iJRASET
International Journal For Research in Applied Science and Engineering Technology



INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Volume: 9 **Issue:** IV **Month of publication:** April 2021

DOI: https://doi.org/10.22214/ijraset.2021.33783

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International Journal for Research in Applied Science & Engineering Technology (IJRASET)
ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.429
Volume 9 Issue IV Apr 2021- Available at www.ijraset.com

Internet Accessibility and Its Effect to Children's Sleeping Pattern

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Abstract: ***The internet is the backbone of an advancing society. It is seen as offering an improvement for society or as an introduction of new problems. Internet use both has positive and negative effects. When it comes to a household, there is an emerging concern of misuse of the internet by the youth. Especially as there is a current pandemic, it is not just the adults who have transitioned to the online world but the children as well. Schools have gone from face-to-face classes to modular or online classes. Children also use the internet for entertainment and interaction. Without supervision, this could lead to misuse ranging from sleeping very late at night to viewing inappropriate content. This study observes the sleeping time of children using the internet. The participants of this study are 5 children. The data collected is through questionnaires and interviews from the parents and guardians of the children involved.***

Keywords: ***Internet, children, dyssomnia, unsupervised internet use***

I. INTRODUCTION

In 2018, 94% of children ages 3-18 years old living in households had home internet access. The 94% is an average of household of different ethnicity in the United States. Children today are already exposed to technology. In the advancement of technology access to different type of gadgets such as smartphones, tablets and desktops have never been easier, and all these gadgets can be easily connected to the internet.

The internet is constantly evolving, it is becoming a trusted and reliable source of information by both children and adult. Through the internet young children (2-12) now have access to information, entertainment, and opportunity for interaction. However, risks and dangers come with an unsupervised child and one of the many risks is sleep problems caused by addiction and is very common among children.

According to American Academy of Pediatrics children should have around 12 hours of sleep and not less than 9 hours. All of us have a natural body clock that helps us sleep and if we follow this rhythm, it helps us get through the next day without feeling tired. Keeping consistent sleeping habits also reduce risk of health problems, one example is childhood obesity. With children more engaged with the internet, it may have some benefits, but misuse also comes with negative effects on the child.

Recent evidence regarding young children 12 years old and below shows that young children enjoy a range of activities online including watching videos, researching their homework, and engage in virtual interactions whether it may be through video games or social media. There is also a trend for children to bring and use these devices connected to the internet at school especially smartphones and tablet. Children's digital footprints are already made which can also be targeted by recommendation and advertisements, and these can be a problem when the child is too young to understand these marketing strategies. This results to children participating what is shown to them online especially when it is something of their interest. Often ends up not having enough sleep and later may develop sleeping problems.

However, different studies have been done in different countries and not all was studied thoroughly whether the country, culture, social status, or parenting has influence over the results. The objective of this study is to identify the numbers and understand the problems caused by unsupervised usage of the internet among children especially during nighttime when it is past their bedtimes in the Philippines in which could reflect the same results to families across the world and explore the relationship between sleep problems by internet usage to children between a sample of families with internet connection and done without parental or guardian intervention.

A. Objectives of the Study

The main objective of this study is to determine if the sleeping pattern of a child is affected from using the internet. This study will help develop a system to help control internet usage of children without much intervention from a guardian or parents.

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II. LITERATURE REVIEW

A. Johnson, Genevieve (2010) Determined that across microsystems of a child Internet is used. Whether it may be at school, immediate home, and the community Internet is already an inevitable part of child development.

B. Sonia Livingstone, Kjartan Olafsson, Brian O'Neill and Veronica Donoso (2012) In a multi-country survey found that parents worry about their child's using the internet because of the risks it contracts. Ranging from sexual content, contacted by strangers, and violence.

C. Chen, Y.-L., and Gau, S.S.-F (2016) Findings showed that when children and adolescents experience dyssomnias they try to fill the time with using the internet which leads to disturbing the natural body clock and possibly leading to addiction.

D. Orsolya Kiraly, et al. (2020) determined that people are turning to the internet due to the anxiety, uncertainty, and confusion caused by the Covid-19 pandemic. It is used as a coping mechanism by people to reduce their stress and may reinforce other abuse or negative behaviors.

E. "All About Sleep" (2019) In an article reviewed by Amita Shroff, MD. It was stated that a healthy sleeping time for children in ages 3 to 6 years old typically goes to bed between 7 to 9 p.m. and wakes up around 6 to 8 a.m. and children in ages 7 to 12 years old goes to bed around 7:30 to 10 p.m. and wakes up around the same time.

III.METHODS

This observation will consist of five samples taken randomly from a population through convenience sampling. The descriptive analysis style is used in this study. The investigator contacted families and interviewed the parents or guardians if they have children and internet in their household. Then took five families willing to participate in the investigation. Parents and guardians are labeled as the observer of the subjects which are the children. The observer engaged in a non-participant observation on the subjects and did not intervene in any usage of gadgets, appliances, and internet through the observation period. The study was conducted in their respective homes. Information gathered by the investigator was primarily through forms that were logged by the observer and were followed up by interviews throughout the observation period. The information recorded were the sleeping times and if they used the internet before bedtime.

IV.DATA INTERPRETATION

Figure No. 1: Sleeping Time of 1st Participant a 5-year-old.

TIME	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
8:00PM-9:00PM					
9:00PM-10:00PM					
10:00PM-11:00PM					
11:00PM-12:00MN					
12:00MN-1:00AM					
1:00AM-2:AM					
2:00AM-3:00AM					
3:00AM - Onwards					
Used the internet			Did not use the Internet		

- *Interpretation:* The figure above shows the sleeping pattern of a 5-year-old across the observation period. Four out of five days the child used the internet before going to bed and on the 3rd day the child went to sleep without using any gadget beforehand after the family had a prayer together.

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Figure No. 2: Sleeping Time of 2nd Participant a 3-year-old.

TIME	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
8:00PM-9:00PM					
9:00PM-10:00PM					
10:00PM-11:00PM					
11:00PM-12:00MN					
12:00MN-1:00AM					
1:00AM-2:AM					
2:00AM-3:00AM					
3:00AM - Onwards					
Used the internet Did not use the Internet					

- *Interpretation:* The figure above shows the sleeping pattern of a 3-year-old. Across the observation period the child used the internet before going to bed.

Figure No. 3: Sleeping Time of 3rd Participant a 9-year-old.

TIME	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
8:00PM-9:00PM					
9:00PM-10:00PM					
10:00PM-11:00PM					
11:00PM-12:00MN					
12:00MN-1:00AM					
1:00AM-2:AM					
2:00AM-3:00AM					
3:00AM - Onwards					
Used the internet Did not use the Internet					

- *Interpretation:* The figure above shows the sleeping pattern of a 9-year-old across the observation period. Across the observation period, the child used the internet before going to bed.

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Figure No. 4: Sleeping Time of 4th Participant a 4-year-old.

TIME	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
8:00PM-9:00PM					
9:00PM-10:00PM					
10:00PM-11:00PM					
11:00PM-12:00MN					
12:00MN-1:00AM					
1:00AM-2:AM					
2:00AM-3:00AM					
3:00AM - Onwards					
Used the internet Did not use the Internet					

- *Interpretation:* The figure above shows the sleeping pattern of a 4-year-old across the observation period. Four out of five days the child used the internet before going to bed across the observation period.

Figure No. 5: Sleeping Time of 5th Participant a 7-year-old.

TIME	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
8:00PM-9:00PM					
9:00PM-10:00PM					
10:00PM-11:00PM					
11:00PM-12:00MN					
12:00MN-1:00AM					
1:00AM-2:AM					
2:00AM-3:00AM					
3:00AM - Onwards					
Used the internet Did not use the Internet					

- *Interpretation:* The figure above shows the sleeping pattern of a 7-year-old across the observation period. Across the observation period the child used the internet before going to bed.

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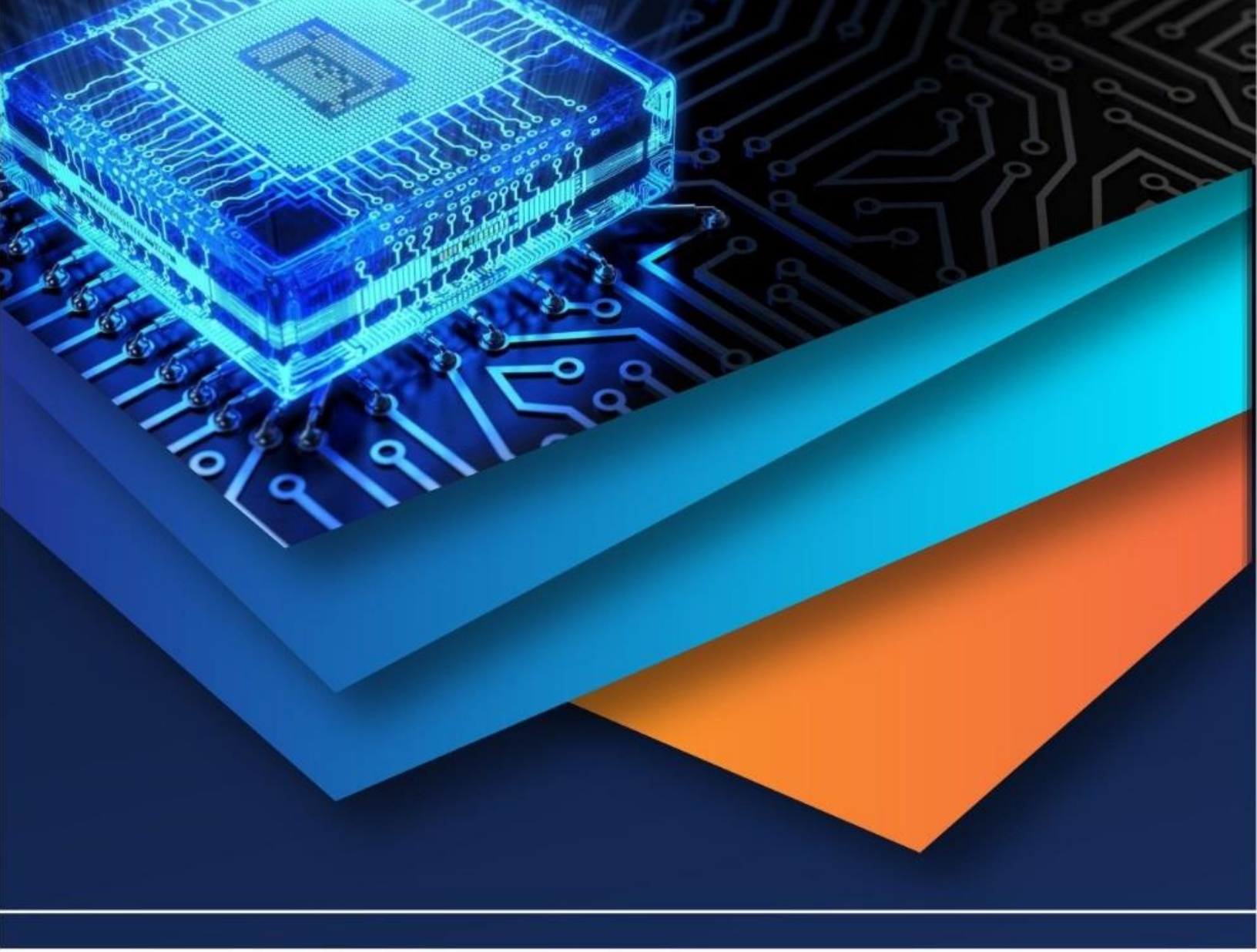
V. CONCLUSION

The first participant according to the parents was either playing video games on a tablet or video streaming on a smart tv. The second participant was mostly streaming videos on a tablet. The third participant had access to their desktop and was mainly engaged in online games. The fourth participant was mostly video streaming on their smart tv. The fifth participant had access to a laptop at their home and was also playing video games and streaming videos. The overall results show that most children sleep late and indulge themselves to mostly playing online games and video streaming on platforms like YouTube, Netflix, etc. These results could have been influenced by the Covid19 pandemic as these kids does not have to worry about waking up early and get ready for school as classes have been modular teaching or moved online. Internet can also be used to suppress their anxiety as it can entertain them, a good example is a child taking his gadget and use it to for entertainment because it fears the dark. It could also be an effect of parental negligence where a child would instead interact with their online friends and play games. Internet use should be regulated in a household and reinforced with parental guidance because children growing up with unsupervised or unregulated use of the internet could become a problem in the later years. As a whole, there are many factors responsible for the misuse of the internet of children.

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