vogel et al., 2014).

Technologically facilitated communication, such as social media, might hinder interpersonal emotions and response attitudes, causing individuals to adopt an impartial approach toward others. This can affect the quality of interpersonal interactions (Turp, 2020).

The correlation between social media usage and interpersonal interactions is contingent upon individual susceptibilities and patterns of use. Although the Impact of social media on interpersonal interactions is generally insignificant for most users, a tiny fraction may encounter favourable or unfavourable consequences (Cingel et al., 2022).



### **2.7.2.3. Body Image Concerns and Social Comparison:**

The media, specifically platforms such as Instagram, can exacerbate body image issues and diminish self-esteem, discovered a negative correlation between the sense of impermanence in Instagram stories, social comparison, and body image worries. Furthermore, those who engage in social comparison are more likely to have lower self-esteem and more significant body image concerns (Kim et al., 2023).

Screen time has reached all-time highs in today's technologically advanced culture. The research is based on data collected from the Adolescent Brain Cognitive Development Study (ABCD Study), which includes 11,875 individuals nationwide. The results show that spending more time in front of screens is somewhat associated with worse mental health, more behavioural issues, worse academic achievement, and disturbed sleep patterns. However, it appears that interactions with one's peers improve (Paulich et al., 2021).

### **2.7.2.4. Social Isolation and Screen time:**

According to the results, adolescent who watch more violent media spend less time hanging out with their peers. Exposure to violent media decreases social interaction, which supports additional media consumption, and so on. The direction of effects is unknown, but a cyclical process likely explains this link. Restricting children's exposure to violent media can help them develop socially and psychologically. Strategies for balanced media intake and healthy peer interactions can be informed by understanding these processes (Bickham & Rich, 2006).

Adolescence and early adulthood are pivotal stages in the process of human development, throughout physical, psychological, social, and sexual growth, adolescents and young adults gradually assume greater responsibility and autonomy. Moreover, individuals develop fresh

viewpoints and convictions concerning their well-being and possible risks (Agarwal et al., 2020).

Recently, the concept of screen time has become more intricate due to the proliferation of electronic devices globally. The progress of technology has resulted in a rise in the use of screen-based technology among young individuals, which has coincided with a decline in their interaction with nature. This has affected their mental health and overall state of well-being (Muppalla et al., 2023).

Understanding the actions people take on their digital devices holds immense importance. As an illustration, research indicates that specific forms of screen time can negatively impact mental health (Boers et al., 2018). another study draws a notable relationship between video gaming and feelings of sadness and anxiety, which identified strong links between depressive symptoms and both video gaming and computer usage, while such associations were not found with TV viewing (Maras et al., 2015).

Adolescent were found to have reduced emotional understanding when engaged in gaming, this effect did not hold for girls. It implies that the influences of different screen-based activities on emotional development for children may be contingent based on sex (Skalická et al., 2019).

Although screens provide pleasure and educational benefits, excessive usage may impede a child's emotional development. Screens substitute for real-life encounters, which limits the opportunity to develop social skills and understand emotional cues. These factors can lead to difficulties in emotional regulation, increased aggressiveness, and diminished self-worth due to comparing oneself to others on social networking sites (Muppalla et al., 2023).

The pandemic has highlighted the research gap in understanding the impact of screen time and physical activity on children's well-being. Early

restrictions led to decreased physical activity and increased ST, highlighting the need for longitudinal studies to explore these changes over time, considering changes in public health measures and Switzerland's post-pandemic recovery (Haile et al., 2023).

## **2.8. Effect of Screen Time on Academic Performance**

A child's optimum growth depends on the quality of their early learning experiences. Many are worried about the Impact of children's increased ST on their academic performance (Buie et al., 2023; Nghi., 2023).

The results indicate that a higher amount of time spent using screens is linked to lower levels of academic success, namely in reading, writing, grammar, and punctuation. Nevertheless, the Impact of screen usage on numeracy and spelling was insignificant. These findings emphasize the significance of monitoring and regulating the amount of time youngsters spend using screens to promote their academic progress (Nghi et al., 2023).

The viewing television for at least one hour per day hurts academic achievement. However, utilizing computers and other screens for less than one hour or abstaining from their use entirely daily is associated with superior academic results (Urvashi et al., 2023).

While spending too much time in front of screens harms one's health, it is also true that, when used properly, technology like smartphones may improve your grades. The key to finding the appropriate balance between these is moderation and meaningful use (Lin et al., 2021).

While it is true that some screen time can have positive effects, children and adolescents whose screen time is excessive, especially for TV and video games, do worse in school It demonstrates the importance of engaging in screen time and other activities to help students succeed (Mireia et al., 2019; Erin et al., 2017).

Excessive screen time was found to negatively impact attention, language, memory, and motor skills development, suggesting a negative impact on cognitive development. Prolonged screen time is associated with adverse social and emotional development outcomes, such as increased social and emotional problems risk, positive impacts of screen time in educational contexts. However, the majority emphasized the need for limited and monitored screen exposure. Parents and caregivers should implement strategies to minimize excessive screen time and promote a healthy balance between technology use and other activities (Goswami et al., 2023).

### **2.9. Parental and Environmental Effect**

The management of screen time, parents have a significant role in this matter and it is largely dependent on their abilities to be watchful and discerning, set limits and utilize behavioural controls. Although some parents view screen time as a reward, they are also of the opinion that digital technology could have negative implications on their child's behavior, interpersonal skills, sleep patterns and physical activities. Parents, schools, and communities should all promote healthy habits related to screen time, sleep, and physical activity to improve children's and adolescents' well-being (Muppalla et al., 2023).

Parents play a crucial role in regulating screen time by raising awareness, setting limits, and implementing behavioural regulations. They may use ST as an incentive but fear it could negatively impact their child's behaviour, social skills, sleep patterns, and physical activity. Screen time and device limitations in bedrooms are effective measures. Furthermore, it is believed that the spread of digital media (DM) has a socioeconomic impact in addition to health concerns, a current survey demonstrated that more than 80% of parents think ST significantly improves their children's creativity and imagination. However, a different survey found that 90% of

the homes that participated in the study followed ST codes (Priftis & Panagiotakos, 2023).

A direct correlation exists between the average screen time of all children in a household and adolescents negative behaviour. Additionally, the more significant the difference in screen time between a child and their siblings, the lower the child's HRQOL. Screen time studies and recommendations should consider the contextual elements related to the family (Tooth et al., 2021).

Screen time must not replace other activities, such as outdoor physical activities, sleep, family and peer interaction, studies, and skill development, necessary for children's and adolescents' overall health and development. Families should ensure a warm, nurturing, supportive, fun-filled, and secure environment at home and monitor their children's screen use to ensure that the content being watched is educational, age-appropriate, and non-violent. Families, schools, and paediatricians should be educated regarding the importance of recording screen exposure and digital wellness as a part of routine child health assessment, detect any signs of cyberbullying or media addiction, and tackle it timely with expert consultation if needed (Guerrerort al., 2019).

Within the home environment, parents play a pivotal role in pre-school children's screen time sedentary behavior. There are a positive association between parents' TV watching and children's screen time .Parents' sociodemographic and behavioral characteristics, such as education level and role modeling for sedentary behavior, are associated with children's screen time (Bassul et al., 2021).

### **2.10. The Concept of Quality of Life and its Components**

Quality of life has(QOL) been defined in many ways, but a consensus definition does not exist. QOL has been conceptualized as

normal functioning, social usefulness, and general well-being (Buctot et al., 2020).

The World Health Organization (WHO) defines quality of life (QoL) criteria as an individual's perception of their place in life in the context of the culture and value system in which they live and their goals, expectations, standards, and concerns (WHO, 1995).

Quality of life (QOL) in healthcare is a complex issue that requires universally accepted definitions and measurement methods. The WHO defines QOL as an individual's subjective perception of their life within their cultural context, considering personal goals, expectations, and concerns. Health-related quality of life (HRQOL) refines this concept by focusing on the impact of health on overall well-being, including physical health, limitations, daily activities, and individual values (Haraldstad et al., 2019).

The term quality of life (QoL) is broader in concept and more challenging to measure than HRQoL because QoL concerns all areas of human functions (Ravens-Sieberer et al., 2006).

which also deals with an individual's expression and awareness of wellness and feeling of value (Buctot et al., 2020).

Despite the ongoing debate surrounding the definition of quality of life (QOL), understanding it remains paramount in healthcare. QOL research serves as a crucial endpoint, providing valuable insights into the impact of illnesses and treatments across diverse populations. However, current evaluations reveal significant methodological and conceptual shortcomings in many QOL studies. This necessitates advancements in the field, with researchers prioritizing transparent methodologies and well-defined concepts when designing their studies (Haraldstad et al., 2019).

quality of life is generally considered a personal assessment of an individual's life. This evaluation is subjective and can vary from person to

person. Various studies and researchers have explored this concept, including Albaugh & Hacker, 2008; Camfield & Skevington, 2008; Ferrans & Larson, 2005; Ferrans (1996) stated that quality of life depends on the individual's unique experience. The WHO, (1995) defined quality of life as “an individual’s perception of their role in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards, and concerns.

Ferrans et al., (2005) asserted that they created the concept of HRQOL to specifically target the aspects of health, sickness, and treatment that impact overall QOL.

Lifestyle medicine emphasizes enhancing HRQoL as a primary objective, positing that reducing symptomatic burden translates to a broader improvement in overall QoL. This approach prioritizes interventions that directly address how health conditions impact an individual's ability to function and experience well-being in daily life (Daundasekara et al., 2020).

Nevertheless, there has been insufficient investigation into the quality of life throughout childhood, particularly regarding health. The majority of previous studies have focused on children and adolescents who have chronic illnesses (Wu et al., 2023).

Understanding the effects of sickness and treatment and making medical decisions requires knowledge about QOL. This knowledge is crucial for individuals of all ages and cultural backgrounds. Quality of life (QOL) is a crucial outcome measure in medical and health research. QOL research encompasses a wide range of target populations and research methodologies (Haraldstad et al., 2019).

### **2.10.1. Domains of Quality of Life**

#### **Physical Well-being Domain**

Physical well-being is the first domain of adolescent health-related QOL. It is an important parameter for health as well as for quality of life, encompassing the ability to perform activities without physical limitations or pain. Health, as defined by the WHO, is not just the absence of disease but a state of complete physical, mental, and social well-being. This definition of health emphasizes quality of life in healthcare practice and research (Capiro et al., 2014).

#### **Emotional Well-being Domain**

Includes a positive balance of pleasant to unpleasant affect and a cognitive appraisal of satisfaction with life in general Promoting emotional well-being (EWB) and mental health is crucial for all age groups to ensure healthy lives and overall well-being. EWB is closely linked to mental health and has physiological correlates with physical health. It is a shared responsibility across different arenas and groups, including schools, children, adolescents, and women, the importance of positive affect and emotions in maintaining both mental and physical well-being (Langeland, 2022).

#### **Self-esteem Domain**

Self-esteem is a core internal disposition that serves as the basis for an individual's character and psychological health. Additionally, it plays a vital function in supporting adaptation processes throughout an individual's lifespan. In this context, the process of concept analysis allows for the evaluation of a phenomenon and helps the understanding of its application and development from a single disciplinary perspective (Doré, 2017).



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### **Family Domain**

The family is an important contributor to the cultural conditions that support health. The roles that parents, particularly mothers and fathers, play in shaping the health behaviors and quality of life of adolescents are crucial and multidimensional. Mothers, often acting as primary caregivers, hold significant influence over their children's health behaviors and overall well-being, emphasizing the importance of their involvement in promoting healthy lifestyles. The interactions between mothers and fathers within the family dynamic also play a substantial role in shaping adolescent health behaviors and quality of life, emphasizing the need for both parents to be actively engaged in health promotion efforts within the family unit (Ho et al., 2022).

Moreover, the adolescents living with both of their biological parents exhibit better health outcomes compared to those in other family structures, aligning with previous research highlighting the positive impact of intact family units on adolescent physical health and well-being. This underscores the importance of family structure in influencing adolescent health and well-being, emphasizing the need for further research to explore the specific mechanisms through which family dynamics impact adolescent health outcomes (Langton & Berger, 2011).

### **Freind Domain**

Friendships play a vital role in shaping the mental health and well-being of adolescents, influencing various aspects of their lives. The interventions targeting mental health outcomes among adolescents often involve friends or social groups to enhance their effectiveness (Manchanda et al., 2023).

Additionally, secure peer relationships characterized by trust and positive communication have the potential to boost self-esteem and contribute positively to overall well-being in adolescents. The quality of

social relationships, especially friendships, is essential in shaping individuals' sense of worthiness and subjective well-being, underlining the importance of focusing on these relationships in mental health interventions for adolescents (Alsarrani et al., 2022).

### **Schoole Domain**

Screen time has been a topic of interest in relation to adolescent well-being and academic performance, with various studies shedding light on the matter. The majority of research findings indicate that the impact of screen time on adolescents falls within the small to medium effect size range, suggesting a noticeable but not overwhelmingly significant influence (Santos et al., 2023).

Concerns have been raised regarding the negative relationship between screen time and academic performance, as excessive recreational screen use may divert time away from studying and schoolwork, potentially impacting educational outcomes negatively. Interestingly, while academic screen time was not included in the data collection for the ABCD Study, there is a possibility that academic screen time could actually have a positive association with academic performance, suggesting a nuanced relationship between screen time and educational outcomes that warrants further investigation (Paulich et al., 2021).

### **2.10.2. Measurement of Health-Related Quality of Life in Adolescents**

The lack of attention in the literature to focus on the specific problems of measuring HRQoL in teenagers has not been well studied. It appears that the unique complexity of this age group is not adequately addressed by previous studies which combine teenagers quality of life ratings with children or adults (Frisén, 2007).

A gap in information was identified as having instigated recent research that delves into the adolescent quality of life through multidimensionality and intercorrelations of a number of HRQoL measures

(Heijdra et al., 2024). In an effort to improve validity and reliability assessments for teenagers, researchers have looked at psychometric aspects of self-report measures that evaluate HRQoL and subjective well-being (Maguire et al., 2023). Unravel the origins, knowledge obtainment and literacy tiers of health amongst adolescents including protective behaviours and self-appraisals. This would show how these factors interact with one another and how they affect health and, dare say it, quality of life (Riiser et al., 2020).

## **2.11. Intervention and Guidelines**

### **2.11.1. Existing Guidelines on Screen Time for Adolescents**

The American Academy of Pediatrics (AAP) has set forth specific guidelines aimed at regulating screen time among children and adolescents, reflecting growing concerns about the effect of digital media on the developing brain. For children aged 2 to 5 years, the AAP recommends limiting non-educational screen time to approximately 1 hour per weekday and 3 hours on weekend days. Importantly, for children younger than 2 years, the AAP discourages any exposure to screen media, except for video chatting (Strasburger et al., 2013).

Recommendations to limit screen-related behavior in young children are in place in many countries including Australia , Canada , the United States of America and New Zealand. The UK guidelines highlight that screen time should not interrupt positive activities for children such as socializing, exercise and sleep and that families should negotiate screen time limits with their children. The Irish National Guidelines follow the recent WHO recommendations for screen time behavior for children under 5 years; for example, 3–4-year-old children should not spend more than 1 hour on screen-related sedentary behavior (Bassul et al., 2021).

The World Health Organization (WHO) has also weighed in on the debate over screen time for children, offering recommendations that align

with the AAP's conservative stance but extend the age range of concern. The WHO advises no sedentary screen time for children under 2 years of age and recommends limiting such screen time to no more than 1 hour for children under age 5; less is considered better (Singh & Balhara, 2021).

Recommendation is part of a broader effort to ensure that screen time does not encroach upon valuable time that could be spent on physically active play or engaging in reading and storytelling with a caregiver. By setting these guidelines, the WHO aims to mitigate the potential adverse effects of excessive screen time on physical health, cognitive development, and well-being in the earliest years of life (Priftis & Panagiotakos, 2023).

According to the American Academy of Child and Adolescent Psychiatry (AACAP), parents should establish certain screen time guidelines to help reduce the negative impact screen exposure has on children. The AACAP sets guidelines on the amount and type of screen time for each age group, and they include: Children under the age of 18 months should not be exposed to any screen time. However, video chatting with family is accepted. Children between 18 and 24 months can have some screen time (less than 1 hr), but the program should be highly-educational. A caregiver should be watching them at all times. Children between the ages of 2-5 can have non-educational screen time for about 1 hour per day and 3 hours on weekend days. For children 6 years and older, the AACAP recommends limiting media time to 2 hrs and encouraging healthy habits. Children should not have any screen time during meals or when outdoors. Parents should use parental controls to choose what content their child is exposed to and to control how much screen time their child is exposed to daily. Parents should not use screens to calm down children. Children should not have any screen time for at least half an hour before bed (McGough, 2022).

**Table : 2.1. Screen time recommendation by age chart.**

<b>Screen Time Recommendations by Age Chart</b>		
<b>Age Group</b>	<b>Amount of Screen Time</b>	<b>Type of Screen Time</b>
Babies (0-18 Months)	No screen time	Only video chatting is allowed.
Toddlers (18-24 Months)	1 hour or less	Educational content only is recommended.
Children (2-5 Years)	1 hour or less per weekday and 3 hours per weekend day	Educational and interactive content is preferred, but non-educational content is allowed.
Children (6-15 Years)	Less than 2 hours	Recreational content is allowed but healthy habits should also be encouraged.
Source: American Academy of Child and Adolescent Psychiatry (AACAP)		

While the current guidelines provide criteria for the use of media and exposure to screen-based devices, it is necessary to set them against what are known to be the effects of screen time on young children, and the developmental trajectory of children. To that end, the literature from medical science, specifically evidence-based research from Neuroscience, Psychiatry, Psychology and Paediatrics, is investigated (AAP, 2016b; ACAP, 2020).

Recent studies, however, are beginning to challenge the traditional screen time limits set by organizations like the AAP and WHO. These studies suggest that the context of screen time and the content consumed significantly influence its impact on children and adolescents. Research is pointing to a more nuanced understanding of digital media's effects, indicating that not all screen time is detrimental and that certain types of engagement can actually support learning and development. This emerging perspective encourages a more flexible approach to screen time

recommendations, advocating for quality over quantity and the importance of parental involvement in media use (Bassul et al., 2021).

As the digital landscape continues to evolve, so too does the conversation around healthy screen time habits, signaling a shift towards guidelines that accommodate the complexities of growing up in a technology-saturated world (McGough, 2022).

According to the Centers for Disease Control and Prevention,(2023)\_children should spend less time on screens and more time participating in physical activities during their free time like walking a dog or playing basketball. They should get at least one hour of exercise every day. The CDC has set some guidelines for screen time.the CDC advises parents to not give any screen time to children under the 2 age .the CDC asks parents to remove TVs from a child's bedroom and limit screen time to 1-2 hours daily for children between the ages of 8 and 14 years.

While the current guidelines provide criteria for the use of media and exposure to screen-based devices, it is necessary to set them against what are known to be the effects of screen time on young children, and the developmental trajectory of children. To that end, the literature from medical science, specifically evidence-based research from Neuroscience, Psychiatry, Psychology and Paediatrics, is investigated (AAP, 2016; ACAP, 2020).

## **2.11.2. Effectiveness of Interventions to Reduce Screen Time**

### **2.11.2.1. Overview of Intervention Strategies**

A study conducted by Jones et al, (2021) highlights the effectiveness of behavioral interventions in reducing children's screen time. The study revealed that these interventions, particularly those using behavior change techniques like goal-setting, feedback, and planning, lead to small but significant reductions in screen time. This finding is supported

by the Community Preventive Services Task Force, which recommends behavioral interventions to reduce sedentary screen time, particularly for children under 13, noting their impact on both screen time reduction and increased physical activity (Buchanan et al., 2016).

#### **2.11.2.2. Parental Involvement and Education**

Research indicates that parental involvement is a crucial factor in reducing screen time. Parents who set limits and model appropriate screen behavior significantly influence their children's screen usage (Hale & Guan, 2015). The "Stop and Play" intervention (Raj et al., 2023) demonstrated that increasing parental knowledge about screen time impacts led to reduced screen time among preschoolers, especially in low socioeconomic families.

Parental practices around children's screen time significantly influence the amount of time children spend watching TV or using electronic devices. The setting rules on screen time, monitoring and limiting usage, and avoiding screen time during mealtimes are associated with decreased screen time behavior in children. Both mothers and fathers play a role in shaping children's media habits, with consistent practices during weekdays and weekends impacting children's screen time (Bassul et al., 2021).

Outdoor time was associated with better mental health, and positive correlations were observed at all levels of outdoor time (compared to no outdoor time, decreasing the likelihood of higher levels of behavioural difficulties by between 3 and 4 percentage points and of lower prosocial scores by between 6 and 8 percentage points; all  $p$ 's < 0.001) (Huanhuan, et al., 2023).

The highlights the impact of parents' behaviors and home environment on children's TV screen time. It suggests that guidelines should offer more than just time limits, providing tools for setting rules and

promoting non-screen activities. The presence of TVs during meals and allowing eating while watching TV were linked to increased screen time. Interventions to reduce these habits and promote interactive family activities are recommended (Bassul et al., 2021).

### **2.11.2.3. School-Based Interventions**

School-based programs also play an effective role in reducing screen time. Studies, such as the one conducted by Vieira et al. (2018), found that interventions involving health education, physical activity, and parental engagement successfully reduced screen time among adolescents. Schools, through structured programs and collaboration with families, can serve as powerful platforms for implementing screen time reduction strategies.

### **2.11.3. Recommendations for Healthy Screen Time Habits**

Future research should focus on establishing baseline HRQoL data for children and adolescents, using objective measures like wearable devices to measure screen time, sleep duration, and physical activity. This will help inform interventions to improve children and adolescents' well-being, as the study's limitations include cross-sectional design, potential bias, and self-reported habits. Future research should also use more robust methods to improve physical habits (McGough, 2022).

## **2.12. Previous Studies**

### **First study:**

This study by Lacy et al. (2012) examined the relationships between physical activity, screen time, and health-related quality of life (HRQoL) in a sample of Australian adolescents (grades 7–11, aged 11–18). Data from over 3,000 students across 12 schools revealed that engaging in higher-intensity physical activity during school breaks (recess, lunch, and after school) was associated with significantly improved HRQoL scores for both boys and girls. Conversely, a decrease in HRQoL was associated with



inactivity during these times. Furthermore, exceeding two hours of daily screen-based media (SBM) use was associated with a decline in HRQoL scores for both genders. Notably, adolescents with consistent physical activity and low SBM on school days had the highest HRQoL scores compared to their less active counterparts with high SBM. These findings suggest a critical link between physical activity behaviors, screen time, and HRQoL in this age group. The observed negative influence of low activity and high screen time on HRQoL mirrored the impact of chronic illnesses, highlighting the potential importance of promoting physical activity and reducing SBM for adolescent well-being.

**Second Study:**

The study by Dong et al., (2020) investigated the relationship between smoking, physical activity, screen time, and quality of life among Chinese adolescents. The research involved 12,900 11-18-year-olds from 13 Shandong administrative areas. Results showed that rural teenagers with high ST, low PA, smoking, older age, and poor socioeconomic position had worse QOL scores. High ST participants had higher scores. The study concluded that more physical activity may reduce ST symptoms and enhance QOL.

**Third Study:**

A study was conducted by Wong et al., (2021) titled "Impact of sleep duration, physical activity, and screen time on health-related quality of life in children and adolescents", aimed to establish a standard for HRQoL in children and adolescents aged 6–17 as well as investigate the effects of screen time, sleep duration, and physical activity. The study conducted a large-scale, population-based survey in Hong Kong, interviewing a sample of children and adolescents aged 6–17 to measure HRQoL using PedsQL and EQ-5D-Y-5L. The study included 7555 respondents with a mean age of 11.5 (SD 3.2), of which 55.1% were

female. The results showed that EQ VAS, Ped sQL physical summary, and psychosocial summary scores were positively associated with sleep duration and moderate/vigorous exercise but negatively correlated with screen usage. The study concluded that children and adolescents with more screen time, shorter sleep duration, and lower physical activity levels had lower HRQoL based on PedsQL and EQ-5D-Y-5L. The authors recommended that schools, communities, and families provide guidance on screen time allocation for children and teenagers.

#### **Fourth study:**

Motamed-Gorji et al., (2019) conducted a study that explores the correlation between screen time, physical activity and health related quality of life (HRQoL) in Iranian adolescent. HRQoL is a broad indicator of wellness, with physical activity (PA) and screen time (ST) considered determinants. The research intends to investigate how PA, ST as well as their joint influence HRQoL among an Iran nation representative sample of children and adolescents. Data was collected using a multi-stage cluster sampling technique, where 25,000 children between the ages of 6 and 18 were selected from 30 regions in Iran. The WHO-Global School-Based Student Health Survey questionnaire was used to gather sociodemographic information. PedsQL questionnaire was utilized to assess HRQoL while PA was measured through the PAQ-A questionnaire. ST habits were determined by the median TV viewing time and leisure computer usage; low ST was defined as less than two hours. A total of 23,043 students (average age 12.5) participated in the study out of the 25,000 pupils approached, resulting in a participation rate of 92.17%.

The study found a negative correlation between screen time duration and quality of life, while a positive correlation was found between health-related quality of life (HRQoL) and (PA). The "high PA-low ST" subgroup had a stronger link with total HRQoL, scoring 1.3 points higher

than the "low PA-low ST" subgroup. High levels of PA may help counteract the adverse effects of prolonged ST on HRQoL in Iranian children and adolescents.

**Fifth Study :**

The study explored the effect of parent–child relationship on Smartphone Use Disorder (SUD) and the mediating role of quality of life (QOL). In addition to explored the role of educational level from the developmental psychology perspective. the results indicate that: (1) parent–child relationship could negatively predict SUD among adolescents; (2) QOL played a partial mediator role in the relationship between parent–child relationship and SUD; (3) As educational level increased from elementary school to middle school to high school, the effect of parent–child relationship on QOL weakened. This study showed that adolescents with good parent–child relationship had a higher QOL thus exhibiting a lower extent of SUD. Moreover, the link between parent–child relationship and SUD weakened as the educational level increased (Gaoet et al., 2020).

**Sixth Study:**

The study was conducted by Haile et al., (2023) aimed to investigate the relationship between health-related quality of life and adherence to physical activity and screen time recommendations among schoolchildren during COVID-19. The study involved 1,769 children from primary and secondary schools in Zurich, Switzerland, who were surveyed five times between 2020 and 2022. The HRQOL was assessed using the KINDL questionnaire, while PA and ST adherence were determined according to WHO criteria. In 2020, compliance with physical activity guidelines dropped from 83% to 59% for primary school students and 77% to 52% for secondary school students. However, compliance with sedentary

time guidelines remained low, with only 74% of PS students and 29% of SS students meeting the guidelines.

The health-related quality of life (HRQOL) declined by three points between two years, but in March, children who met PA and ST guidelines saw a surge in HRQOL, up nearly ten points. This highlights the importance of physical activity and social distancing in enhancing health-related quality of life, even as behavior changes over time. Sticking to these measures during the pandemic can be beneficial.

### **Seventh Study:**

Mukhametzyanov's, (2021) in this study entitled "Screen Time and Health of Children and Adolescents," the significant impacts of increased use of technology on the health of young people especially during COVID-19 times is highlighted. This research examines the factors contributing to what it calls the 'child health collapse' due to digital technologies. Major changes that were noticed are mental health disorders, sleep disturbances, musculoskeletal problems, pain syndromes, metabolic dysregulation leading to obesity plus hypothyroidism along with behavioural abnormalities and socialization issues , as well as difficulties in child adaptation: read more about dysphagia.

### **Eighth study**

In their systematic literature review titled "The Influence of Smartphones on Adolescent Sleep" De-Sá et al. (2023) probed into the influence that smartphone usage has on the quality of sleep for adolescents, trying to draw relationships between the two. The presence of electronic devices, smartphones most especially, has woven itself into the fabric of youth's daily existence. The study uncovers an inverse relationship between electronic gadgets (smartphones included) and sleep; this shortage translates not only into a lack in quality but also quantity of sleep. There's a trinity among night smartphone usage, lack of sleep and mental issues at

play here; it seems using modern technologies during nighttime alters adolescents' behaviour patterns significantly enough to impact both quality and duration of sleep as well as overall wellness and productivity throughout subsequent days.

**Nineth Study:**

A study in China was carried out by Liu et al. (2019) involving 13,119 participants. The aim of the study was to understand the relationship between physical activity and sedentary behavior (screen time) on mental health issues among which includes depression, anxiety and self-injurious behavior. In the group of boys with low physical activity/high sedentary behavior, more depressive symptoms were shown; while for girls in the same group higher anxiety levels were shown. Self-injurious behavior was found to be worse among those with low physical activity/high sedentary behavior (Liu et al., 2019).

**Tenth Study:**

The study in Sweden with 1,139 teenagers to analyze the interconnection between physical activity, involvement in sports, time spent on screens, and the psychological condition. They discovered that girls who stated they spend five hours or more watching screens showed significantly higher levels of anxiety in comparison with those spending less time viewing screens. This relationship still held after adjustment for moderate and vigorous physical activities suggesting that there is a strong connection between screen time and anxiety among adolescent girls (Kjellenberg et al., 2022).

# **Chapter Three**

## **Methodology**

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## Methodology

### 3.1. Study Design

A descriptive correlational study was conducted to investigate the effect of screen time on the quality of life of adolescents in various secondary schools in Al-Najaf Al-Ashraf City. The study was carried out from December 24<sup>th</sup> / 2023 to June 25<sup>th</sup> / 2024.

### 3.2. Administrative Arrangements

Before gathering the study's data, the following official permissions were requested from the appropriate authorities: The first approval was obtained from the postgraduate program committee members from the Kerbala University\ College of Nursing who are required to carry out the study.

A legal document requesting permission from the University of Kerbala \ College of Nursing to gather samples, addressed to Al-Najaf Al-Ashraf Province's Directorate General of Education (Appendix A-I).

An official document from the Al-Najaf Al-Ashraf Province's Directorate General of Education was sent to principals of secondary schools in the city centre (see Appendix A-II).

After reviewing study tools, the scale on quality of life, and the screen time questionnaire, the ethical committee of the College of Nursing was established as the second step in approving the research project's subject and design (see Appendix B).

### 3.3. Ethical Considerations

Ensuring ethical standards in research is essential. The Ethics Committee at the College of Nursing thoroughly examined the study and confirmed its harmlessness to participants, detailed information about the ethical considerations in Appendix B.

Before data collection from participants, a comprehensive overview of the study's goals and practical foundation was provided to ensure participant understanding.

The study has transparently outlined its primary goals, anticipated results, participant selection, and research design. A commitment has been made to maintain the confidentiality of information obtained from participants for the study's scientific objectives.

Participants can withdraw if they feel uncomfortable with specific questionnaire terms, underscoring the commitment to respect and participant autonomy.

The study adheres to informed consent practices, providing participants with information about the study's purpose, potential risks, and benefits and the right to withdraw or refuse to participate. The study prioritizes ethical practices, utilizing collected data solely for research purposes and emphasizing its role as a valuable tool for academic inquiry

### **3.4. The Sample of the Study**

A non-probability convenience sample of 387 students out of 25000 students selected statistical services was estimated to be needed for the study, and a total of students were chosen to obtain the data. Other than this total number, 33 questionnaires were neglected for not completing all the questionnaire information by the participants. The sample size of the study was 182 females and 205 males.

To sample selection, one must know the total number of the study population. The researcher went to the Najaf Education Directorate and obtained the number of secondary schools in the centre of the city of Najaf and the number of students in them, as the number of students in the secondary schools was 25,000 students.



The sample size was determined using the formula for estimating a proportion for a finite population, where  $N$  is the total population available and  $p$  is the proportion observed

$$n = N \left( z_1 - \frac{\alpha}{2} \right)^2 \cdot pq / (N - 1) d^2 + \left( z_1 - \frac{\alpha}{2} \right)^2 \cdot pq$$

Formula 1. Sample size calculation formula

### 3.5. Setting of the Study

The study was conducted in secondary schools in the centre of Al-Najaf Al-Ashraf City Province. Through a multistage sampling, first, a list of secondary schools was prepared with the help of the Al-Najaf Directorate of Education. From this list, 10 schools were randomly selected and quotas were determined based on the total sample size and number of students in each school.

**Table 3.1. School of the Study**

School Name	Number of sample
1. Al-Mutamayzat Secondary School for Girls	30
2. Nazik Al-Malaika Secondary School for Girls	30
3. Al-Amirat Secondary School for Girls	41
4. Minhaj Al-Nabwa Secondary School for Girls	36
5. Maysloun Secondary School for Girls	30
6. Iraq Model Secondary School for Boys	40
7. Basmala Secondary School for Boys	41
8. Sabt Al-Rasul Secondary School for Boys	40
9. Al-Omara' Secondary School for Boys	43
10. Ramadan Secondary School for Boys	41
11. Total	387

### **3.6. Study Instrument**

#### **3.6.1. Questionnaire of the Study**

A special questionnaire was prepared after a comprehensive review of related literature in the field of interest phenomena to achieve the project research objective. The questionnaire was divided into three parts:

##### **Part 1: Demographic Characteristics**

The first part included questions on the students' demographic characteristics, including age, sex, class, father's and mother's education level and occupation status, and family income.

##### **Part 2: The Questionnaire for Screen Time of Adolescents (QueST) (Brazil, 2019).**

The second part was the questionnaire for screen time in adolescents (QueST). The QueST was developed by Knebel et al. to measure ST activities such as studying, watching videos, playing electronic games, using social media, and performing work or internship-related activities. It includes five items asking respondents to report continuous hours spent on electronic devices on weekdays and weekends. The original developers reported its Content Validity Indexes (CVI) to be 0.94, and the intraclass correlation coefficients ranged from 0.24 to 0.76 for various ST activities.

##### **Part 3: Health-related Quality of Life Scale:**

While most quality of life measures for children have been developed in the English language and then translated in a further, methodologically elaborate step (Ravens-Sieberer and Cieza, 2008), the generic KINDLR Questionnaire for Measuring Health-Related Quality of Life in Children and Adolescents represents a German-language measure (originally developed by Bullinger et al., 1994, revised by Ravens-Sieberer & Bullinger 1998a, 1998b), for use in clinical populations but also with healthy children and adolescents.

The KINDL health-related quality of life questionnaire was the third part of the survey utilized in this study. It consists of 24 items divided into six subscales: physical well-being, emotional well-being, self-esteem, family, friends, and everyday functioning. Participants were asked to rate each item on a 5-point Likert scale, ranging from "never" (1) to "always" (5). The total score was calculated by summing the scores of all subscales, which could range from 4 to 20.

The overall score ranged from 24 to 120, with higher scores indicating better quality of life on each subscale. Specifically, scores falling within 24-59, 60-95, and 96-120 were classified as low, medium, and high quality of life, respectively.

Essaddam et al, (2018) assessed the validity and reliability of the Arabic version of the KINDL questionnaire, reporting a Cronbach's alpha coefficient of 0.70, indicating good internal consistency. In present study, the KINDL questionnaire was administered to a sample of 10 secondary school students during the pilot research. The Cronbach's alpha coefficient was 0.85, indicating acceptable internal consistency.

### **3.7. Validity of the study instrument**

The validity of an instrument pertains to its capacity to collect the specific data it is designed to collect effectively. The face and content validity of the initial questionnaire is assessed by a panel of experts who examine the clarity, relevance, and appropriateness of the questionnaire in measuring the desired concepts.

The QueST demonstrated satisfactory content validity attested by the experts and adolescents through analysis of Content Validity Indexes (CVI) for clarity and representativeness (Costa et al., 2022)

A version of the questionnaire is created and given to ten specialists with over a decade of expertise in the medical and nursing field (Appendix C).

Furthermore, the recommendations provided by the experts have been duly considered. Adjustments have been made, and the final version of the instrument has been produced to serve as a suitable tool for gathering data.

Creswell, (2014) states that the panel usually has at least three experts. However, a more significant number may be recommended for complicated constructs.

### **3.8. Pilot Study**

A pilot study was conducted on a convenience sample of (15) of students at Al-Najaf Al-Ashraf Province secondary school. The pilot study sample is excluded from the original sample of the study. The pilot study is conducted from 24<sup>th</sup> December, 2023, to 15<sup>th</sup> January, 2024. The purposes of the pilot study are:

- a) To know whether respondents understand the questions and directions or they find certain questions objectionable in some way.
- b) To enhance the reliability (internal consistency and test-retest) of the scales used in the study .
- c) To determine the average time required for the data collection for each subject.

The results was collected from the pilot study indicated that the questions are clear and understandable. Also the questionnaire can be completed with an appropriate time (15-20 min). and the reliability of the study instrument has determined. As well as, all these purposes are achieved.

The pilot study evaluate an existing instrument. It also can be used to determine how long it will take to conduct the data collection, and to evaluate the subject's responses to the data collection method.

### 3.9. Reliability of the Study Instrument

Reliability refers to a research instrument's degree of consistency and dependability in accurately measuring a specific variable of interest. The reliability of the scales is assessed using the Alpha Cronbach approach for internal consistency reliability, as indicated in Table 3.2.

**Table (3.2) Reliability (Internal Consistency) Coefficient of the Studied scale .**

Reliability Coefficients		Standard Lower Bound	Actual Values	Assessment
QOL Scale	Internal Consistency Cronbach Alpha	0.70	0.85	Accepted
Screen Time	Internal Consistency Cronbach Alpha	0.70	0.85	Accepted

The questionnaire findings indicate that the QOL scale used in the study is reliable for studying phenomena in the same population at any future time (Creswell, 2014).

### 3.10. Methods of the Collection of Data

Self-report questionnaires were used to collect data from secondary school students. The instruments included a screen time questionnaire and a health-related quality of life scale. The average completion time for each student was 10 to 15 minutes. The data collection period spanned from February 24<sup>th</sup>, 2024, to May 25<sup>th</sup>, 2024. During official school hours, the first researcher visited each school and obtained permission from officials

to speak with students during their breaks. After explaining the study's objectives, the researcher invited the students to participate and provided them with the study questionnaire upon agreement. The students were instructed on how to complete the questionnaire in a quiet and private setting during their free time in class or breaks, depending on the school's schedule. The questionnaires were completed at school and returned directly to the researcher on the same day.

### **3.11. Statistical Analysis Approach**

The statistical analysis for this study was conducted using IBM SPSS Statistics version 20. Various social science disciplines widely employ this software for quantitative data analysis.

Descriptive statistics were utilised to characterise the distribution of the data. These included frequency (F) for the number of observations in each category, percentage (%) to express frequencies as a proportion of the total sample, and arithmetic mean (M) to represent the average value for continuous variables.

To examine group differences in quality of life and screen time, hypothesis testing was implemented. Independent sample t-tests were employed to compare means between two groups based on bi-categorical demographic variables. For demographic variables with more than two categories, a one-way analysis of variance (ANOVA) was conducted to assess the statistical significance of mean differences across multiple groups.

The relationship between quality of life and screen time was evaluated using Pearson's correlation coefficient (R). This coefficient measures the strength and direction of the linear association between two continuous variables. A positive R value indicates a direct correlation, while a negative R signifies an inverse correlation.

Statistical significance was set at a p-value threshold of  $\leq 0.05$ . This implies that any observed differences or relationships were considered statistically significant if the probability of them occurring by chance was less than 5%. Additionally, the text acknowledges the use of a more stringent significance level (p-value  $\leq 0.01$ ) for certain analyses, suggesting potentially stronger statistical evidence in those cases.

The study used the following formula to calculate the average daily screen time:  $([\text{volume on weekdays} * 5 + \text{volume on weekend days} * 2] / 7)$ .

This approach ensures a comprehensive statistical analysis, allowing for the exploration of descriptive characteristics, group differences, and the potential relationship between quality of life and screen time among the adolescent population under study.

# **Chapter Four**

## **Results and Analysis**



## Chapter Four

### Results of The Study Findings

**Table (1) Frequency distribution of participants according to their demographic data**

Demographic variable	Categories of variable	F=387	%
Age (years)	13-16	147	38
	16-18	215	55.5
	>18	25	6.5
	Total	387	
Sex	Male	205	53
	female	182	47
Class	First	9	2.3
	Second	41	10.7
	Third	112	28.9
	Fourth	60	15.5
	Fifth	119	29.7
	sixty	46	11.9
Father's education Level	Illiteracy	10	2.6
	Read and write	30	7.8
	Primary	39	10.1
	Middle	90	23.3
	Preparatory	69	17.8
	College	97	25.1
	Postgraduate	52	13.4
Mother's education Level	Illiteracy	28	7.2
	Read and write	44	11.4
	Primary	60	15.5
	Middle	88	22.7
	Preparatory	59	15.2
	College	75	19.4
	Postgraduate	33	8.5
Father's occupation status	Employee	232	59.9
	Un employee	155	40.1
Mother's occupation status	Employee	90	23.3
	Un employee	297	76.7
Family monthly income (Iraqi Dinar)	<300000	50	12.9
	300000-600000	88	22.7
	601000- 900000	95	24.5
	901000- 1200000	93	24
	>1200000	61	15.8

Table (1) indicates that the ages of the high percentage of participants range between (16-8) years (55.5%) and that the more than half

percentage of them are male (53%) and those in the third class (28.9%). The highest percentage of them whose fathers and mothers have a (middle) level of education at (23.3%) and (22.7%) respectively, and the highest percentage of the participants' fathers Employee (59.9%)% and the highest percentage of their mother's work (76>7)% un Employee. The families' monthly income of the highest percentage ranges between (601000-900000 ) Iraqi dinars (24.5%).

**Table (2): Frequency distribution of participants according to their answers about the duration of their screen use during the weekdays except the weekend days.**

Reason for Use	number of hours	F	%
Studying	< 6	334	86.3
	6-10	51	13.2
	>10	2	0.5
Watching videos	< 6	350	90.4
	6-10	34	8.8
	>10	3	0.8
Playing video games	< 6	361	93.3
	6-10	22	5.7
	>10	4	1.00
Using social media/chat applications	< 6	340	87.9
	6-10	43	11.1
	>10	4	1.00

Table (2) shows that (86.3%) of participants use the screen during the weekdays to study for less than six hours per day, (90.4%) use it during the weekdays for less than six hours in order to watch videos, and (93.3%) use it during the weekdays. To play video games for less than six hours, and (87.9%) of them use the screen for social media applications for less than six hours per day.

**Table (3): Frequency distribution of participants according to their answers about the duration of their screen use during the weekend days.**

Reason for use	number of hours	F	%
Studying	< 6	269	69.5

	6-10	113	29.2
	>10	5	1.3
Watching videos	< 6	289	74.7
	6-10	84	21.7
	>10	14	3.6
Playing video games	< 6	344	88.9
	6-10	35	9.00
	>10	8	2.1
Using social media/chat applications	< 6	295	76.2
	6-10	79	20.4
	>10	13	3.4

Table (3) reveals that 69.5% of participants reported using screens for studying for less than six hours on weekends. Similarly, 74.7% of participants indicated using screens for video watching for less than six hours during weekends. Social media and chat application usage displayed a comparable pattern, with 76.2% of participants reporting screen time under six hours on weekends.

**Table (4): Frequency distribution of participants according to average daily screen time**

number of hours	F	%
< 6	42	10.9
6-10	130	33.6
>10	215	55.6
Mean of screen time	11.23± 4.53	

Table (4) shows that most participants' average daily screen use exceeds ten hours (55.6%).

**Table (5): Frequency distribution of participants according to their answers about the physical Domain**

Item	answer	F	%
I felt ill	Never	116	30.0
	Rarely	60	15.5
	Sometimes	93	24.2
	Mostly	78	20.2
	always	40	10.3
I was in pain	Never	95	24.5
	Rarely	94	24.3

	Sometimes	93	24.0
	Mostly	57	14.7
	always	48	12.4
I was tired and worn out	Never	46	11.9
	Rarely	52	13.4
	Sometimes	112	28.9
	Mostly	96	24.8
	always	81	20.9
I felt strong and full of energy	Never	42	10.9
	Rarely	77	19.9
	Sometimes	106	27.4
	Mostly	86	22.2
	always	76	19.6

Table (5) shows that (30)% answered (Never) to the phrase (I felt ill), and (24.5)% also answered (Never) to the phrase (I was in pain), and (28.9)% answered (Sometimes) to the phrase (I was tired and worn-out), and (27.4)% answered (sometimes) on the phrase (I felt strong and full of energy)

**Table (6): Frequency distribution of participants according to their answers about the Emotional Domain**

Item	answer	F	%
I had fun and laughed a lot	Never	39	10.1
	Rarely	45	11.6
	Sometimes	116	30.0
	Mostly	102	26.4
	always	85	22.00
I was bored	Never	27	7.0
	Rarely	76	19.6
	Sometimes	109	28.2
	Mostly	96	24.8
	always	79	20.5
I felt alone	Never	125	32.3
	Rarely	63	16.3
	Sometimes	78	20.2
	Mostly	55	14.2
	always	66	17.1
I felt scared or unsure of myself	Never	187	48.3
	Rarely	77	19.9
	Sometimes	44	11.4
	Mostly	39	10.1
	always	40	10.4

Table (6) shows that (30)% answered (Sometimes) to the phrase (I had fun and laughed a lot), (28.2)% also answered (Sometimes) to the phrase (I was bored), and (32.3)% answered (never) to the phrase (I felt alone), and (48.3)% answered (sometimes) on the phrase (I felt scared or unsure of myself).

**Table (7): Frequency distribution of participants according to their answers about the Self-esteem Domain**

Item	answer	F	%
I was proud of myself	Never	41	10.6
	Rarely	55	14.2
	Sometimes	87	22.5
	Mostly	78	20.2
	always	126	32.6
I felt on top of the world	Never	42	10.9
	Rarely	82	21.2
	Sometimes	134	34.6
	Mostly	73	18.9
	always	56	14.5
I felt pleased with myself	Never	36	9.3
	Rarely	46	11.9
	Sometimes	88	22.7
	Mostly	55	14.2
	always	162	41.9
I had lots of good ideas	Never	22	5.2
	Rarely	49	12.7
	Sometimes	94	24.3
	Mostly	92	23.8
	always	130	33.6

Table (7) shows that (32.6)% answered (always) to the phrase (I was proud of myself), and that (34.6)% also answered (Sometimes) to the phrase (I felt on top of the world), and (41.9)% answered (always) to the phrase (I felt pleased with myself), and (33.6)% answered (always) on the phrase (I had lots of good ideas)

**Table (8): Frequency distribution of participants according to their answers about the family Domain**

Item	answer	F	%
I got on well with my parents	Never	47	12.2
	Rarely	46	11.9

	Sometimes	78	20.2
	Mostly	82	21.2
	always	134	34.6
I felt OK at home	Never	31	8.1
	Rarely	38	9.8
	Sometimes	63	16.3
	Mostly	102	26.4
We quarrelled at home	always	153	39.5
	Never	86	22.3
	Rarely	85	22.0
	Sometimes	98	25.3
I felt restricted by my parents	Mostly	49	12.7
	always	69	17.8
	Never	186	48.1
	Rarely	60	15.5
	Sometimes	62	16.0
	Mostly	28	7.2
	always	51	13.2

Table (8) shows that (34.6)% answered (always) to the phrase (I got on well with my parents), and that (39.5)% also answered (always) to the phrase (I felt OK at home), and (25.3)% answered (Sometimes) to the phrase (We quarrelled at home), and (48.1)% answered (never) on the phrase (I felt restricted by my parents).

**Table (9): Frequency distribution of participants according to their answers about the friends Domain**

Item	answer	N	%
I did things together with my Friends	Never	64	16.5
	Rarely	53	13.7
	Sometimes	92	23.8
	Mostly	89	23
	always	89	23
I was a "success" with my friends	Never	24	6.2
	Rarely	44	11.4
	Sometimes	83	21.4
	Mostly	122	31.5
I got along well with my friends	always	114	29.5
	Never	27	7.0
	Rarely	38	9.8
	Sometimes	60	15.5
I felt different from other people	Mostly	89	23.0
	always	173	44.7
	Never	77	19.9

	Rarely	52	13.4
	Sometimes	80	20.7
	Mostly	70	18.1
	always	108	27.9

Table (9) shows that (23.8)% answered (Sometimes) to the phrase (I did things together with my Friends), and that (31.5)% also answered (Mostly) to the phrase (I was a "success" with my friends), and (44.7)% answered (always) to the phrase (I got along well with my friends), and (27.9)% answered (always) on the phrase (I felt different from other people)

**Table (10): Frequency distribution of participants according to their answers about the school Domain**

Item	answer	N	%
doing the schoolwork was easy	Never	22	5.7
	Rarely	39	10.1
	Sometimes	96	24.8
	Mostly	105	27.1
	always	125	32.3
I found school interesting	Never	69	17.8
	Rarely	68	17.6
	Sometimes	104	26.9
	Mostly	73	18.9
	always	73	18.9
I worried about my future	Never	203	52.5
	Rarely	55	14.2
	Sometimes	66	17.1
	Mostly	23	5.9
	always	40	10.3
I worried about getting bad marks or grades	Never	26	6.7
	Rarely	30	7.8
	Sometimes	51	13.2
	Mostly	61	15.8
	always	219	56.6

Table (10) shows that (32.3)% answered (always) to the phrase (doing the schoolwork was easy), (26.9)% also answered (Sometimes) to

the phrase (I found school interesting), and (52.5)% answered (Never) to the phrase (I worried about my future), and (56.6)% answered (always) on the phrase (I worried about getting bad marks or grades)

**Table (11) Frequency distribution of participants according to the level of quality of life**

Domains	Level					
	Low		Moderate		High	
	F	%	F	%	F	%
physical Domain	88	22.7	197	50.9	102	26.4
Emotional Domain	59	15.2	209	54.00	119	30.7
Self-esteem Domain	48	12.4	199	51.4	140	36.2
Family Domain	42	10.9	173	44.7	172	44.4
Friends Domain	48	12.4	219	56.6	120	31.00
School Domain	143	37.00	214	55.3	30	7.8
Total Quality of life	30	7.8	302	78.00	55	14.2

Low(24-59) ,moderate(60-95) ,high(96-120).

Table (11) shows that the highest percentage of participants have a moderate level of quality of life related to (the physical domain, Emotional domain, Self-esteem domain, family domain, friends domain and school domain) by (50.9%, 54%, 51.4%, 44.7%, 56.6%, and 55.3%) respectively. It also shows that the overall quality of life level is moderate among the highest percentage of participants (78%).

**Table (12) Correlation between the total score of quality of life domains with participants' daily screen time**

Quality of life domain	Mean	Screen Time (Mean=11.23)	
physical Domain	3.14	R	-0.101
		P. value	0.046*
Emotional Domain	3.31	R	-0.084
		P. value	0.048*
Self-esteem Domain	3.47	R	0.047
		P. value	0.355
Family Domain	3.56	R	0.034
		P. value	0.510
Friends Domain	3.39	R	0.046
		P. value	0.365



School Domain	2.68	R	-0.148
		P. value	0.004**
Total Quality of life	3.26	R	-0.052
		P. value	0.312

R: Pearson correlation coefficient. P.value: Significance level. \*\*: P.value $\leq$ 0.01, \*: P.value $\leq$ 0.05

Table (12) shows a correlation between the total score of quality of life domains with participants' daily screen time., as it shows that there is a statistically significant inverse correlation (P = 0.046) between the physical quality of life domain and screen time. It also shows, statistically significant inverse correlation (p = 0.048 ) between the quality of life domain related to Emotional Domain and screen time. Also, the table shows statistically significant inverse correlation (P = 0.004) between the quality of life domain related to school and screen time.

On the other hand, there was no correlation between the quality of life-related to Self-esteem, family and friends, and the overall quality of life.

**Table (13) Differences in the participants' general quality of life according to their demographic characteristics**

Sociodemographic variables		F	QOL	
			Mean	T, F/ P. Value
Age (years)	<16	147	3.29	One Way ANOVA 0.497 0.609
	16-18	215	3.23	
	>18	25	3.31	
Sex	Male	205	3.34	T 3.053 0.017*
	female	182	3.17	
Class	First	9	3.31	One Way ANOVA 1.887 0.096
	Second	41	3.11	
	Third	112	3.32	
	Fourth	60	3.35	
	Fifth	119	3.27	
	sixty	46	3.10	
Father's education Level	Illiteracy	10	3.37	One Way ANOVA 0.870 0.517
	Read and write	30	3.38	
	Primary	39	3.13	
	Middle	90	3.24	

	Preparatory	69	3.33	
	College	97	3.23	
	Postgraduate	52	3.26	
Mother's education Level	Illiteracy	28	3.38	One Way ANOVA 0.557 0.764
	Read and write	44	3.29	
	Primary	60	3.15	
	Middle	88	3.25	
	Preparatory	59	3.29	
Father's occupation	College	75	3.31	T 0.392 0.173
	Postgraduate	33	3.26	
	Employee	232	3.25	
Mother's occupation	Un Employee	155	3.27	T 184 0.787
	Employee	90	3.25	
Family monthly income	Un Employee	297	3.26	One Way ANOVA 0.687 .0602
	<300000	50	3.18	
	300000-600000	88	3.27	
	601000- 900000	95	3.30	
	901000- 1200000	93	3.30	
>1200000	61	3.20		

T: Refers to t. test for independent samples test. : Refers to the one-way variance test One Way ANOVA. \*: P.value $\leq$ 0.05

Table (13) shows statistically significant differences in quality of life due to gender (p. value= 0.017) in favour of males with a higher average level (M= 3.34). On the other hand, there were no significant differences with the rest of the demographic variables.

**Table (14) simple linear regression coefficient between the gender variable and the overall quality of life**

Quality of Life	M	Male (F=205)	Female (F=182)	Effect Size	P.value
		3.24	3.17	0.155	0.002

M:mean

Table (14) shows the simple linear regression coefficient between the sex variable and the overall quality of life level, which shows that the effect size is (0.155), and it is considered a weak effect size because it is less than (0.25 ).

**Chapter Five: Discussion,  
Conclusions, and  
Recommendations**

## Chapter Five

### Chapter Five: Discussion and Analysis

In this chapter, we will discuss in detail the main findings of the research, as well as the nature of the relationship between screen time and quality of life among adolescents. The study also explain the results and discuss them with previous studies.

#### 5.1. Discussion of demographic characteristics

The largest group of participants falls within the 16-18 age range, constituting 55.5% of the total sample. This suggests that the study primarily focuses on adolescent, This is consistent with research conducted on the same age group of adolescents (Motamed-Gorji et al., 2019: Wong et al., 2021).

This result is also almost identical to the study conducted in Baghdad. A study of the effects of internet and social media use on sleep among 500 Baghdad secondary school students found that most of the students were around 16 years old (Al-Shatari, 2023).

It is worth noting that study participants were 53% male, in contrast to the Indonesian study, where most were female. However, they were in the same age group as us, which does not represent a significant difference, considering that male adolescents are 4.55 times more vulnerable to frequent use of screens and excessive use than females, as in the study conducted in China (Cui et al., 2022).

Table 1 shows that more than half of the participants are male (53%), while females make up 47% of the sample. This distribution is closely aligned with previous research conducted on the same age group (Santos & Reeve, 2020).

Sex also plays a role in both quality of life and screen time. Our findings indicate that young males report a higher quality of life compared

to females, a result that partially aligns with the findings of Skalická et al., (2019).

Class level plays a significant role in determining how screen time is distributed between academic activities and leisure. Excessive or unbalanced screen use, however, poses a risk to the quality of life for all students, regardless of class level. A present study reported that 28.9% of adolescents in the third class experienced negative outcomes associated with their screen usage. Addressing these factors is crucial for improving adolescents' well-being across various academic levels, as highlighted by several researchers who have considered class level in their studies (Buie et al., 2023; Tooth et al., 2021).

In this study, the high percentage of participants (23.3% for fathers and 22.7% for mothers) came from families where parents had a middle level of education. This finding aligns with Tooth et al., (2021), who highlight the significant role of parental education in shaping children's academic and social outcomes. Furthermore, these results are consistent with the work of Dong et al., (2020), which emphasizes the influence of parental education, occupation, and family income on adolescents' behaviors and well-being.

The family's economic status, with 24.5% of families reporting a monthly income range of 601,000 to 900,000 Iraqi dinars, is also a critical factor. Domingues- Montanari, (2017) demonstrated that family income can impact access to resources such as educational materials and extracurricular activities, which in turn may affect adolescents' screen time and overall well-being. This is further supported by Priftis and Panagiotakos, (2023).

## **5.2. Discussion of Screen Time.**

### **5.2.1. Weekday Screen Use**

The findings in table 2 indicate that a significant majority of participants reported using screens for less than six hours on weekdays: 86.3% for studying, 90.4% for watching videos, 93.3% for playing video games, and 87.9% for social media use. This is consistent with prior research, such as Domingues-Montanari (2017), which found that moderate screen time can be beneficial, especially in educational settings. The results suggest that participants' screen use aligns with typical weekday patterns where screen use is primarily functional, supporting academic and leisure activities without exceeding recommended thresholds.

### **5.2.2. Weekend Screen Use**

In contrast, the data from weekend screen use, presented in Table 3, shows an increase in the percentage of participants using screens for longer durations. For instance, 29.2% of participants reported using screens for 6-10 hours for studying on weekends, and 21.7% did so for watching videos. This shift is consistent with findings from the American Academy of Pediatrics, which highlights that children and adolescents often engage in more screen time during weekends compared to weekdays (Rideout, 2021).

On weekends, although screen time remained below six hours for most participants, there was a slight increase in leisure-related activities compared to weekdays. Specifically, 69.5% of participants reported using screens for studying for less than six hours, 74.7% for watching videos, and 76.2% for social media and chat applications.

The results also demonstrate that screen use for gaming remains notably high across both weekdays (93.3% < 6 hours) and weekends (88.9% < 6 hours), indicating a strong preference for gaming among participants. This finding is supported by research from Przybylski and Weinstein (2019), which suggests that gaming can serve as a significant recreational activity for youth, often leading to social interactions and engagement. However, it is essential to note that while gaming can have

positive social aspects, excessive use may lead to negative outcomes, such as decreased physical activity and academic performance.

These findings partially align with Wong et al., (2021), who measured electronic device use in terms of hours per day on both weekdays and weekends, examining screen time for studying, gaming, and leisure activities. Moreover, this study's results correspond to research on the enforcement of screen time recommendations and their relationship to quality of life (Haile et al., 2023).

### **5.2.3. Daily Screen Time Discussion**

According to the (Table 4), 55.6% of participants reported using screens for more than 10 hours per day, while 33.6% used screens between 6 to 10 hours, and only 10.9% limited their daily screen time to less than 6 hours. The average daily screen time for all participants was  $11.23 \pm 4.53$  hours.

In a recent comparative study, 49% of Indonesian adolescents reported that they were exposed to more than ten hours of screen time before the outbreak of COVID-19. This rate increased to 59% during the pandemic and decreased to 35% after the peak of COVID-19 (Wiguna et al., 2024)

This result is also almost identical to the study conducted in Baghdad reported that the time span given seems very long. 201-300 hours per month is almost 7-10 hours per day, which is a large part of the day. Excessive screen time has been linked to symptoms such as morning fatigue, nightmares, and difficulty sleeping (Al-Shatari, 2023).

Moreover, the average screen time reported (11.23 hours) aligns with alarming trends observed in broader populations. A study by Rideout, (2021) noted that children in the United States spend an average of over 9 hours per day on screens These statistics suggest that the participants in this

study are engaging in screen use that far exceeds national averages, which could exacerbate the risks associated with excessive screen time.

### **5.3. Discussion of the Relationship Between Screen Time and Quality of Life**

The findings presented in Table (12) reveal significant inverse correlations between daily screen time and several domains of quality of life (QoL), specifically in the physical, emotional, and school domains.

These results align with a substantial body of literature that highlights the detrimental effects of excessive screen time on health-related quality of life (HRQOL) and psychological well-being. For instance, Wu et al. (2020) reported that increased screen time was linked to lower HRQOL in 11 out of 13 studies reviewed. A meta-analysis conducted within the same review found that individuals who engaged in  $\geq 2$  hours of screen time daily had significantly lower HRQOL scores compared to those with less screen time. Similarly, Suchert et al., (2022) identified higher screen time as being associated with poorer psychological well-being in the majority of the studies they analyzed, reinforcing the notion that excessive screen use contributes to adverse health outcomes.

In the current study, a significant correlation was observed between screen time and the physical domain of QoL ( $p = 0.046$ ), which is consistent with the findings of Ye et al., (2022), who identified passive screen time, such as television watching, as a predictor of lower QoL among children. The emotional domain also showed a statistically significant inverse correlation with screen time ( $p = 0.048$ ), which corroborates Hoare et al., (2020), who reported a strong association between excessive screen time and depressive symptoms, particularly when daily screen use exceeded two hours.

While this study's results align with much of the literature, they differ from those of Twenge and Campbell, (2018), who found negative



associations between screen time and overall psychosocial QoL. Boras et al., (2021) examined the relationships between QoL, physical activity, and screen time and concluded that these factors may influence QoL differently across specific domains. Additionally, studies by Qiu et al., (2024) and Guerrero et al., (2019) have supported the link between excessive screen time, physical inactivity, emotional distress, and reduced school engagement.

A study that's presently going on concentrates on the effects of excessive screen time on adolescents' wellbeing. Research has also recognized the repercussions in other areas. Physiologically, it can lead to obesity, cardiovascular disease, and musculoskeletal issues from other factor, Thus affecting the physical health domain. (Priftis & Panagiotakos, 2023). Psychologically it makes individuals more vulnerable to hopelessness and anxiety from despair (Zhu et al., 2023). Behaviorally, lack of sleep patterns, unhealthy eating practices, and problematic parent-child relationships due to time spent on screens are disruptions. An overall impact: reduced quality of life due to physical and psychological health (Saunders & Vallance, 2017) can be due to high screen use.

The study's observation of a significant correlation between screen time and the school domain ( $p = 0.004$ ) is in line with previous research suggesting that excessive screen time negatively impacts academic performance and engagement. For example, studies have shown that children with higher screen time tend to report lower levels of school satisfaction and academic performance. This suggests that excessive screen time may displace opportunities for educational activities, thereby negatively affecting school-related QoL (Ye et al., 2023).

The study findings are also supported by previous research that has shown a link between ST and physical inactivity, poor emotional well-

being, and reduced engagement in school activities (Qiu et al., 2024; Guerrero et al., 2019).

This finding is supported by the work of Daniel et al. (2023) and David et al. (2021), who demonstrated that increased screen time is associated with declines in school-related outcomes.

Furthermore, research by Tooth et al. (2021) indicates that family context can play a moderating role in the relationship between screen time and QoL, with the adverse effects of screen time on both behavior and HRQOL being more pronounced in families with less supportive environments.

The reason for the lack of a relationship between screen time and overall quality of life may be due to the mediating role that physical activity, smoking, and mental health play in the relationship between screen time and health-related quality of life, as Dong et al., (2020) reported that the adolescent who exercises regularly have a better quality of life and reduce the effects of excessive screen time, while smoking and high ST are linked to poorer QOL as well as differences between studies in research methodology or specific characteristics of the adolescent groups being studied may play the role of this differences.

#### **5.4. Discussion of differences in the participant's general quality of life according to their demographic characteristics**

Table 13 presents the differences in general quality of life among participants based on their demographic characteristics. The results indicate statistically significant differences in quality of life according to gender ( $p = 0.017$ ), with males reporting a higher average quality of life ( $M = 3.34$ ).

The study observed significant differences in QoL between genders, with males reporting a higher QoL than females. This finding aligns with previous research, which indicates that gender differences exist in how screen time affects QoL. Specifically, a narrative review highlighted that

females often experience a more pronounced negative impact on psychological well-being from screen time, particularly in relation to social media use. Conversely, males may face greater negative effects from gaming (Belton et al., 2021). This suggests that the nature of the screen activity plays a mediating role in the relationship between screen time and QoL, with different implications for each gender.

These findings are consistent with the study by Motamed-Gorji et al., (2019), which identified gender as a factor influencing both life expectancy and quality of life, particularly in relation to screen time and its usage.

The results also indicated that demographic variables, such as age and family income, did not significantly influence QoL in this sample. This contrasts with previous research that has demonstrated an association between socioeconomic status and screen time behaviors, and in turn, QoL. For instance, Cheung et al., (2022) found that children from lower-income families tend to exhibit higher screen time due to fewer opportunities for physical activities and limited access to alternative resources, which can negatively affect their QoL.

However, these findings differ from those reported by Wong et al., (2021), who found significant relationships between monthly income, parental occupation, educational level, and quality of life, as well as the relationship between screen time and quality of life.

The basic linear regression coefficient in table (14) was utilized to explain the influence of sex on quality of life. The results demonstrate a modest effect size or, put another way, gender has little effect on the quality of life. This means that sex has a slight effect on quality of life, as previous research documented the effects of screen time and quality of life while controlling for other factors such as sex and physical exercise, and

the result was the same in terms of effects (Wong et al., 2021; Motamed-Gorji et al., 2019).

### **5.5. Conclusion of Study Findings**

More than half of adolescents (55.6%) indicated that they spend over 10 hours each day on screens, demonstrating a significant prevalence of extended screen exposure within this demographic. A considerable portion of participants (78%) reported experiencing a moderate quality of life (QOL), underscoring the possible effects of lifestyle elements, such as screen time, on their overall well-being. There is a correlation between higher levels of ST and poorer physical, emotional, and school functioning. These results indicate a possible connection between high levels of screen time and a deterioration in adolescents' quality of life, especially in the areas of physical health, emotional health, and academic performance.

### **5.6. Recommendations of Study Findings**

#### **Recommendations for the Ministry of Education and Health**

1. Integrate digital literacy programs into the curriculum to educate adolescents on responsible screen use, including time management, content selection, and potential risks associated with excessive screen time.
2. Implement programs to educate students about the risks of excessive screen time and encourage healthier screen use habits. Consider incorporating lessons on digital wellness into the curriculum.
3. Train healthcare professionals to incorporate discussions about healthy screen habits during routine adolescent checkups.

#### **Recommendations for Parents:**

1. Develop strategies to monitor and manage their children's screen time, such as setting limits on daily usage and encouraging breaks. Parental guidance can help balance screen time with other activities.
2. Promote alternative activities that can enhance physical, emotional, and social well-being, such as physical activity, hobbies, and social interaction.

**Recommendations for Researchers:**

1. Conduct longitudinal studies with larger and more diverse samples to solidify the causal relationship between screen time and QOL in Iraqi adolescents.
2. Investigate potential mediating factors, such as the displacement of physical activity or social interaction by excessive screen time, to understand the mechanisms at play.
3. Design and evaluate interventions aimed at promoting healthy screen habits and improving QOL among adolescents. This could involve parent training programs, school-based initiatives, or digital tools.

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# Appendices

## Administrative Agreements

### Appendix A-I

Republic of Iraq Ministry of higher education & scientific research University of Karbala College of Nursing Graduate studies Division		جمهورية العراق وزارة التعليم العالي والبحث العلمي جامعة كربلاء كلية التمريض شعبة الدراسات العليا
التاريخ: 2023 / 10 / 25		العدد : د.ع / 305

الى / مديرية تربية النجف الأشرف

م / تسهيل مهمة

تحية طيبة ...

يرجى التفضل بالموافقة على تسهيل مهمة طالب الدراسات العليا / الماجستير (محمد عبد العالي إبراهيم) في كليتنا للعام الدراسي (2023-2024) لغرض جمع العينات الخاصة برسالته الموسومة :

" أثر وقت الشاشة على جودة حياة المراهقين "

" Effect of Screen Time on Adolescents Quality of Life "

\*\* مع التقدير \*\*



أ.م.د. سلمان حسين فارس الكريطي  
معاون العميد للشؤون العلمية و الدراسات العليا

2023 / 10 / 25



نسخة منه الى :

- مكتب السيد المعاون العلمي المحترم .
- شعبة الدراسات العليا .



العنوان : العراق - محافظة كربلاء المقدسة - حي الموظفين - جامعة كربلاء  
Mail: nursing@uokerbala.edu.iq website:



## Appendix A-II

قسم الإعداد والتدريب والبحوث  
الدراسات  
التاريخ





وزارة التعليم  
الجمهورية العراقية



**إلى إدارات المدارس الثانوية في القائمة أدناه**  
**م/ تسهيل مهمة**

تحية طيبة ....

إستناداً الى كتاب جامعة كربلاء/كلية التمريض /شعبة الدراسات ذي العدد (د.ع ٣٠٥ في ٢٥/١٠/٢٠٢٣) وبناءً على طلبه يرجى تسهيل مهمة طالب الماجستير ( محمد عبد العالي ابراهيم ) لإكمال بحثه الموسوم ( أثر وقت الشاشة على جودة حياة المراهقين) وذلك بتوزيع إستمارات الإستبيان على الطلبة مع التقدير .

ت	اسم المدرسة	ت	اسم المدرسة
١	التميزات للبنات	٦	البسمة للبنين
٢	نازك الملايكة للبنات	٧	سبط الرسول (ع) للبنين
٣	الأميرات للبنات	٨	الأمراء للبنين
٤	منهاج النبوة للبنات	٩	رمضان للبنين
٥	ميسلون للبنات	١٠	العراق النموذجية للبنين



**م. م. عمار علي الحرابي**  
المعاون الفني  
٢٠٢٣/١٢/٤

نسخة منه الى:

- قسم الإعداد والتدريب / شعبة البحوث والدراسات مع الأوليات .
- الحفظ .

العنوان / العراق - النجف الأشرف - شارع الصوفاة

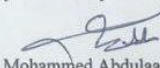
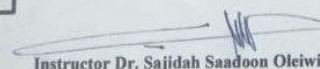
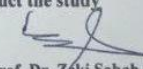
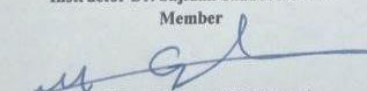
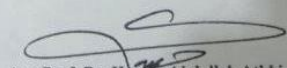
البريد الإلكتروني / ALNAAJAFEDU@YAHOO.COM

ص ب (٥٨٧) هاتف - ٣٣ - ٣٦٤٥٢٢



## Appendix B

### Ethical Considerations

Title of the research project			
In the English language	In the Arabic language		
Effect of screen time on adolescents quality of life	أثر وقت الشاشة على جودة حياة المراهقين		
Data About the Main Researcher /Student:			
Full Name	Scientific Title	Mobile Number	Email
Mohammed abdualaali Ibrahim	Bachelor of nursing science	07509825626	mhmdbd468@gmail.com
Data About the Co-author /Supervisor:			
Full Name	Scientific Title	Mobile Number	Email
Khamees Bandar Obaid	Prof.Dr	07734638612	Khamees.b@uokerbala.edu.iq
Study objectives			
1.To Examine the Effect of Screen Time on Adolescents Quality of Life 2-To Find Out the Relationship Between the Effect of Screen Time and Sociodemographic Factors of Adolescents(Age, Gender ,Class, Parent Education ,Income )			
Time and Setting of the Study			
Alnajaf Al-Ashraf Center from 11 November 2023 to 12 June 2024			
Study Design			
Descriptive Cross sectional			
Sampling method and sample size			
Convenience sampling 200-300 sample			
Statement of Ethical Commitment			
<p>The study will be conducted in accordance with what was mentioned in protocol above and to commitment that all rules set by the ethical committee are followed in present research process. The researcher also makes a commitment to abide by ethical principles, moral values ,law and instruction of the institutions .there is no bias will be during collecting the data ,gender, regional aspect and is totally impartial and objectives .the researcher will have taken an informed consent from the participants, and provide clarifications and information about the study to the sample members. The researcher deal with the data of the sample members in complete confidentiality.</p>			
 Mohammed Abdulaali Ibrahim			
Name and signature of the researcher;			
Recommendation of the College's Research Ethical Committee			
<input checked="" type="checkbox"/> Agreement to conduct the study   Instructor Dr. Sajidah Saadoon Olewi Member	<input type="checkbox"/> Disagreement to conduct the study   Ass. Prof. Dr. Zeki Sabah Musihb Member		
 Ass. Prof. Dr. Ghazwan Abdalhussein Member	 Ass. Prof. Dr. Hassan Abdullah Athbi Chairman of the Committee		

2024/5/2 00:0

## Appendix C

## "الاستبانة في صورتها النهائية"

استبيان حول وقت الشاشة وجودة حياة المراهقين

عزيزي الطالب ..... عزيزتي الطالبة..... أقوم حالياً بعمل بحث أكاديمي حول: (أثر وقت الشاشة على جودة حياة المراهقين)

المعلومات التي يتم تحصيلها ستُعامل بخصوصية وبسرية تامة وتستخدم فقط لغرض البحث العلمي.

يرجى وضع إشارة (صح) للإجابة التي تناسبك

المحور الاول: المعلومات الديموغرافية والاجتماعية للمراهق

سنة

العمر:

انثى ذكر 

الجنس:

الرابع اعدادي   
الخامس الاعدادي   
السادس الاعدادي

الاول متوسط   
الثاني متوسط   
الثالث متوسط

الصف:

كلية 

متوسطة   
اعدادية   
ابتدائية

لا يقرأ ولا يكتب   
يقرأ ويكتب   
دراسات عليا

مستوى تعليم الاب:

كلية   
دراسات عليا

متوسطة   
اعدادية

لا يقرأ ولا يكتب   
يقرأ ويكتب   
ابتدائية

مستوى تعليم الام:

غير موظف موظف 

مهنة الأب:

غير موظف موظف 

مهنة الام:

بين ٩٠١-١٢٠٠ مليون دع   
اكثر من ١٢٠٠ مليون دع

اقل من ٣٠٠ الف دع   
بين ٣٠٠-٦٠٠ الف دع   
بين ٦٠١-٩٠٠ الف دع

الدخل الشهري  
للعائلة (بالدينار  
العراقي):



		المحور الثاني : قياس وقت الشاشة
في عطلة نهاية الاسبوع (الجمعة والسبت) عدد الساعات	في يوم من ايام الاسبوع (عدا العطلة) عدد الساعات	الاسئلة بيان الاسئلة :في اليوم العادي كم من الوقت تقضيه في .....
<input type="text"/>	<input type="text"/>	١- <u>الدراسة</u> ... الدراسة أو مشاهدة دروس الفيديو أو القراءة أو إجراء الأبحاث أو الواجب المدرسي على جهاز كمبيوتر أو تلفزيون أو جهاز لوحي أو هاتف ذكي أو أجهزة إلكترونية أخرى؟
<input type="text"/>	<input type="text"/>	٢- <u>مشاهدة مقاطع الفيديو</u> ...في اليوم العادي كم من الوقت تقضيه في مشاهدة البرامج التلفزيونية أو الأفلام أو المسلسلات أو الأخبار أو الرياضة أو البرامج أو مقاطع الفيديو الأخرى على جهاز الكمبيوتر أو التلفزيون أو الجهاز اللوحي أو الهاتف الذكي أو الأجهزة الإلكترونية الأخرى؟
<input type="text"/>	<input type="text"/>	٣- <u>ممارسة ألعاب الفيديو</u> ...في اليوم العادي كم من الوقت تقضيه في لعب ألعاب الفيديو على وحدة التحكم في الألعاب أو الكمبيوتر أو التلفزيون أو الجهاز اللوحي أو الهاتف الذكي أو الأجهزة الإلكترونية الأخرى؟
<input type="text"/>	<input type="text"/>	٤- <u>استخدام وسائل التواصل الاجتماعي /تطبيقات الدردشة</u> ...في اليوم العادي كم من الوقت تقضيه في استخدام وسائل التواصل الاجتماعي مثل تويتر أو انستغرام أو فيسبوك أو تطبيقات الدردشة مثل سناب جات أو ماسنجر أو تليكرام أو واتساب على جهاز كمبيوتر أو تلفزيون أو جهاز لوحي أو هاتف ذكي أو أجهزة إلكترونية أخرى؟

استبيان جودة حياة الشباب  
Kiddo-KINDL

اهلا بك :

نود لو تخبرنا عن احوالك في الوقت الحاضر. لهذا السبب اعددنا لك بعض الاسئلة نرجو ان تجيب عنها

اقرا السؤال بأكمله

حاول ان تتذكر كيف كان الحال خلال الفترة المشار اليها

ضع علامة أمام الاجابة الاكثر تناسبا معك

من فضلك لاتضع العلامة الا في خانة واحدة فقط بالنسبة لكل سؤال

اعلم أنه لا توجد اجابة صحيحة ولا اجابة خاطئة .كل ما يهمنا هو معرفة رأيك

١- الاسئلة التي يتعلق بالصحة البدنية

دائما	غالبا	احيانا	نادرا	ابدا	خلال الأسبوع الماضي....
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	١-... شعرتُ بالمرض
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	٢-... كنتُ أتألم
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	٣-... كنتُ متعباً ومنهكاً
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	٤- ... كنتُ مفعماً بالقوة والمثابرة

٢-... الاسئلة التي يتعلق بالشعور العام

دائما	غالبا	أحيانا	نادرا	ابدا	خلال الاسبوع الماضي....
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	١-... ضحكْتُ كثيراً واستمتعتُ كثيراً
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	٢-... شعرتُ بالملل
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	٣-... شعرتُ بالوحدة
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	٤-... كنتُ خائفاً ولا اشعرُ بالأمان

٣- الاسئلة التي يتعلق بالشعور اتجاه نفسك

دائماً	غالباً	احياناً	نادراً	ابداً	خلال الاسبوع الماضي.....
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	١-... شعرتُ بالفخر
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	٢-... كنتُ أشعرُ بالارتياح
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	٣-... كنتُ متقبلاً لذاتي
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	٤-... كانت لديّ كثير من الافكار الجيدة

٤- الأسئلة التي يتعلق بالعائلة

دائماً	غالباً	احياناً	نادراً	ابداً	خلال الاسبوع الماضي.....
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	١-... كنتُ منسجماً مع والدي
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	٢-... كنتُ أشعر بالارتياح في البيت
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	٣-... تشاجرنا في البيت
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	٤-... شعرتُ أن والديّ يقيداني

٥- الاسئلة التي يتعلق بالاصدقاء

دائماً	غالباً	احياناً	نادراً	ابداً	خلال الاسبوع الماضي....
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	١-... شاركتُ رفاقي في الأمور
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	٢-... تقبلني الآخرون جيداً
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	٣-... انسجمتُ مع رفاقي
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	٤-... كنتُ أشعر أنني مختلف عن الآخرين

٦- الاسئلة التي يتعلق بالمدرسة

خلال الاسبوع الماضي ....	ابدا	نادرا	احيانا	غالبا	دائما
١...تمكنتُ من القيام بواجباتي المدرسية جيداً	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
٢...استمتعتُ بالدروس	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
٣...كنتُ قلقاً اتجاه مستقبلي	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
٤...كنتُ متخوفاً من الحصول على علامات او درجات سيئة	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

شكرا جزيلاً لمشاركتك

**Final version of the Questionnaire for Screen Time of Adolescents (QueST) (Brazil, 2019).**

Questions	Statement: On a typical day, how much time do you spend...	On a weekday	On weekend days
		Hours	Hours
1. Studying	...studying, watching video classes, reading, doing research, or school work on a computer, television, tablet, smartphone, or other electronic devices?	<input type="text"/>	<input type="text"/>
2. Performing work/internship-related activities	...doing job or internship-related work on a computer, television, tablet, smartphone, or other electronic devices?	<input type="text"/>	<input type="text"/>
3. Watching videos	...watching TV shows, movies, soap operas, news, sports, programs, or other videos on a computer, television, tablet, smartphone, or other electronic devices?	<input type="text"/>	<input type="text"/>
4. Playing video games	...playing video games on a games console, computer, television, tablet, smartphone, or other electronic devices?	<input type="text"/>	<input type="text"/>
5. Using social media/chat applications	...using social media like Facebook, Instagram, Twitter, Snapchat, or chat applications like WhatsApp, Telegram, Messenger on a computer, television, tablet, smartphone, or other electronic devices?	<input type="text"/>	<input type="text"/>

Kiddo-KINDL

Hello there

we would like to know how you have been feeling during the past week, so we have worked out a few questions which we would like you to answer.

- Please read each question carefully.
- Think about how things have been for you over the past week.
- Choose the answer that fits you best in each line and put a cross in the box.

There are no right or wrong answers. It's what you think that matters.

1. First of all, we would like to know something about your physical health...

During the past week...	Never	seldom	some-times	Often	all the time
1...I felt ill					
2...I was in pain					
3...I was tired and worn-out					
4...I felt strong and full of energy					

2. ... then something about how you've been feeling in general... never  
seldom some-times often all the time

During the past week...	Never	seldom	Some-times	Often	All the time
1... I had fun and laughed a lot					
2... I was bored					
3... I felt alone					
4... I felt scared or unsure of myself					

1. ... and how you have been feeling about yourself.

During the past week...	Never	seldom	some-times	Often	all the time
1... I was proud of myself					

## Appendices

2... I felt on top of the world					
3... I felt pleased with myself					
4... I had lots of good ideas					

4-....The next questions are about your family ...

During the past week...	Never	seldom	some- times	Often	all the time
1... I got on well with my parents					
2.... I felt fine at home					
3... We quarrelled at home					
4... I felt restricted by my parents					

5. ... and then about friends.

During the past week...	Never	Seldom	some- times	Often	all the time
1...I did things together with my Friends					
2...I was a "success" with my friends					
3...I got along well with my friends					
4...I felt different from other people					

6. Last of all, we would like to know something about school.

During the last week in which I was at school.....	Never	seldom	some- times	Often	all the time
1... doing the schoolwork was easy					
2... I found school interesting					
3... I worried about my future					
4... I worried about getting bad marks or grades					

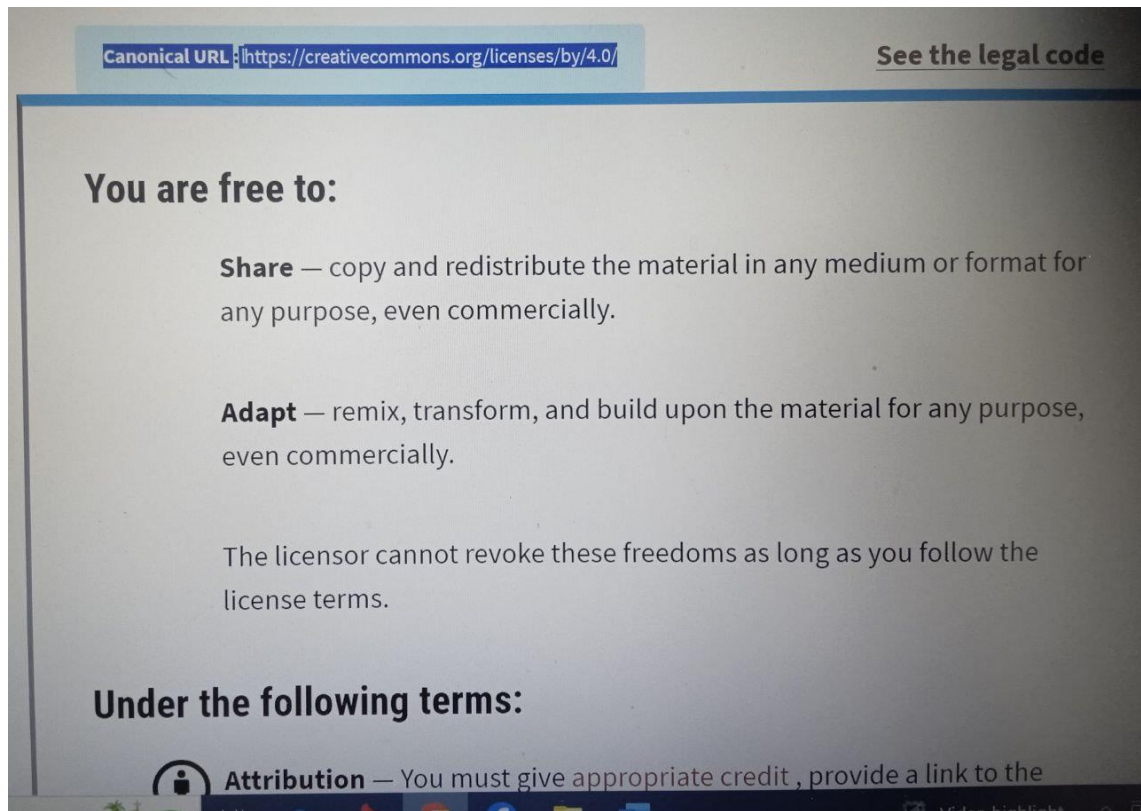
## Expert's Panel Appendix D

ت	اسم الخبير	العنوان الوظيفي	الشهادة	الاختصاص العلمي	سنوات الخبرة	مكان العمل
١.	سلمان حسين فارس	استاذ مساعد	الدكتوراه	تمريض صحة مجتمع	٣٢	جامعة كربلاء / كلية التمريض
٢.	زكي صباح مصيحب	استاذ مساعد	الدكتوراه	تمريض الاطفال	٢١	جامعة كربلاء / كلية التمريض
٣.	حسن عبد الله عذبي	استاذ مساعد	الدكتوراه	دكتوراه تمريض البالغين	21	جامعة كربلاء / كلية التمريض
٤.	غزوان عبدالحسين	استاذ مساعد	الدكتوراه	تمريض الصحة النفسية والعقلية	٢٠	جامعة كربلاء / كلية التمريض
٥.	محمد باقر حسن آل دخيل	استاذ مساعد	الدكتوراه	تمريض الاطفال	١٨	جامعة الكوفة / كلية التمريض
٦.	عذراء حسين شوق	استاذ مساعد	الدكتوراه	تمريض الاطفال	١٨	جامعة بغداد / كلية التمريض
٧.	وميض حامد شاكر	استاذ مساعد	الدكتوراه	دكتوراه تمريض الاطفال	١٦	جامعة الكوفة / كلية التمريض
٨.	اشوان عبدالزهرة	طبيب استشاري	بور	دكتوراه الصحة النفسية والعقلية	٢٠	جامعة الكوفة / كلية الطب
٩.	عرفات حسين الدجيلي	طبيب استشاري	بور	دكتوراه الصحة النفسية والعقلية	١٥	جامعة الكوفة / كلية الطب
١٠.	ريان ابراهيم خليل	مدرس	الدكتوراه	تمريض الاطفال	١٥	جامعة الموصل / كلية التمريض



## Appendix E

### Authors Permission



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## Appendix F Statistician' opinion

جمهورية العراق  
وزارة التعليم العالي والبحث العلمي  
جامعة كربلاء  
كلية التمريض  
شعبة الدراسات العليا

Republic of Iraq  
Ministry of higher education & scientific research  
University of Karbala  
College of Nursing  
Graduate studies Division

إقرار الخبير الإحصائي

أشهد بأن الرسالة الموسومة :  
" اثر وقت الشاشة على جودة حياة المراهقين "  
" Effect of Screen Time on Adolescents Quality of Life"  
قد تم الإطلاع على الإسلوب الإحصائي المتبع في تحليل البيانات و إظهار النتائج الإحصائية وفق  
مضمون الدراسة و لأجله وقعت .

توقيع الخبير الإحصائي  
الإسم و اللقب العلمي :  
الإختصاص الدقيق :  
مكان العمل : جامعة كربلاء كلية التمريض  
التاريخ : ٢٠٢٤ / ٤ / ٢٠

العنوان : العراق - محافظة كربلاء المقدسة - حي الموظفين - جامعة كربلاء  
Mail: nursing@uokerbala.edu.iq website: nursing.uokerbala.edu.iq

## Appendix G

### Linguist opinion

Republic of Iraq Ministry of higher education & scientific research University of Karbala College of Nursing Graduate studies Division		جمهورية العراق وزارة التعليم العالي والبحث العلمي جامعة كربلاء كلية التمريض شعبة الدراسات العليا
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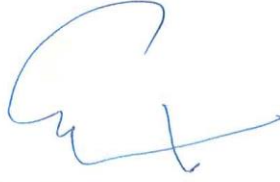
#### إقرار الخبير اللغوي

أشهد بأن الرسالة الموسومة :

" اثر وقت الشاشة على جودة حياة المراهقين "

" Effect of Screen Time on Adolescents Quality of Life"

قد جرى مراجعتها من الناحية اللغوية بحيث أصبحت بإسلوب علمي سليم خالٍ من الأخطاء اللغوية ولأجله وقعت .



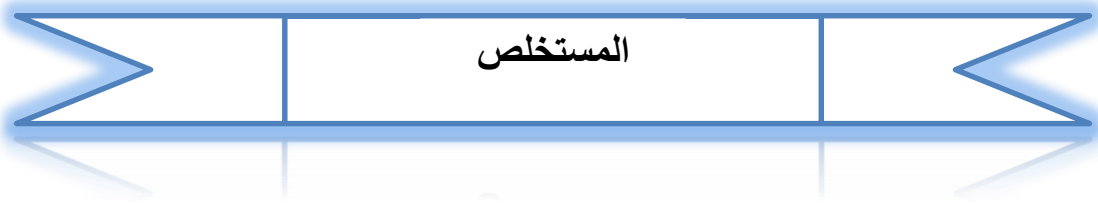
توقيع الخبير اللغوي :

الإسم و اللقب العلمي : م.د. عامر كطان الجواد

الإختصاص الدقيق : علم اللغة

مكان العمل : جامعة كربلاء | كلية التربية - قسم اللغة  
الإنكليزية

التاريخ : 2024 / 7 / 19



الخلفية : ارتبط الإفراط في استخدام الشاشات بتأثيرات سلبية على الصحة تؤدي إلى انخفاض جودة الحياة وتدهور الظروف الجسدية والنفسية.

الهدف: دراسة العلاقة بين مقدار الوقت الذي يقضيه المراهقون أمام الشاشات وجودة الحياة بشكل عام

الطريقة: أجريت دراسة مقطعية على ٣٨٧ طالب وطالبة من المدارس الثانوية في مدينة النجف الأشرف. تم جمع البيانات من ٢٤ شباط ٢٠٢٣ إلى ٢٥ أيار ٢٠٢٤، باستخدام استبيان تقرير ذاتي يتضمن تفاصيل ديموغرافية، واستبيان كندل ، واستبيان وقت الشاشة للمراهقين. تم استخدام الإحصاء الوصفي ومعامل ارتباط بيرسون وتحليل الانحدار الخطي لتحليل البيانات.

النتيجة : وأظهرت النتائج أن غالبية المشاركين (٥٥,٦%) استخدموا الشاشات لأكثر من ١٠ ساعات يومياً، وأظهر ٧٨% منهم مستوى متوسط من جودة الحياة. كشف تحليل ارتباط بيرسون عن وجود ارتباطات عكسية هامة بين وقت الشاشة اليومي ومجالات الرفاهية الجسدية ( $P = 0.022$ ) ، والرفاهية العاطفي ( $P = 0.029$ ) ، والأداء اليومي/المدرسة ( $P = 0.002$ ) ضمن إطار جودة الحياة.

الاستنتاجات: أثبتت هذه الدراسة وجود علاقة بين زيادة وقت استخدام الشاشات وتدهور الأداء البدني والعاطفي والمدرسي بين المراهقين.

التوصيات: أوصت الدراسة بتقليل الاستخدام اليومي للشاشات، وزيادة الوعي بين الطلاب وأولياء الأمور، وتشجيع النشاط البدني، وحث المدارس والمنظمات الصحية على تنفيذ برامج توازن بين استخدام الشاشات وممارسة التمارين الرياضية.



جامعة كربلاء  
كلية التمريض

## أثر وقت الشاشة على جودة حياة المراهقين

رسالة مقدمة الى مجلس كلية التمريض / جامعة كربلاء

وهي جزء من متطلبات نيل درجة الماجستير علوم في التمريض

بواسطة :

محمد عبدالعالي إبراهيم علي

إشراف:

أ.د. خميس بندر عبيد

ذو الحجة - ١٤٤٥ هـ

تموز ٢٠٢٤ م