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ELECTRONIC DEVICE USE: HOW IT AFFECTS
THE WELL-BEING OF CHILDREN AND ADOLESCENTS

A Project
Presented to the
Faculty of
California State University,
San Bernardino

In Partial Fulfillment
of the Requirements for the Degree
Master of Social Work

by
Amandalee Merryman
Sabrina Rodriguez

May 2021

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Approved by:

Armando Barragán, Faculty Supervisor, Social Work
Armando Barragán M.S.W. Research Coordinator

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ABSTRACT

Electronic device use among children and adolescents is omnipresent. Literature suggests an inverse correlation between electronic device use and the overall well-being of children and adolescents. The current study employed an explanatory research design to explore the association between excessive device use and the well-being of children and adolescents. Researchers collected and analyzed quantitative data in the form of archival data from a local school district's mental health department. A total of 50 participants, ranging from ages 5 to 17, were randomly selected from the 2018-2019 archived case files. The results of the study suggest that electronic device use has no significant impact on the well-being of children and adolescents. Specifically, no significant correlation was found between number of hours children and adolescents spend using electronic devices and their well-being: problematic behaviors, GPA, hours of sleep, diagnoses, peer support, and health problems. Nonetheless, social workers should take into consideration previous literature when assessing and treating children and adolescents in a mental health setting.

ACKNOWLEDGEMENTS

We would individually like to thank each other for the amount of time, dedication, collaboration, and thoroughness throughout the completion of this research study. We want to acknowledge and thank our research advisor, Dr. Barragan, for his support and guidance. We want to thank the director of the school district's mental health department for allowing us to utilize archived data. Most importantly, we want to thank the ones in our personal lives who supported and encouraged us to succeed, remained patient with us, understood the sacrifices that would be endured and gracefully accepted any additional responsibilities that would be required in order to complete this research study. Specifically, we want to acknowledge and thank Sabrina's husband and children, as well as Amandalee's son, Ryder, and her family.

TABLE OF CONTENTS

ABSTRACT.....	iii
ACKNOWLEDGEMENTS.....	iv
CHAPTER ONE: INTRODUCTION	
Problem Formulation.....	1
Purpose of the Study.....	3
Significance of the Project for Social Work Practice.....	4
CHAPTER TWO: LITERATURE REVIEW	
Introduction.....	6
Excessive Device Usage and Screen Time Exposure.....	6
Parent Educational Attainment.....	7
Parental Involvement.....	8
Social Support and Attachment.....	9
Mental Health.....	10
Physical Health.....	11
Sleep Patterns.....	11
Academics.....	12
Theories Guiding Conceptualization.....	13
Summary.....	14
CHAPTER THREE: METHODS	
Introduction.....	15
Study Design.....	15
Sampling.....	16

Data Collection and Instruments.....	17
Procedures.....	18
Protection of Human Subjects.....	19
Data Analysis.....	20
Summary.....	21
CHAPTER FOUR: RESULTS	
Introduction.....	22
Descriptive Statistics.....	22
Correlation Analysis.....	23
Summary.....	25
CHAPTER FIVE: DISCUSSION	
Introduction.....	26
Discussion.....	26
Limitations.....	28
Recommendations.....	29
Conclusion.....	31
APPENDIX A: DATA COLLECTION GUIDE.....	34
REFERENCES.....	36
ASSIGNED RESPONSIBILITIES.....	43

CHAPTER ONE

INTRODUCTION

Problem Formulation

Electronic devices have become the focus of children and adolescents' attention in modern times. In fact, in 2018 45% of U.S. adolescents ages 13-17 reported being online almost constantly (Anderson & Jiang, 2018). Electronic devices can be described as cell phones, tablets, computers, televisions, and game consoles. Accessibility to electronic devices is nearly ubiquitous (Anderson & Jiang 2018). In 2018, 95% of U.S. adolescents reported that they own or have access to a smartphone. Similarly, 84% stated that they own or have access to a gaming console.

The American Academy of Pediatrics (2016) recommends that screen time should be limited to 1 hour for children ages 2 through 5. Parents should limit screen time and not allow electronic devices to replace physical activity and activities beneficial to a child's well-being for children ages 6 and older. For the purpose of this study, well-being includes physical health, psychological health, sleep patterns, and academics.

Although electronic devices can be beneficial, excessive use has been found to have a harmful impact on the welfare of children and adolescents (Dominguez-Montanari, 2017). Much of the research conducted on device use specifically focuses on the risks associated with children's overexposure to

excessive screen time and implies that this issue could be considered a public health issue (Haughton & Cheevers, 2015; Radesky & Christakis, 2016).

Ramifications of excessive device in childhood and adolescence may include non-adaptive and negative thought processes, higher physiological stress, decreased life satisfaction, lower social support systems, and higher risk of mental, emotional and physical health issues into adulthood (Lissak, 2018).

Merlo, Stone and Bibby (2013) suggested that excessive phone use in inappropriate situations may lead to numerous ramifications, including safety risks and poor interpersonal relationships.

Sleep health has also been found to be negatively impacted by excessive screen-time. In 2014, 72% of children and adolescents ages 6 to 17 had at least one electronic device in the bedroom (National Sleep Foundation, 2014). In 2011, 55% of adolescents ages 13 to 18 reported using the internet within an hour before going to sleep for the night (National Sleep Foundation, 2011). 56% reported texting within an hour before falling asleep. 50% reported watching television within an hour before falling asleep. 14% of adolescents reported playing video games within an hour before falling asleep. Research suggests electronic device use during the evening is negatively associated with sleep quality (Buxton et al., 2015). Children and adolescents experienced a significant reduction in sleep quality when they used electronic devices during the evening before bed or left the television on overnight. In fact, children and adolescents

experienced a loss of 30 minutes of sleep a night when the television was occasionally left on.

Purpose of the Study

The purpose of the research study was to provide insight into the issues that arise with excessive electronic device use for mental health professionals; specifically, who work with youth in a school-based setting. Electronic device utilization is nearly ubiquitous amongst children and adolescents which creates a concern for the impact it has on the overall health of the targeted population (Anderson & Jiang 2018; Lauricella et al., 2015). In the current study, researchers aimed to examine the relationship between electronic device use and the well-being of children and adolescents between the ages of 5 and 17. Well-being is defined as the psychological health, physical health, sleep quality, and academic performance of children and adolescents. It is also defined as the presence or absence of a social support system and number of problematic behaviors. The research should be utilized to assist mental health professionals when treating clients in a school-based mental health setting.

A pre-experimental design best addresses the proposed issue. With characteristics of an explanatory study, quantitative data was gathered. Archival data was retrieved from the case records at a local school district's mental health department. The data provided enough information in regard to each variable and is the most appropriate source of data available to researchers. Data was

collected from the case records of children and adolescents ages 5 to 17 who received mental health services in the 2018 and 2019 school year within the local school district.

Significance of the Project for Social Work Practice

The need for this study arose by the increased incidence of technology usage and screen-time exposure in society. Ease of access to electronic devices and the overwhelming presence of electronic device usage in daily life activities have impactful positive and negative ramifications on family systems, adequate biopsychosocial functioning and the overall well-being of children and adolescents. The study is significant because although there is ample research conducted on electronic device usage, there is a lack of research available that assesses the biopsychosocial impact of excessive electronic device usage and screen-time exposure on youth, in a clinical, school-based setting.

The focus of this research study assessed important family demographic factors such as age, gender, race, family income, marital status and parental education attainment, which may influence the prevalence of electronic device usage and screen-time exposure. Additional variables explored the potential impact and correlation between electronic device usage and youth academic performance, mental health, physical health, social health, sleep patterns, and problematic behaviors. Assessing the correlation between these factors and potential ramifications of this study, may enable clinical social workers, mental

health professionals and school-based mental health programs to develop and implement strategies, interventions and guidelines intended to promote children and adolescent social, emotional, mental and physical well-being.

The findings of this study may contribute to school-based social workers, mental health professions and school districts abroad. Researchers in the field of social work and mental health interested in the relationship between youth well-being and screen time, will find the current study useful. Specifically, the study's findings may be of significant importance to the local school district's behavioral and mental health program. It is necessary to understand the issues related to excessive screen-time exposure and electronic device usage when facilitating and providing interventions for the improvement of child well-being and the overall family systems and functioning. Thus, the research question addressed in this study is: How does electronic digital device use impact the well-being of children and adolescents?

CHAPTER TWO

LITERATURE REVIEW

Introduction

This chapter consists of an examination of the research relevant to children and adolescents' excessive exposure and usage of electronic devices and the correlating factors that may impede, as well as benefit their overall well-being. The subsections will include social support and attachment, mental health, physical health, sleep patterns, academics and demographic factors. The final subsection will examine the Time Displacement Theory and the Social Cognitive Theory, as it pertains to the concept and population of study.

Excessive Device Usage and Screen Time Exposure

The concern towards children's excessive screen-time exposure has been the topic of debate, since the 1990's. In 1999, the average daily screen-time exposure of children and adolescents was 6.21 hours per day (Magee et al., 2014). This measurement was based on television screen-time exposure. Advancement in technology, along with a shift in youth and family choice of electronic devices used, have played a critical role in the increase of screen-time exposure for children and their families. Statistics show that 75% of families own some type of mobile device, internet-enabled device, and/or a smartphone and is

constantly rising (Lauricella et al., 2015). Mobile electronic device usage and access to constant internet has many beneficial attributes but has also raised immense concern in regard to the long-term and developmental effects that excessive electronic device screen-time may have on children and adolescents (Falbe et al., 2015). Many factors contribute to children and adolescent excessive electronic device use and screen-time exposure. An important relationship to consider when analyzing both the variances and similarities in the findings of various research studies are: Parent educational attainment, profession, parenting-styles and mediation. Subsequently, the ramifications, themes and interlinking factors associated with excessive exposure to screen-time and digital device use, as it directly relates to children's and adolescent's social, emotional, mental and physical well-being will be evaluated and assessed.

Parent Educational Attainment

Socio-economic status of a family is important to consider when assessing excessive exposure to screen-time on electronic devices and the ramifications that the overuse of devices may have for children and adolescents. The educational background, income and current profession of the parent/s or caretaker/s of children correlate with the various outcomes presented in research studies. One study suggests that parents with higher education obtain an enhanced critical view of technology, pertaining to the way digital devices and technology is used in the home, and exhibits control over children's technological practices in a more positive manner, than their counterparts (Pauwels et al.,

2008). Additionally, parents with a higher education tend to be more supportive, involved in media use conjointly with their children, and have more experience and knowledge about digital media, such as the positive and negative influences associated with screen-time usage (Hollingsworth et al. 2011; Nikken & Jansz, 2014).

In contrast, most recent research has highlighted that parental educational attainment is not a major indicative factor that affects child excessive screen-time exposure or use. Furthermore, it is important to consider the parent's digital practices and their attitudes and acuties towards digital technology, and not only parental educational attainment (Brito, Francisco, Dias, & Chaudron, 2017). Today's parents tend to be digitally inclined to be experienced and skillful digital users, who enjoy engaging in digital media consumption themselves and with their children (Plowman et al. 2008). Consequently, modern "digital native" (Prensky, 2001) parents tend to vary in their attitudes and beliefs towards device usage and amount of consumption, depending on context and environment, ultimately lacking consistency reliability. For example, even with high educational attainment, modern parents who set limitations and control children's screen-time exposure become permissive with digital media use at home, by utilizing mobile tablets and other devices as "babysitters" for their children, so parents can have time to work from home, complete other household tasks, or have personal leisure time (Brito, Francisco, Dias, & Chaudron, 2017).

Parental Involvement

The roles that parent's play in a child's life is extremely significant and influences the outcomes and opportunities in the child's life cycle. Parental involvement may mitigate excessive digital device usage by implementing strict rules and controlling the amount of time spent on digital devices and type of media being consumed. Divergently, children that lack parental involvement or support tend to exhibit high usage of technological devices and some may even consider themselves to have an addiction to devices (Brito et al., 2017). For the purpose of this study, it was important to assess and evaluate parental involvement, coupled with family socio-economic and demographic factors, utilizing a holistic approach, in order to acquire a more accurate perspective on the impact these variables may have on children device usage and their overall well-being.

Social Support and Attachment

Positive social well-being and healthy relationship attachments contribute to an individual's overall well-being, by promoting the relationship between family and immediate support systems and also by improving life satisfaction, mindfulness and resilience to life stressors. Excessive digital device use and screen-time may be negatively impacting these factors (Pop, 2014; Sahin, Baltaci & Karatas, 2015). Direct, face-to-face communication is strongly correlated to positive social support and well-being (Pea et al., 2012). However, with the increase of digital device usage, communication is shifting away from face-to-

face interactions and moving towards virtual communication through technology. Research has indicated that excessive device media usage may lead to addictive behaviors (Love et al., 2015). Studies have found that screen-addicted children and adolescents have less social support with their family and peers and have a relatively low life satisfaction (Pea et al., 2012; Wu et al., 2016). The societal shift from face-to-face, direct communication, towards virtual communication is hindering offline social relationships, decreasing social support systems and negatively impacting children's and adolescent's psychological well-being (Andreassen et al., 2016; Wu et al., 2016).

Mental Health

Depression, attention deficit/hyperactivity disorder (ADHD), suicide and addiction are on the rise among children and adolescents and is a growing public health concern year after year. Research findings have suggested a causal relationship between depression, suicidal behavior and excessive screen-time use among children and adolescents (Maras et al., 2015; Wood & Scott, 2016). Additionally, researchers found an adverse association between screen-time use and psychological well-being (Twenge & Campbell, 2018). Adolescents who used a large amount of time using electronic devices were twice as likely to have been diagnosed with disorders such as depression and anxiety. They were also more likely to have been treated by a mental health professional and have taken psychotropic medications. Moreover, children and adolescents were found to exhibit decreased curiosity, self-control and emotional stability. They were also

more likely to have a difficult time making friends. Additional studies have found a link between portable digital device use and self-reported feelings of depression and depressive behaviors (Bezinovic et al., 2015; Kim et al., 2010). However, Ferguson (2017) research suggests that reducing digital device and screen-time exposure is unlikely to be effective in improving the mental well-being of children and adolescents.

Physical Health

Physical health is an important factor to assess, when discussing the well-being of children and adolescents, in association with excessive device usage. Excessive screen-time exposure has been associated with physical health issues, such as obesity, poor vision, and musculoskeletal issues. The relationship between physical health issues and excessive digital device use and screen-time is a focus of the current study.

Nightingale, et al. (2017) suggest an association between obesity and children, ages 9 to 10, who have three or more hours of screen-time per day. Children who are allotted an excessive amount of screen-time exposure tend to acquire a reduced amount of sleep and physical activity (Pérez-Farinós et al., 2017). However, Magee et al. (2014) suggests an interactional relationship between obesity, sleep and screen-time exposure. The researchers argued that obesity may be impacting both the amount of obtained sleep-time and screen-time, because they may normally live a sedentary lifestyle.

Sleep Patterns

Children are experiencing sleep problems due to higher screen-time use (Kubiszewski et al., 2014). Lemola et al. (2015) found that high cell phone use was a predictor of poor sleep quality. Whereas, no association was found between sleep quality and TV, game consoles, and computer use. Lack of sleep or sleep disturbances are known factors that perpetuate the presence of depression and suicidal behavior. Studies have linked adolescent nighttime digital device use and excessive screen exposure to increased rates of depression, suicidal thoughts and negative behaviors among children and adolescents (Lemola et al., 2015; Oshima et al., 2012).

Academics

Researchers conducted a systematic review and found a lack of relationship between screen-time and academic performance (Adelantado-Renau et al., 2019). On the other hand, studies have found a deleterious effect of screen-time on academic performance (Johnson et al., 2007; Shariff et al., 2010). Children who spent more time using electronic devices completed less homework and were more likely to have learning difficulties. Similarly, another study found an inverse relationship between screen-time and academic achievement (Garcia-Hermoso & Marina, 2017). Children and adolescents were less likely to perform well academically when they exceeded the recommended screen-time use. Researchers found adolescents were 40% less likely to perform

well academically when they spent more than 7 hours per day on screens (Faught et al., 2017).

Theories Guiding Conceptualization

The theories utilized to conceptualize the topics discussed in this study are the time displacement theory and the social cognitive theory. Past researchers have used the time displacement theory as a theoretical guide to help explain the implications of excessive screen time use (Garcia-Hermoso & Marina, 2017; Shariff et al., 2010). The time displacement theory suggests that the time children and adolescents spend in front of screens replaces the time they spend on other activities. For the current study, researchers utilized the time displacement theory to assist in understanding the consequences children and adolescents experience when they use a great amount of time using electronic devices. Researchers examined the amount of time children and adolescents spend using electronic devices compared to the time they spend in other spare time activities.

Researchers have also used Bandura's social cognitive theory to help explain how screen time influences children and adolescent's behavior (Carson, Pickett, & Janssen, 2011). The social cognitive theory uses observational learning to explain behavior, which states that people learn behaviors by observing and imitating other people. Researchers suggest that children and adolescents learn problematic behaviors from violent videos, video games and the media that they are exposed to. This theoretical perspective assists in

guiding this study by assessing the family systems, parenting-style, and parent mediation which will impact the outcomes and relationship of the learned and observed behaviors of the population, in reference to digital device use.

Summary

This study explored the issues that arise with excessive electronic device usage and screen-time exposure and also explored factors that affect the outcomes and overall well-being of the targeted population. The type of media consumption, coupled with the amount of time children and adolescents are allotted for screen-time are important elements for social workers and mental health professionals to consider, when assessing the physical, mental, emotional and social well-being of the youth in a school-based setting. There are many negative factors associated with excessive electronic device usage and screen-time exposure that have been identified in the literature. However, research also supports positive outcomes for children and adolescents that are monitored during electronic device use, have limited daily screen-time and are exposed to positive and educational content. Time Displacement Theory and the Social Cognitive Theory can assist professionals in the school-based and clinical setting to better understand and help the youth with this increasing problem, as well as seek potential guidelines, interventions and possible solutions for improved outcomes and service application.

CHAPTER THREE

METHODS

Introduction

This study gathered information about the relationship between electronic device use and the well-being of children and adolescents between the ages of 5 and 17. This chapter consists of six sections. The first section presents an overview of the study design. The second section describes the sample from which the data will be obtained. The third section explains what data will be collected. The fourth section describes the procedures to gather the data. The fifth section describes the protection of human subjects. Finally, the sixth section will analyze the data.

Study Design

The purpose of this study was to explore the association between electronic device use and the well-being of children and adolescents in a local school district. This was an explanatory research topic because it evaluates the amount of device usage and content exposure and various demographic factors, as well as sleep patterns, academic progression, physical health, mental health, and social support and attachments. Quantitative data was collected and coded from archival files from the 2018-2019 academic school year. The archival data

files are from a local school district's behavioral and mental health program that are comprised of children and adolescents, who received behavioral and mental health services. Practical methodological strength of the study includes the ability to gather data from client case files and generalize the results to a local school district's student population. Additionally, utilizing student case files allowed the student researchers to gather all the necessary information to conduct this study, without ample cost effects or time consumption. Limitations of the design include not having access to each client in the population to inquire follow-up questions to gather more information. Student researchers based the information gathered in this study off of various clinician's client files. Researchers were unable to generalize this study to any other population, other than the school district in close proximity to the researchers.

Sampling

The sample from which the data was obtained is a portion of the overall archived case files from the 2018-2019 academic school year, of children and adolescents who received school-based behavioral and mental health services. This academic year was used because it was the most recent data available to researchers; the current academic school year, 2019-2020, was incomplete. The student researchers chose the first 50 opened case records, out of the total 345 received referrals for the 2018-2019 academic school year, to review and code. The sample size was reflective of the total population served during the time

period and was considerate of the time and resources necessary to effectively complete this study. This sampling method was a non-probability, purposive sampling method, due to the amount of case files available for review, coupled with the differentiation in demographic information, treatment plan contexts and assessment responses. Probability sampling methods were not a plausible option or beneficial to this study.

Data Collection and Instruments

Quantitative data was gathered from case records of children and adolescents who received mental health services from a local school district's mental health program in the 2018-2019 academic school year. The data was collected at the district's behavioral and mental department.

The current study consists of one independent variable and six dependent variables. The independent variable is children and adolescent electronic device use. Researchers measured the independent variable by examining the number of hours children and adolescents spend using electronic devices daily. Ratio is the level of measurement for the independent variable. The six dependent variables include: problematic behaviors, academic performance, peer support, mental health, physical health, and sleep patterns. Problematic behaviors were measured by the number of problematic behaviors stated on a mental health referral, academic performance was measured by grade point average; mental health was measured by the number of corresponding diagnoses stated on a

mental health treatment plan; sleep patterns were measured by the number of hours of sleep each night. Each of these variables is a ratio level of measurement. Peer support was measured by the presence or absence of a peer support system; physical health was measured by the presence or absence or current health problems. Each of the variables is a nominal dichotomous level of measurement. Demographic data and parental involvement with services was reviewed and assessed in the data collection process as well, in order to provide a more thorough understanding of the problem and related factors. Demographic data, such as age, race, family income, parental education attainment and family household demographic information was used as a tool to cross-reference with the amount of electronic device usage and was a nominal categorical measurement. Parental involvement in services was measured as the overall presence or absence of parental support and involvement with behavioral and mental health services through the local school district and was a nominal dichotomous measurement.

Procedures

A local school district's behavioral and mental health program provided consent to allow California State University San Bernardino's MSW student researchers to conduct this study. The school district gave the two student researchers access to all of the archived case files that are composed of students in their district who received behavioral and mental health services from

the 2018-2019 academic school year. For the purpose of this study, two student researchers reviewed a total amount of 50 case files. Data was gathered by reviewing each case file's initial referral, assessment, treatment and parent contact notes. These documents allowed the student researchers to acquire all of the necessary information to complete this study. Data collection took place at a local school district's behavioral and mental health program's main office, where the archived files were securely located. The case file review process and data gathering took 1 day to complete.

Protection of Human Subjects

All of the children and adolescents, along with their parents, who have received services through the local school district's behavioral and mental health program have signed informed consent and been debriefed, as well as provided with information regarding the school district's research partnership with California State University San Bernardino (CSUSB). During the initial intake and assessment with the parents and their child, the research partnership between the school district and CSUSB is discussed, parents and children are informed that there will be no identifiable information shared and both anonymity and confidentiality will be maintained in the study and results. Each student researcher maintained client and family confidentiality and anonymity by gathering basic demographic information, such as age, race/ethnicity, family household income, parental education attainment and household demographic

information (i.e., Single-parent household, multi-generational household, single family household, etc.). To ensure confidentiality and anonymity, names, addresses, school information, phone numbers and all other personal and identifiable information was not utilized or reported in this study.

Data Analysis

Quantitative data was gathered by researchers to evaluate and assess how excessive electronic device usage affects children and adolescent overall well-being. Procedurally, quantitative data collection was conducted utilizing archived case files from the 2018-2019 academic school year. The independent variable was the amount of time students spend using electronic devices. The dependent variables within the research consisted of challenging behaviors, academic functioning, peer support, mental health, physical health, and sleep patterns. Researchers aimed to analyze the associations between the independent and dependent variables.

Researchers collected non-identifiable information from the first 50 archived files. Specifically, demographic data including gender, age, race, family income, marital status and parental education attainment was gathered. Additionally, non-identifiable information related to the independent and dependent variables was collected. After gathering the necessary data, researchers conducted a data analysis utilizing an SPSS statistical software.

Researchers conducted a correlation analysis when examining the independent variable and dependent variables.

Summary

The current study aimed to examine the effects of electronic device use on the well-being of children and adolescents, while also examining the factors that contribute to the effects of excessive device use on the intended population. Quantitative data best addressed the proposed research topic. Children and adolescents are a vulnerable population to study. Therefore, secondary data was collected from the local school district's mental health program. Parents and students were informed about a research agreement with CSUSB and have consented to non-identifiable information being shared with researchers. The data should contribute to the mental health field by providing insight into the issues that arise with excessive use of electronic devices, specifically, in a school-based setting.

CHAPTER FOUR

RESULTS

Introduction

The purpose of this chapter is to analyze the data of the research study. The first section will provide descriptive statistics for the study. The next section will summarize the inferential statistics, correlation analysis and the independent sample T-test conducted between the independent variable and dependent variables. The chapter will conclude with a general review of the results of the study.

Descriptive Statistics

Descriptive statistics were conducted to provide a profile of the respondents in this study. Researchers were able to obtain a total of 50 participants in this study, utilizing archival data. The participant ages ranged from 5 years old to 17 years old with an average of 5.38 and a standard deviation of 2.767. Of the 50 participants, 64% were male and 36% were female. 12% of participants were in elementary school; 36% of the participants were in middle school; 52% of the participants were in high school. Additionally, 94% of the participants identified as Hispanic, 2% of the participants identified as Asian, and 4% of the participants identified as African American. Parent demographics such as education status and marital status, were also collected to understand the

results of the study. Of the participants, 36% of participants' parents were not high school graduates, 40% of participants' parents were high school graduates, 20% of participants' parents completed some college, 2% of participants' parents were college graduates, and 2% of parents' education status was unavailable to researchers. Marital status was distinguished as single, married, divorced, and separated/widowed. 7% of participants' parents were single, 52% of participants' parents were married, 14% of participants' parents were divorced, 10% of participants' parents were separated/widowed, and 10% of parents' marital status was unavailable to researchers. Information about the number of people living in a household was also gathered. This number ranged from 2 people to 11 people living in each household, with an average of 5.38 and a standard deviation of 1.652.

Correlation Analysis

Inferential statistics were utilized to analyze the independent variable in relation to each of the six dependent variables. The following four dependent variables: number of problematic behaviors, grade point average, hours of sleep, and number of diagnoses on a treatment plan, were interpreted utilizing correlational analysis, specifically the Pearson's correlation, due to the aforementioned dependent variables being an interval level of measurement. Additionally, an independent sample t-test was used to analyze two independent variables on a nominal scale, which explored the data obtained for the presence

or absence of peer support and presence or absence of health problems of the participants.

No significant relationship was found between number of hours using electronic devices and number of problematic behaviors. A Pearson correlation coefficient found no relationship between number of hours of electronic device use and number of problematic behaviors, $r = -.22$, $n = 50$, $p = .12$.

No significant relationship was found between number of hours using electronic devices and grade point average. A Pearson correlation coefficient found no relationship between number of hours using electronic devices and grade point average, $r = -.13$, $n = 32$, $p = .49$.

No significant relationship was found between number of hours of electronic device use and number of hours of sleep. A Pearson correlation coefficient found no relationship between number of hours of electronic device use and number of hours of sleep, $r = -.19$, $n = 48$, $p = .19$.

No significant relationship was found between number of hours using electronic devices and number of diagnoses on a treatment plan. A Pearson correlation coefficient found no relationship between number of hours using electronic devices and number of diagnoses on a treatment plan, $r = -.17$, $n = 50$, $p = .25$.

An independent samples t-test was conducted to compare the electronic device use scores for presence and absence of peer support. There was no significant difference in scores for presence of peer support ($M = 4.37$, $SD =$

2.674) and absence of peer support ($M = 3.63$, $SD = 2.856$); $t(48) = .88$, $p = .39$, two-tailed. No significant relationship was found between the number of hours using electronic devices and presence or absence of peer support.

An independent samples t-test was conducted to compare the electronic device use scores for presence and absence of health problems. There was no significant difference in scores for presence of peer support ($M = 4.91$, $SD = 2.672$) and absence of peer support ($M = 3.79$, $SD = 2.711$); $t(48) = 1.36$, $p = .18$, two-tailed. No significant relationship was found between the number of hours using electronic devices and presence or absence of peer support.

Summary

The aforementioned chapter analyzed the data collected for this study. No significant correlation was found between the independent variable (number of hours using electronic devices) and each of the six dependent variables (problematic behaviors, GPA, hours of sleep, diagnoses, peer support, health problems). The results of the study failed to reject the null hypothesis.

CHAPTER FIVE

DISCUSSION

Introduction

The purpose of this chapter is to review the results of the data analysis and the significance of the findings, as it pertains to the research question. Additionally, an analysis of whether the results support the findings in the literature review will be assessed. The following sections will identify any unanticipated results, possible explanations, limitations, and recommendations for social work practice, policy and future research. Finally, the conclusion will explore broader implications of the research findings, as it relates to social work.

Discussion

The literature review data presented in chapter two suggested that the data collected for the six dependent variables would be significantly influenced by the independent variable in this study. The Pearson's correlation test was utilized to assess the correlation between children and adolescent electronic digital device usage and the four interval dependent variables: number of problematic behaviors, grade point average, hours of sleep, and number of diagnoses on a treatment plan. Similar to researchers, Adelantado-Renau et al. (2019), the current study found no significant relationship between academic performance and electronic device use. Additionally, this study found no significant correlation

between children and adolescent electronic device usage and number of problematic behaviors, hours of sleep, nor number of diagnoses reported on a treatment plan, contrary to the data presented in the remainder of the literature review. Lastly, an independent sample T-test was performed to examine the correlations between the two nominal variables and the dependent variable. Data outputs found no significance between device usage and the absence or presence of peer support in a child or adolescent's life. Similarly, the data results found no significance between child and adolescent electronic device usage and the presence or absence of physical health.

The research and statistical data presented in the chapter two literature review inferred significance and supported the claim that the number of hours that children and adolescents spend on electronic devices affects their overall well-being and success. This study indicated no significance between time spent on electronic devices and the impact on children and adolescent well-being. This study's inability to reproduce significant correlations between the variables, based on previous research data, may be explained by unforeseen occurrences with the archival data content and sample size. During the data collection process, researchers began to recognize that many case files were incomplete or missing pertinent information for various dependent variable categories and therefore, were considered missing values and did not contribute to the respective variable results. Furthermore, when analyzing the data, the researchers recognized that along with missing value information, the reduced

amount of case files available in comparison to following years and subsequent sample size, may have impacted the data analysis and results.

Limitations

The results of this research study were limited by a variety of factors, including, but not limited to: the amount of available archived case files for the academic year chosen, collection of self-reported data, and the small sample size that data was collected from. The limited amount of available archived case files, may be as a result of the school-based mental and behavioral health program being in its second year of operation for the academic year that this study examined. As a result, the researchers were only able to obtain a limited, randomized sample size, which compromises the validity and reliability of this study and may not accurately represent the sample population. Furthermore, due to the program being fairly new, the ability to adequately fulfill staff training needs, obtain enough staff/interns to support the school-district community needs, provide community outreach and psychoeducation to increase caseload size, and the continued development and alteration of the program, policies and procedures, may have affected the data results. The previously mentioned limitations may be attributable to pertinent information not being able to be obtained, included or analyzed in this case study, as a result of incomplete archived case files.

The validity and reliability of the data collected and analyzed is another limitation of this study. The data collected and subsequent statistical output may not be valid nor reliable due to utilizing self-reported information from respondents as the premise for the data collected in this study.

Parents/guardians and children/adolescents provided self-reported information, in the forms of a biopsychosocial assessment and program referrals, which were included in the archived case file data that was collected. Self-reported information may limit the validity and reliability of the study, based on the potential for respondent underreporting, overreporting, or not providing any information. Respondents may underreport, overreport, or not provide any information due to perceived stigmas, feelings of judgment and/or inadequacy, or to be viewed in a better light. This may provide a possible explanation for missing values associated with parental education, parental income, and student GPA data, along with discrepancies noticed between parent and child/adolescent responses for the number of hours spent on device usage, number of hours of sleep and presence or absence of peer support data.

Recommendations

Based on the data collected, output and analysis of this study, it is appropriate to suggest recommendations for future social work practice and research. Although this research study yielded the inability to find significance between children and adolescent device usage and number of problematic

behaviors, grade point average, hours of sleep, number of diagnoses on a treatment plan, presence or absence of parental support, nor presence or absence of peer support, social workers should educate themselves on the potential impacts that excessive electronic device usage may have on the mental, emotional, social, physical and academic well-being of children and adolescents. It is important to note that understanding the type of media being excessively accessed on digital devices may be an important and necessary component to explore, when assessing the impact of digital device usage on children and adolescent well-being, for future research.

The results of this study suggest that the sample size may not have provided enough data to indicate any significance between the independent and dependent variables. For future research on this research topic, a larger sample size would be imperative, in order to obtain more accurate data that is representative of the population. Additionally, it would be beneficial for future researchers to obtain archival case files from an academic school year that contains a larger population, for the purpose of effectively and methodically being able to obtain a larger sample size. Acquiring data from a more recent academic year with a larger population served, will promote the capacity of researchers to not only obtain a larger sample size from the population, but also endorse a more reliable randomization method, which should foster increased reliability and validity of the data and corresponding results.

As mentioned in the limitation portion of this chapter, accessing case files that were incomplete or missing pertinent information for this study were one of many factors that affected the data analysis and results. It is important for future researchers to vet the archived case files before collecting data, to ensure that the case files are completed and not missing pertinent data for a more thorough data collection process. It is also recommended that school-based social workers understand the importance of completing a thorough assessment and maintaining adequate up-keep of client files and the implications that not doing so may have on client systems, service delivery, policy and research data. Due to the results of this study indicating an insignificant relationship between the independent variable and the dependent variables, it is not suitable to provide recommendations for social work policy implications or change at this time.

Conclusion

In essence, the results of this study indicate that there is no significance between children and adolescent electronic device usage and number of problematic behaviors, grade point average, hours of sleep, number of diagnoses on a treatment plan, presence or absence of parental support, nor presence or absence of peer support. Contrary to the literature review, which supported the assumed correlation between the independent and dependent variables, this study was unable to indicate significance of the impact of electronic device usage on children and adolescent well-being, nor mirror previous, peer-reviewed

research results. After analysis of the collected data and results, researchers recognized that the limitations of the amount of available archived case files for the academic year chosen, collection of self-reported data, unavailable pertinent information, and also the small sample size that data was collected from may have impacted the validity and reliability of the results.

Based on the research results and noted limitations of this study, recommendations for future research and social work practice are imperative in order to gain a better understanding of the issue and gather a representative sample of the population. Due to the findings of this study, recommendations for social work policy or procedure changes cannot be advised at this time. Subsequent research on this topic of study should obtain a larger sample size from the population, vet case files before data collection to ensure that pertinent information is completed and accessible, and potentially include the type of media children and adolescents are accessing during device usage. Moreover, it is important for social work practice that school-based mental health professionals receive proper training and understand the importance of documentation, conducting adequate assessments and maintaining client case files, as well as the implications that deficient case file information may have on future research, service delivery, client systems, social work practice, policies and procedures. In conclusion, future research should be conducted on this research topic, taking into consideration the aforementioned discussion, limitations and recommendations in order to obtain a more valid and reliable data

representation of the impacts that electronic device usage may have on the children and adolescent population involved with school-based mental and behavioral health services.

APPENDIX A
DATA COLLECTION GUIDE

- Age
- Gender
- Race
- Family income
- Marital status
- Highest level of parent education
- Use of electronic devices
- Problematic behaviors
- Grade point average
- Peer support
- Diagnosis
- Physical health
- Sleep patterns
- Parental involvement with services

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ASSIGNED RESPONSIBILITIES

The research project required partnered researchers, due to the research project taking significantly longer than one person can manage in the allotted time to collect data. Both researchers equally agreed to contribute to composing all required documents necessary to gain approval from IRB for the research study, before data collection began. Researchers agreed to equally take on the responsibility of collecting data, ensuring confidentiality of respondents was maintained and all IRB guidelines were followed, as well as analyzing the data with the research supervisor. Researchers also agreed to equally participate in documenting the process: outcome, implications, limitations and future recommendations for the research study.