

ESCAPISM BY DIGITAL MEDIA: ASSESSING SCREEN TIME IMPACT, USAGE GUIDELINES/RECOMMENDATIONS AWARENESS AND ADOPTION AMONG UNDERGRADUATE STUDENTS IN ENUGU STATE, SOUTH-EAST NIGERIA

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ABSTRACT

For decades, smart phones, electronic games, personal computers and the television have assumed an important place in the daily lives of university students and as such it appears many have become significantly dependent on the escapism these gadgets seem to facilitate. This study assessed the impact of screen time on university students in Enugu state, South-East Nigeria and their awareness and adoption of screen usage guidelines/recommendations. The study intended the following: (i) to ascertain whether university students in Enugu state own or have access to screen enabled devices; (ii) to ascertain their screen activities; (iii) To ascertain how many university students in Enugu state are aware of screen usage guidelines/recommendations; (iv) to determine the percentage of university students in Enugu state meeting the screen usage guidelines/recommendations; (v) to determine the impact screen time has on them. A survey of 400 university students in Enugu state was conducted. The students were sampled from five universities in the state: University of Nigeria Nsukka-Enugu Campus, Enugu State University of Technology, Renaissance University, Caritas University and Geoffrey Okoye University. The findings suggested that most of these students spent more time on various screens especially mobile device screens and television screens. Majority of the students are also unaware of the screen usage guidelines/recommendations and associated potential health risks.

Key words: Digital Media Escapism; Screen time; Impact; University students; Recommendations; Guidelines;

INTRODUCTION

The socio-cultural, economic and technological dynamics that interplay in the life of a university student in the 21st century has made smart phones, the television, video games and personal computers an inevitable companion and tools of escapism with almost guaranteed prolonged exposure to their digital screens. These dynamics and guaranteed exposure raises some concerns about university students screen media consumption duration or screen time dosage especially in the light of health and psychological recommendations/ guidelines for screen usage as well as scientific warnings of screen time abuse. This study therefore surveys the possibility of any screen time impact, awareness and adoption of screen usage recommendations that may have bearing on this unique and all important segment of the society: university students.

BACKGROUND OF STUDY

In the mid 1980s, researchers identified television viewing as a predisposition to obesity and associated cardiac vulnerabilities, a finding that has been confirmed by numerous other investigators. The consumption of media content among children and adolescents has greatly increased in the past 7 – 12 years, which has been documented in numerous Kaiser Family Foundation Studies. The most recent 2010 report regarding behavior of two thousand 8 – 18 year olds showed that the average child spent 7.5 hours each day using media (Kaiser Family Foundation, 2010).

There is also substantive evidence that television viewing and other screen enabled devices is linked to numerous health and social problems, including violence and aggressive behavior, physical inactivity, initiation of early sexual behaviors, body self-image issues, and substance use and abuse. The excessive use of computers, including video games, entertainment screen media enabled cell phones appears to be associated with many of the same problems as watching television (American College of Pediatricians, 2016).

The digital media has evolved to be an omnipresent and integral part of modern society lifestyle. Time spent by audiences on screens consuming digital content borders on addiction especially with the boom of affordable mobile screens. This apparently harmless crave for digital screens by diverse audiences may not be so side effects free as perceived by numerous users as certain research endeavors such as *The Minnesota Physical Activity and Nutrition Program* (2011) insists heavy exposure to television and other screens has effects on the community and the individual.

In 2016, the *American Academy of Pediatrics (AAP)* released guidelines recommending that screen time (for television, personal computers and other devices with digital screens or display) should be limited to no more than two hours per day. These are the full guidelines:

- For children younger than 18 months, avoid use of screen media other than video-chatting. Parents of children 18 to 24 months of age who want to introduce digital media should choose high-quality programming, and watch it with their children to help them understand what they're seeing.

- For children ages 2 to 5 years, limit screen use to 1 hour per day of high-quality programs. Parents should co-view media with children to help them understand what they are seeing and apply it to the world around them.
- For children ages 6 and older, place consistent limits on the time spent using media, and the types of media, and make sure media does not take the place of adequate sleep, physical activity and other behaviors essential to health.
- Designate media-free times together, such as dinner or driving, as well as media-free locations at home, such as bedrooms.
- Have ongoing communication about online citizenship and safety, including treating others with respect online and offline.

This recommendation was followed in 2012 by a statement on active healthy living from the Canadian Paediatric Society (CPS) indicating that most young people need to reduce their sedentary activities by 30 min per day, followed by a further reduction of five min per day each month until sedentary behavior amount to no more than 90 minutes per day. Television viewing and any form of screen activities should not be more than two hours per day in school-aged youth (Canadian Paediatric Society, 2012). As evidence of the high volume of television watching in young people, findings from a representative sample of 18- to 27years old Americans indicate that 48 % of boys and 38 % of girls watch two hours or more of television per day. These figures do not include computer and video game use. A study of youth in California found that total screen time averaged six hours five minutes per day.

In 2011 there was still a significant gap in ownership of home computers and mobile devices such as smart phones and tablets. However, children from all income levels spend about the same amount of time playing games on digital devices and engaged in other computer-based activities. Research now indicates that for every hour of television children watch each day, their risk of developing attention-related problems later increases by ten %. For example, if a student watches three hours of television each day, the student would be thirty % more likely to develop attention deficit disorder.

According to Wollaston (2014), data from a nationally representative survey of under-28s American youth established that 37 % of girls and 34 % of boys watch less than two hours of television per day. These values are quite comparable with those reported in the present study on Canadian youth. Also, in

a different representative survey of under 28s American youth conducted in 2015, it was reported that boys and girls averaged seven hours and five hours of daily screen time, respectively.

Cross-sectional studies indicate that youth who engage in screen device activities, either by watching television or playing video games or more on their devices for more than two hours to three hours per day are more likely to be overweight and obese, compared with their peers who watch less than these amounts. Understandably, youth who watch more television are less physically active. Furthermore, time spent watching television or videos from the laptop are positively correlated with calorically dense foods. The negative consequences of television and computer use are by no means limited to obesity.

Zimmerman and Bell (2010) say that spending more time watching television and playing video games, increases exposure to violence, sexual content, negative body images, and irresponsible tobacco and alcohol use. For instance, during the first hour of primetime television, three out of every four programs contain sexual messages (as many as eight sexual incidences per hour), with little discussion relating to the risks and consequences of these behaviors. As for leisure time video game use, the most common video games are action, shooter and combat-related *PlayStation* and *Xbox* games such as *Call of Duty*, *Mortal Kombat* and *Gran Theft Auto* trilogies which are widely speculated could influence real-life violence among associated gamers.

Three randomized trials have addressed the issue of reducing time on screen in youth. The first study was a school-based intervention in third and fourth graders that consisted of 18 lessons aimed at reducing television and video game use, followed by a challenge to limit use to seven hours per week. Following the intervention, total screen time in the students attending the intervention schools were almost one-half that of the students attending the control schools 8 hours, 8mins /week versus 14hours 5mins /week).

The second study was a school-based program for university students and consisted of lessons focused on reducing television viewing and consumption of high-fat foods, and increasing physical activity and fruit and vegetable

consumption most especially for the females. After one year, students in the intervention schools were watching 0.6 hrs per day less television than students in the control schools. The third study randomly assigned 90 obese children into one of four treatment groups, with each treatment consisting of educational therapy meetings with children and their parents. The meetings were provided in either a low or high dose and focused on either reducing sedentary behaviors or increasing physical activity.

Following six months of treatment, targeted sedentary behaviors were significantly reduced in the group receiving the high dose of sedentary behavior reduction therapy. However, the effects of the intervention were not as strong at 24-month follow-up.

Despite the demonstrated decreases in screen time, only one of the aforementioned intervention studies observed an increase in physical activity participation. Thus, although the overall goal of interventions should be to reduce total screen time to less than two hours per day, emphasis must also be placed on increasing physical activity, so that time previously spent watching television and playing video games is not simply replaced by other sedentary behaviors such as reading or talking on the telephone with friends. The intervention should also incorporate guidelines for proper nutrition to help reduce snacking of calorically dense foods associated with screen activities (Hingel and Kunkel, 2012).

The *Minnesota Physical Activity and Health Program* (2012), after various studies has suggested different likely impact of excessive screen time. They are:

- i. Too much screen time can make you gain weight
- ii. Zoning out in front of the TV can make you sad
- iii. Playing violent video games can make you violent
- iv. Screen time can make you tired
- v. Too much video game playing can hurt
- vi. Decreased physical activity due to time taken doing sedentary activities
- vii. Food advertising encouraging consuming less healthy foods
- viii. Snacking behaviour while watching television
- ix. Decreased metabolism

Youth with two or more hours of daily screen time are more likely to have increased psychological difficulties, including hyperactivity, emotional and conduct problems and difficulties with peers (Lapierre, Piotrowski and Linebarger, 2012). Adolescents who watch three or more hours of television daily are at especially high risk for poor homework completion, negative attitudes toward school, poor grades, and long-term academic failure. Students with a television in their various apartments spend more time watching TV and report less physical activity, less healthy dietary habits, worse school performance, and fewer meals.

It is important that young adults learn to make suitable and conscious choices about their level of screen time use. Uncontrollable screen activities may be a sign of pathological or 'addicted' screen use. It is important that students are aware of this issue, and are able to take sound choices in an environment where technology is all around them. There is some evidence that truly educational screen media, such as programs on PBS, actually can promote learning and literacy. There is also evidence that what content they are exposed to matters but it is important to remember that excessive time spent with screens, regardless of content, is a problem.

According Pagani, Fitzpatrick, Barnett and Dubow (2010), studies at the Université de Montréal, the Sainte-Justine University Hospital Research Center and the University of Michigan, published in the *Archives of Pediatrics & Adolescent Medicine* have shown a range of both positive and negative effects from increased screen activities. Young people often have less supervision and more control in this environments than they would usually experience. It is important to empower younger persons with the tools to identify and rectify excessive or compulsive screen use, as well as an understanding of potential consequences on their physical or mental health, which they or their peers may experience; this becomes a big challenge for the health communication intervention effort (University of Montreal, 2010).

PRESENT PROBLEM

Digital screens devices and gadgets are now a must have for university students in order to fit into the information superhighway and campus tech culture. The average university student has one more screen device than those below average and has its display on over eight hours a day. 61 % of university students use screen media and 43 % watch television every day. Nearly a third of university students live where television is on always or most of the time like in private and public accommodation such as hostels.

Peculiar factors in Nigeria such as the affordability of new and used personal computers, penetration of mobile internet, the proliferation of original and pirated videogames, the boom of cheap mobile devices and wider coverage of affordable satellite and digital terrestrial television has increased the likelihood of extended screen time exposure. This trend signals time away from all kinds of constructive activities, including reading and tackling assignments coupled with the possibility of breeding addiction (Mistry et al, 2007).

Studies commissioned by the Nigerian Heart Foundation in 2013 and 2016 and published as *A Nigerian Report Card on Physical Activity for Children and Youth* revealed that 35% to 90.9% of children and youth in rural and urban areas of Nigeria are spending over three hours on screen time daily. Television viewing (90.7%) and playing video games (60.3%) are the most common sedentary behaviours of Nigerian children and youth. The study which focused on the North-East, North-Central and South- geopolitical zones of Nigeria admitted there was a lack of national representative data or those examining socio-demographic and socio-economic disparities in screen-based sedentary behavior among Nigerian children and youth. (Adeniyi, Odukoya, Oyeyemi, Adedoyin, Ojo, Metseagharun, Akinroye, 2016; Adedoyin, Adeniyi, Akinroye, Alawode, Awotidebe, Odukoya, Ojo, Oyeyemi, Ozomata, 2013).

Currently, there is a gap of knowledge on the wholistic multi platform screen time exposure and impact among university students in Nigerian and there is no comprehensive national data to ascertain what proportion of this population

conforms to the guidelines or recommendation of two hours or less of screen time per day. The effect of this reliance on digital screen time as escapism is a subject of much debate and discussion. A lot of digital screens have been implicated in antisocial behavior, ill health and underperformance among the young and impressionable as well as in beneficial uses. This calls for the investigation of this possibility.

PURPOSE OF THE STUDY

The purpose of this study was to investigate the impact of screen time on university students in Enugu state, Nigeria and their awareness and adoption of screen usage recommendations/guidelines in the face of escapism facilitated by digital screen media. Particularly the study sought answers to the following questions:

1. Do university students in Enugu state own or have access to devices with digital screens?
2. What are the screen activities and duration of the activities by university students in Enugu state?
3. What proportion of these university in Enugu state are aware of screen usage guidelines/recommendations?
4. What proportion of these university students in Enugu state meet the screen usage guidelines/recommendations?
5. What impact does screen time have on these university students in Enugu state?

ACCESSIBILITY TO DIGITAL SCREEN MEDIA

The ability of young people to own and have access to screen enabled devices and effectively use them is often associated with potential social and economic benefits. These benefits include, education, learning, social inclusion, access to services, personal safety and security. Young people are generally the most active users of electronic media and communication technologies.

The most widely owned digital media devices among student circles are smart phones and tablets, followed by personal computers such as laptops, desktops and notebooks, television and video games. According to the *2017 College*

Explorer Market Research Study by the *Refuel Agency* (2017) which measures tech obsession among students, the average 18-34-year-old college student owns 5 or 6 tech or screen enabled devices.

The smartphone stands out as commonly owned device with about 85 % ownership among college student population. As at the time of this study smartphone penetration was about 70 % and tablets 36 %, more widespread than non smart phones which was at 33 %. 62 % had televisions and personal computer ownership was much less. Video game consoles are also very popular and owned by roughly two-thirds of the representative sample of college students. Video games really didn't appeal to a lot of persons when they were first invented and introduced in the 1960s, until Ralph Baer created a home console that brought video games to the masses.

According to McGonigal (2013) researcher of games and Director of Games Research & Development at the Institute for the Future, more than half a billion people own or have access to video games for at least three hours each day. It appears that the younger a person is, the more likely it is he or she plays the video game. Nearly 100 % of boys and 94 % of girls under the age of 18 regularly play video games.

According to Pew Research Center's *Mobile Fact Sheet* (2017), there are as many smart phone subscriptions as there are people on planet . It is easy to comprehend why smart phone growth has been so fast, as one needs not have a home to become a smartphone owner. Today, almost everywhere has more mobile penetration than land lines. Pew research center's internet and American life project has found that cell phones ownership among adults has exceeded 90 %. Cell phone is now being used by 91 % of adults according to the survey conducted between April and May of 2,252 adults in 2013.

The study also found out that 97 % of students own a mobile phone and young girls have a voracious appetite for celebrity and also, males are using their mobile phones to learn about each other's bodies and access X-rated porn. Given high penetration rates of smart phones and tablets, it's understandable

that devices such as the handheld game system 35% camcorder/video recorder, 25 % and e-reader 21% have are relatively unpopular among college students.

ELECTRONIC MEDIA USAGE

Today, we are surrounded by electronic media gadgets that demands our attention, constantly fragmenting our abilities to properly focus on the task at hand because we want to unwind, feel comfort, to connect, have an experience to escape or to indulge (Swing, 2012);(Tandon, Zhou, Lozano, Christakis, 2011).

Among the most popular apps for Millennials are Instagram, Kik Messenger, Facebook, Twitter and Snapshot Com Score. YouTube, Skype and Pinterest are popular among 25-34 years old. The older crowd prefers to play Candy Crush and use apps that earn those rewards for watching television; Solitaire and Words with Friends were among the most popular apps for Baby Boomers. People become addicted to activities they perform on computers or laptops; like, instant messaging, viewing internet pornography, playing video games, checks sing e-mails, and reading news and advert articles.

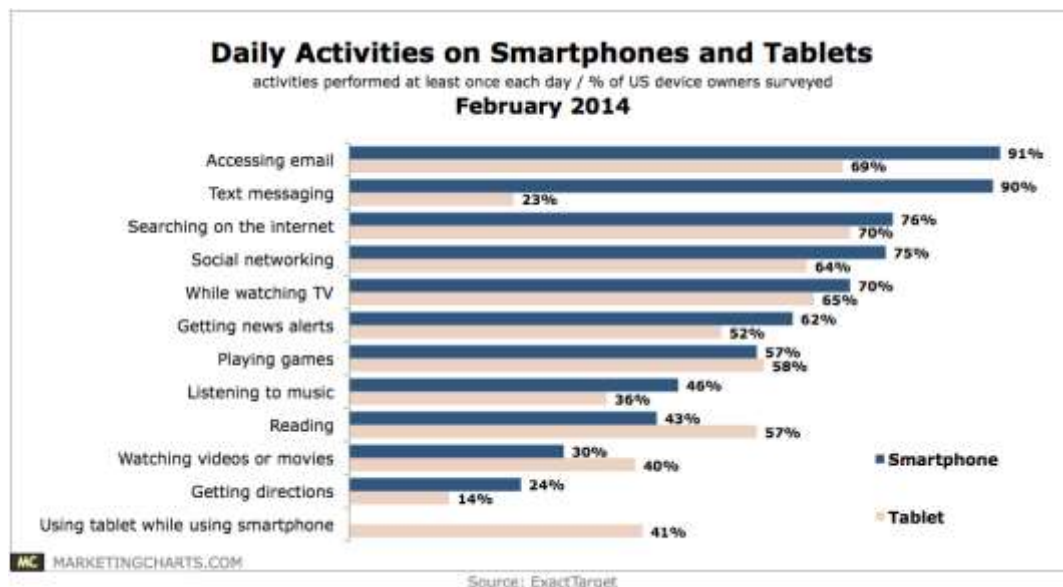
According to Vandewater and Lee (2009), the main reason why people indulge in television watching is to know what is happening in the society; news, sports, weather and some entertainment shows, while other genres are drama and documentary (Vandewater, Bickham, & Lee, 2006). According to a new study by the Nielsen Company(2014), the burgeoning influence of social media on TV viewing habits, a quarter of viewers reported that they were more aware of TV programs due to their social media interactions in a year-over-year comparison from 2012 to 2013. In 2013, 15 % of viewers said they enjoyed watching television more when social media was involved. And when it comes to viewing content, 11 % of viewers said they watched more live TV, and 12 % said they recorded more programs in 2013 alone.

Smartphone owners spend a whopping 3.3 hours per day on their phones, while tablet owners are close behind, averaging 3.1 hours a day on their devices. Nielsen company (2014) study further suggests that daily time spent with mobile devices is closer to one hour, the researchers indicate that Smartphone owners

just “can’t seem to put them down.” Here’s some insight into what mobile owners are doing on a day-to-day basis on their devices.

According to *Exact Target Survey* (2014), 91 % of respondents indicated that the top daily activities on smart phones are accessing email and 90 % indicated text messaging, while for tablet owners, 70 %, search on the internet and those who access their email are 69 %. Text messages like SMS, Whatsapp, Wechat, BBM, etc continues to be a phenomenon. 75% of the global mobile users communicate using messenger applications and SMS. The study also reveals that 72 % of student uses it for taking pictures or photos or recording videos. Also, most persons use it for the purpose of entertainment like playing games, listening to songs, watching movies, etc. The chart below shows the findings of a recent research by Exact Target on the daily activities performed on smart phones and tablets by US device owners.

Figure 1. Daily activities of US device owners on smartphones and tablets.



For the most part, both groups tend to use their devices in similar ways. Some notable exceptions that appear to skew towards the Smartphone camp are text messaging, accessing email, getting news alerts and getting directions. Tablet owners, for their part, are more likely to be found watching videos or movies and reading. Those discrepancies suggest that tablet owners view their devices

more as entertainment hubs, while Smartphone owners are more likely to use them as information sources.

In fact, the survey confirms that mobile owners tend to associate “mobile” with a Smartphone or cell phone saying that 54 % are doing so, compared to only 14 % associating the term with tablets and e-readers. That doesn’t seem to owe to survey sample bias; some 73 % of Smartphone owners surveyed also own a tablet. The study also tracked ten popular online properties visited, using tracking data to determine whether they were mostly visited on smart phones or tablets, and via an application or on the mobile web. Of note, social media platforms such as Twitter (76 %), YouTube (73%) and Facebook (67%) skewed towards tablets, while Pinterest (83 %) was almost exclusively visited on smart phones. Not surprisingly given the influence of tablets.

When sorting by mobile web versus application, *Instagram* (97 % app), *Pinterest* (95 % app) and *Facebook* (88 % app) were among those with the biggest skew towards app usage, while Amazon (66 % web) and Twitter (74 % web) were the only properties of the 10 listed to skew towards mobile web use.

As at late 2014, Pew research center began asking separately about the special ways people might be using their phones. It was still clear that texting was becoming the most popular as 79 % of cell owners were texters.

ESCAPISM

Escapism can be basically called any type of mental diversion or escape from the perceived unpleasant or banal aspects of daily life. Everything that makes us escape from the realities of life can be considered a form of escapism. The most common forms of escapism are the use of mobile phones, movies, video games, drugs, alcohol addiction, social media games, gambling, movies, sports and game shows, addictive television viewing, pornography, internet surfing, alcoholism etc. According to clinical and forensic psychologist Stephen Diamond (2010), addictive escapism is the compulsive desire to alter, avoid, deny and escape reality. Escapism and addiction often go hand in hand or one is the precursor of the other. In psychology addiction is all about escapism. Diamond (2010) buttresses this fact by saying; Avoidance and denial. Addicts flee from

reality and in some cases have been running all their lives. The addict cannot tolerate reality and its vicissitudes. Neither internal reality nor external reality. These escapists perceive reality to be repugnant, uncomfortable, overwhelming, and prefer, like the psychotic, withdrawal into fantasy, bliss or oblivion over reality. They seek constantly to alter subjective and objective reality to their own liking. For one thing, reality which embodies the existential facts of life can be both painful, harsh and anxiety-provoking. Like most people, addicts don't like confronting pain, disappointment, failure or feeling anxiety. That's human nature and comports with Freud's "pleasure principle": Everyone tends, whenever possible, to avoid pain and seek pleasure. Addicts prefer the pleasure of intoxication, the bliss of oblivion to the suffering, banality, ordinariness and difficulty of mundane day to day reality. Reality inevitably includes suffering, pain, loss, fear and failure. Reality entails consciously acknowledging. David Ford (2017) describes escapism as a habit of thought. It is a way of calming and soothing emotional pain. When an individual's way of soothing pain becomes a habit, he or she can no longer be consciously aware of what triggers the addictive behavior. The individual also cannot see the actual cause of the emotional pain. The person just feels pain, and triggers the solution: some calming behavior. This calming or soothing behavior is something best described as escapism. It doesn't matter what an individual calls it. It is still a habit of thought that one engage in automatically, so it makes it impossible for an individual to see the source of his or her emotional pain.

SCREEN EXPOSURE DURATION

A report released by *Child Wise* Australia's leading not-for-profit child abuse prevention organization suggests that screens are increasingly turning into electronic babysitter and young people spend more time plugged in than ever. It found that young people spend more time in front of a screen in one day than they spend exercising in the entire week. (Child Wise Annual Report 2013 to 2014)

Whether it's a Smartphone, a tablet, TV, laptop or a PC monitor at work, it might surprise you how much time you spend staring at a screen. According to figures

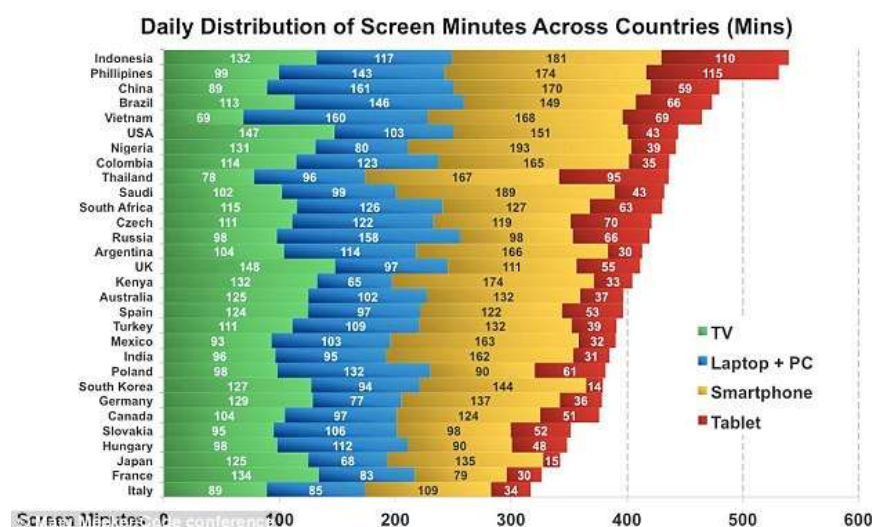
from a recent study in 2013, the average viewer spends six hours 50 minutes a day switching between different displays.

Students are engaging with a number of different applications on their smart phones and tablets, laptops and computers. More than six in 10 claim to regularly use games (73%), music (67%), entertainment (64%) and social networking (64%) apps, with a majority also putting photo and video (53%) apps to use. Interestingly, productivity apps are on the low end of the totem pole, with less than one in five saying they regularly use them.

Using those apps takes time, and college students are spending more of it with their devices. On average, they report spending 0.8 hours with a tablet, up from half-an-hour last year. And they're spending 3.6 hours a day with their cell phones and smart phones (presumably more on smart phones), up from 3.3 hours last year. By contrast, they're spending less time with computers, TVs, handheld gaming devices, and e-readers.

In 2009 a health survey from the Minnesota Department of Health it was found out that adults spend nine hours a day in front of a screen, with six hours for leisure and three hours for work or study. This is more than the eight hours recommended for sleep, according to 1,505 Australians surveyed by Medibank.

Figure 2. Daily Distribution of Screen Minutes Across 30 countries



Source: Milward Brown Study (2014) Internet Trends Code Conference Carlifornia.

According to figures from a 2014 Milward Brown study recently presented at *Internet Trends 2014 Code Conference California* by Mary Meeker (2014), a tech analyst at *Kleiner Perkins Caufield Byers* (KPCB); the average viewer spends six hours 50 minutes a day looking at a display. Across 30 countries, pictured in the graph above, Indonesians are the worst offenders with a staggering nine hours. At the other end of the scale, Italians spend just five hours 17 minutes facing a screen. Nigerians spend the most time looking at their smart phones, according to the chart, using apps, watching videos and sending messages for three hours 13 minutes a day.

According to a study by *Harvard Medical School* almost six in ten people are not getting enough sleep, a 50 % increase on just a year ago. Experts blame the rise on growing numbers of the use of smart phones, tablet, computers and other gadgets in bed and in the hour or two before turning in. The blue light emitted by the screens suppresses the production of the sleep-inducing hormone melatonin and so it's important to avoid them before bedtime. A study by Chahal, Fung, Kuhle, Veugelers (2013) also stressed

A *Baylor University* study by Roberts, Yaya and Manolis (2014) published in the *Journal of Behavioral Addictions* investigated 164 college students on the amount of time they devote to 24 different Smartphone activities each day and found that women average more time on social media and on communication in general. Women dominate Pinterest in particular, and say they use the app 26 minutes a day, compared to men's one minute. Women also spent three times as long using Instagram, but men spent almost twice as much time playing games.

A study by Kent State University researchers; Andrew Lepp, Jacob Barkley, Gabriel Sanders, Michael Rebold and Peter Gates in 2013 showed that students who spent the most time on their cell phones tended to be the least physically active and performed the worst on treadmill exertion tests implying a negative relationship between cell phone use and cardiorespiratory fitness (Lepp and Barkley, Sanders, Rebold & Gates, 2013). Another Kent State University study further revealed that student cell phone use may negatively impact academic performance (Grade Point Average), mental health and subjective well-being or

happiness.(Lepp, Barkley and Karpinski, 2014) This is in line with older research that predated smart phones and showed people who spent the most time in front of the TV exercised the least.

The average number of hours female students report using their devices most especially, their smart phones each day is six hours according to Roberts et al (2014) while male students reported nearly eight hours of daily use. The average number of minute's college women said they spent texting each day, making it the most time-intensive activity. Men averaged 84 minutes. Both genders spent about half as much time e-mailing from their phones. Motivation for excessive use of these devices are summarized as:

- Modern social life is predominantly online – it is important to be connected and keep up with trending culture and friends in real time.
- Complex modern entertainment requires commitment to participation. In order to get the most out of online gaming experiences, players must be available and commit to their online friends, teams and clans.
- The ability to access factual information at any time and in real time is the key to competitive academic and economic success.
- Staying current with constant updates from friends and celebrities enriches and informs our behaviour in beneficial ways.

According to Roberts et al (2014) Baylor university study, a clear majority of students profiled failed to voluntarily avoid their gadgets for one full day. Four in five students had significant mental and physical distress, panic, confusion and extreme isolation when forced to unplug from another their devices for an entire day. They found that students at campuses across the globe admitted being addicted to their modern technology such as cell phones, laptops/computers, televisions, video games. Therefore, the withdrawal symptoms experienced by the young people deprived of their gadgets are compared to that act by drug addicts or smokers going "cold turkey" the study concluded.

IMPACT OF SCREEN TIME AND ITS EXCESSIVENESS

Understanding the impact of screen time use requires good estimates of both the time people spend on screen enabled devices and the time taken away from other activities. While the use of technology as a learning tool holds much promise for students, the misuse of technology can have the opposite effect. Research clearly shows that too much 'screen time' is linked to a lack of school success - poor grades, lower reading scores, inattention, dulled thinking, and social problems. It is not hard to observe how the television, video games, and internet activities might interfere with healthy eating and sleeping habits, and getting your homework done. Less well known is how 'screen time' can rob youth of opportunities to develop essential learning skills. New studies in neuroscience like that of Jan-Marino Ramirez, a neuroscientist at Seattle Children's Hospital (Hamilton, 2016) shows that too much 'screen time' versus not enough 'face time' is wiring student's brains in ways that can make learning in the classroom, and getting along with lecturers and other students more difficult.

A 2013 and 2016 *Nigerian Report Card on Physical Activity for Children and Youth* sponsored by the Nigerian Heart Foundation and published in the Journal of Physical Activity and Health showed that overall physical activity levels of Nigerian children and youth seemed to be declining. The study also revealed substantial number of Nigerian children and youth still have high sedentary behaviors both screen-based and non screen-based, there was record of substantial number of overweight and obese children and youth. (Adeniyi et al, 2016; Adedoyin et al, 2013).

Multiple studies have found that a sedentary lifestyle is associated with obesity. According to a study by Mitchell, Bottai, Park, Marshall, Moore & Matthews (2014) more sitting at baseline was associated with increases in body mass index (BMI) over time. This holds true for children and adolescents as well. Another study of adolescents who were followed every six months from age 14 to age 18 found that greater screen time was associated with adolescent obesity. Another study by Nigerian researchers (Ukegbu, Uwaegbute, Echendu, Ejike C, Anyika-Elekeh & Asumugha, 2017) revealed that the prevalence of obesity was

high in the studied population of undergraduate students in South East Nigeria and, if left unchecked, portends deleterious consequences, especially with respect to the development of cardiovascular diseases.

Poor dietary habits and a largely sedentary lifestyle have been the combination that has played perhaps the most significant role in the obesity epidemic. Increasing amounts of screen time promote this combination, sometimes in unforeseen. According to a study, it has shown that too much time in front of the television promotes unhealthy eating habits. In an analysis of over 1,000 people, investigators found that those who watched television for two to six hours per day were more likely to have a higher BMI than those who watched less TV or spent an equal amount of time on a computer or playing video games. It is not yet clear why television time seems to have a different effect from computer time, but experts hypothesize that TV time in particular is associated with poorer dietary choices (think of all the chips, microwave popcorn and other high-calorie, low-nutrition foods that often accompany TV watching).

Several studies have now shown that the damage done to the cardiovascular and metabolic systems of the human body by sitting for prolonged periods of time may actually be worse than that of cigarette smoking!

In a study by a group of Spanish researchers on 13,284 students of University of Navarra, Spain; television viewing was found to be directly associated with premature death from any cause.(Francisco Javier Basterra-Gortari, Maira Bes-Rastrollo, Alfredo Gea, Jorge María Núñez-Córdoba, Estefanía Toledo, Miguel Ángel Martínez-González, 2014).

However not all screen time studies show negative impact. A 2009 study by Lanningham-Foster, Foster, McCrady, Jensen, Mitre, Levine found out that video games that promote physical activity have the potential to increase movement and burn more calories compared to sedentary video games. Some Pew research Center studies highlight some screen time positivity which includes:

1. Benefit the Brain

According to a research at the University of Rochester New York, led by Daphne Bavelier, people who play video games are better able to process visual information and are better attuned to their surroundings while performing certain tasks, like driving (Bavelier, Green, Han, Renshaw, Merzenich, Gentile, 2011). At the University of Iowa, a study of 681 healthy individuals ages 20 and older revealed that playing 10 hours of a specially designed video game was able to stall the natural decline of different cognitive skills by up to seven years. (Wolinsky, Vander Weg, Howren, Jones, Dotson, 2013)

2. A Bonding Experience among Friends

Nobody can deny this. When you see student's cozies up on the couch or anywhere with their friends and neighbors, connections are being made; minds are melding (and maybe melting), there is a relationships building. There may be other ways to bond, that's true, but watching TV and movies, playing video games together is one of the strongest.

3. Screen Time Can Be Educational

Some of the programs on TV are awesome. Who want to be a millionaire, even with Neil De Grasse Tyson hosting. In a recent study, Led by William Penuel, as part of Ready to Learn Initiative awarded by the US Department of Education and the Education Development Center it was found out that a curriculum that involved digital media such as video games helped improve early literacy skills when coupled with strong parental and teacher involvement.(Penuel , Pasnik, Bates, Townsend, Gallagher, Llorente, Hupert, 2009)

4. Screen Time Can Be Social

Skyping, Face-timing, Email, Facebook, Whatsapp, BBM, etc – Almost all modern forms of communication take place using a screen. Screen Time keeps us in touch with our loved ones.

Screen time can have mind-numbing effects but what that really means is users just have to use it sparingly. Users who are smart and regulate content consumed, can have a ton of positives from screen time: It's an awesome

bonding experience between friends, parents and loved ones; and if the right shows are selected, users can actually learn something. Therefore, excessive screen time, apart from the ones mentioned can:

1. Strains the eyes

According to experts, staring at screens “can strain the eyes or make the symptoms of existing eye conditions worse.” Looking at screens for too long without taking breaks can also lead to difficulty focusing, headaches, eye discomfort, blurred vision, dry eyes, and itchy eyes. This happens because looking at a screen for an extended period of time causes the viewer to blink less, which deprives the eyes of moisture.

When these symptoms are neglected, they can have a huge effect on viewers work performance, but eyestrain can be prevented by simply looking away from the screen every 20 minutes or so (more on that below).

2. Excessive screen time reduces creativity and productivity

While the physical effects of staring at screens for prolonged periods can be great when users or viewers of screen content don’t take breaks, it can have an even larger negative impact on users creativity and productivity. This is because prolonged screen exposures prevents users from feeling the sense of responsibility that can make a person tremendously more creative and productive. Most screen gadget users rely on their phones, tablets, PC or game console to escape the feeling of boredom by purposely distracting themselves .

The mind has a built-in aversion or resistance to boredom, but that resistance actually drives productivity and creativity. Boredom, encourages self reflection, unconscious organization of a person’s life goals, analytical thinking that could suggest creative solutions to problems, and as well yield more productivity. Screen gadgets have a way of high jacking users attention and prevent unguarded persons from taking advantage of the unique state of mind boredom could enable.

Rideout, Foehr & Roberts (2010) examined screens and school success. These were his hypotheses:

- By any given holiday, the average students will have spent more time watching screens than in the classroom, playing sports or talking with their parents or friends.
- Students who watch a lot of television and other activities on their device without the positive contents, do significantly worse at school and are less likely to reach an expected G.P.
- Students who get inadequate sleep and spend too much time watching TV or doing activities online do worse in school than their peers who get plenty of sleep and avoid excessive TV.

Several studies like those conducted by Harvard Medical School have now established that the blue light emitted by LED screens suppresses melatonin production and thereby interferes with the ability to fall asleep. In turn, chronic sleep deprivation is associated with weight gain and overeating

Therefore, to optimize the chances of falling asleep and staying asleep, one should make it a habit to turn off all screens at least an hour before going to bed. Since the light emitted from computer, phone, and tablet screens can be particularly harmful when it comes to suppressing melatonin and disrupting circadian rhythms, plan to turn those devices off two or more hours before bedtime.

SCREEN USAGE GUIDELINES AND RECOMMENDATIONS

A lot of recommendations /guidelines for screen use duration for children, youths and adults have been made available to the public through government sponsored and private research in the area of addiction, sleep deprivation, cardiovascular health, physical activity, sedentary lifestyle, pediatric health, smart phone, television and video game effects etc. Most of these recommendations/guideline tend to be restrictive and rehabilitating for the vulnerable children and young adults, parents, guardian, families and even pediatrician. Some of the most comprehensive and internationally adaptable of these screen time recommendations/guidelines are suggested by the following:

American Academy of Pediatrics, American College of Pediatricians, Canadian Pediatric Society, Kaiser Family Foundation, Minnesota Department of Health, National Center for Chronic Disease Prevention, Baylor University Study, Kent State University study etc.

METHOD

This study was designed as a survey. The area of study was universities in Enugu state, Nigeria. Enugu state is in the South-eastern geo-political zone of Nigeria. It was the former capital of the now defunct East Central Nigeria and currently shares a border with Abia state and Imo state to the South; Ebonyi state to the East; and Anambra state to the West. Enugu state has six universities: University of Nigeria Nsukka-Enugu Campus (UNEC), Enugu State University of Technology (ESUT), Renaissance University, Caritas University and Geoffrey Okoye University and Coal City University. Five of these universities were purposively selected because of their student population and diversity. According to data sourced from the registries of these schools, the population for this study comprises all university undergraduate totaling about 100,000 students in all the five Universities: UNEC has about 40,000 students, ESUT 30,000, Renaissance University 15,000, Caritas University 10,000 and Geoffrey Okoye University 5,000.

The sample size was determined using Taro Yamane's formula for calculating sample size.

$$n = \frac{N}{1+N(e)^2}$$

The sample size is therefore 398 at 5 % error margin. This was approximated to 400.

The sampling procedure was multi-stage in approach. The first stage involved the selection of universities. Five of the six universities in Enugu state were selected, this was done to ensure spread. UNEC, being a federal university, admitted students across the nation. ESUT, a state university, has the policy of admitting students mainly of Enugu state before others. Renaissance and Geoffrey Okoye universities, as well, had wider grass root coverage in terms of students admitted.

The second stage was the random selection of faculty from the five universities. Accordingly, the faculty of Arts was chosen from Caritas University; faculty of Engineering from ESUT; faculty of Management science in Geoffrey Okoye University and faculty of Social Sciences from UNEC and Renaissance Universities.

Next stage was the random selection of departments from the faculties that had been previously selected from the various universities under study. In Caritas University, English and philosophy were selected; while the departments of Accounting and Public Administration were chosen from the faculty of Management Science in Geoffrey Okoye University; in ESUT, the department of Civil Engineering and Mechanical Engineering were chosen from the faculty of Engineering. Lastly, in Renaissance University, the department of Sociology and Psychology was selected from the faculty of Social Sciences while at UNEC the department of Mass Communication and Political Science was selected from faculty of Social Sciences.

The last stage involved the random selection of level or year of study.

At Caritas University, level 200 and 300 students were randomly selected from the department of English while in the department of Philosophy, level 100 and 200 were selected. In Geoffrey Okoye University, 100 and 300 level students were chosen respectively from the department of Accounting while the level 300 and 400 were chosen from Public Administration department. Level 400 and 100 were chosen from the department of Psychology and level 200 and 400 from the department of Sociology in Renaissance University. For UNEC, level 300 and 400 were chosen in Mass communication department and level 100 and 200 in Political Science department while level 500 and 100 were chosen from Civil Engineering department and level 500 and 200 from Mechanical Engineering department in ESUT.

In all, 400 copies of the questionnaire were administered during data collection to the respondents in the various universities/ faculties/ departments/ level of study that was selected.

FINDINGS

Data extracted via the questionnaire was presented, analyzed and interpreted. Results from the findings showed that 98% of undergraduate students (respondents) in Enugu state universities owned or had access to one or more digital screen devices (96% had smartphones, 62% had personal computers, 28% had videogames and 72% had televisions). The students had prolonged exposure to different audiovisual content and user interface displayed on these devices. Content viewing or user interface interaction with these various devices or gadgets were a form of escapism for them from the harsh reality of academic work such as reading, doing assignments, research work, practicals, taking exams and attending lectures. 58% of the students spent more time indulging in these devices than in any other activity e.g. sleeping, studies, sports, social interaction and other productive physical activity.

A reasonable number of the undergraduate students used screen time as a means of daily escapism; 90% of the students indulged in their smartphone screens daily for between 4 to 16 hours, 54% used their personal computers mostly laptops for 2 to 8 hrs daily mostly for movie watching, 22% were glued to their video game screens via connected TVs for between 2 to 16 hours this supported multiple study findings by the American Academy of Pediatrics (2016); Kaiser Family Foundation (2010); Okika and Nwakasi (2016). While 68% were addicted to their TV sets watching broadcast content, sport and movies to the tune of 2 to 9 hours daily supporting the research by Mistry, Minkovitz, Strobino, & Borzekowski (2007); Okika & Agbasi, 2015. This implied that the various audiovisual content on these screens or the user interface interaction had such an addictive influence which hooked them on for hours daily in such a wasteful manner with respect to academic productivity. This particular finding correlated with the study by Roberts et al (2014) which found out that a clear majority of students profiled failed to voluntarily avoid their gadgets for one full day as well as with the Child Wise Annual Report (Child Wise Annual Report, 2013; 2014).

Four in five students had significant mental and physical distress, panic, confusion and extreme isolation when forced to unplug from any of these screen media devices for an entire day.

Roberts et al (2014)'s study further found out that students at campuses across the globe admitted to being addicted to their modern technology such as mobile phones, personal computers, televisions, video games. Therefore, the withdrawal syndrome experienced by the young people deprived of their gadgets are comparable to those observed in drug addicts or smokers.

91% of these undergraduate students are unaware of any screen time usage guidelines or recommendations suggested by any government, regulatory or pediatric body and sadly none of them at the time of this study implemented any of the guidelines recommendations. This implied wide scale ignorance among the students on issues surrounding obesity, cardiovascular disease, hypertension, pediatric and psychosocial implications of screen media usage.

More findings further revealed that screen time really did have some negative impact on the students. 74 % of the students stayed up late in the night or eat while doing their screen activities. This could be linked to the Harvard Medical School study (2013) that established that the blue light emitted by LED screens suppressed melatonin production and thereby interferes with the ability to fall asleep. Several studies like that of Barlett et al (2012) and Chahal et al (2013) has linked chronic sleep deprivation with weight gain and overeating.

This study coincidentally also revealed that 16% of the female university students who suffered sleep deprivation admitted sessional weight gain.

78% of the students also admitted to have suffered soreness or stiffness of the neck or painful and tingling sensation of their wrists and fingers directly related to their usage screen devices. Over 20% of the students admitted being violent and aggressive in their speech and actions which further supported studies by Coyne, Stockdale, Nelson and Fraser (2011); Okika and Nwakasi (2016).

Several findings of this study buttress the claims of the uses and gratification theory, the theorists here argue that the needs of people influence how they use and respond to a medium. For instance, boredom encourages the choice of exciting contents while stress encourages a choice of relaxing content. In relation to this, these undergraduate students in Enugu state who are used to spending more time on audiovisual screen content without minding the effects that comes from it strongly accepts as true that screen time serves as a means of relaxing or satisfying their boredom (escapism). Thus, is the general idea of the *Uses and Gratification Theory*.

Finally, 34% of the student admitted that their screen time duration negatively impacted their academic life such as attention during lectures, concentration during reading, reading duration, executing assignments, poor semester grades scores and overall poor grade point average (GPA) which corresponds with the findings of Rideout et al (2010), Zimmerman and Christakis (2005), Lepp, Barkley and Karpinski (2014), Okika and Nwakasi (2016) and of neuroscience studies cited by Hamilton(2016).

CONCLUSION

The relationship between screen time escapism, the physiological and psychological well being of school-going young adults appears to be more complex than envisaged. It would appear that the recommended screen time guideline is two hours but majority of users spend more time indulging in one activity or the other on various screens. Besides personal and home ownership of screen based gadgets and electronics by school-going young adults, school buildings, hostels, café's, libraries etc are usually equipped with computers and televisions which although makes it easier and faster to transmit and receive information also encourages abuse its usage. This study is a clarion call.

RECOMMENDATIONS

Government regulatory bodies, gadget makers, screen content producers and health professionals should intensify sensitization of screen gadget users, parents and educational formators on problematic screen issues relating to screen exposure duration:

- Make users aware of the AAP media guidelines and encourage them to set guidelines for themselves.
- Advice students who perceive screen time as a means of escapism, to increase in physical activity. Like, taking a walk, play with friends or engage in talks or read books that could help improve their lifestyle, eating healthy foods, etc.

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