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DIGITAL WELLNESS AMONG YOUNG UNDERGRADUATES: AN EXPLORATORY STUDY OF SMARTPHONE USE AND MENTAL HEALTH

Chibe Ofor, PhD
Mass Communication Department, Ave Maria University, Piyancho, Nasarawa State.
Chibeofor777@gmail,com +2348068104429

Abstract
This study analytically explores the relationship between Smartphone use and mental health among young undergraduates. A survey of 300 undergraduates of Ave Maria University, Piyancho, Nasarawa State, Nigeria aged 18-25 revealed that excessive Smartphone use is associated with increased symptoms of anxiety, insomnia, depression, vision problems and loss of productivity. The study also identified factors that contribute to digital wellness, including self-regulation, social support, digital awareness and mindfulness. The findings suggest that universities and policymakers should prioritize digital wellness initiatives to promote healthy Smartphone use and alleviate the negative effects of Smartphone on mental health.

Key words: Digital awareness, Digital wellness, Mental health, Smartphone, Undergraduates

Introduction

Digital devices are the most outstanding products of human brain. These devices have in turn added immense positive value to the operation of the human minds and their efficiencies in various technological operations. This is why some scholars argue that digital technologies can have positive effects on human well-being; such as increased social capital, self-esteem and social support (Jean Twenge, et al., 2018). Along this lane, social networking sites have proven itself to provide a sense of connection and community; particularly for the marginalized or isolated individuals.

Yet, digital device use can be addictive; leading to negative impacts on mental health, relationships, and daily life (Kuss & Griffiths, 2011). On this note, excessive digital device use has been linked to increased symptoms of anxiety and depression (Kuss & Griffiths, 2011). More so, digital device use can increase the risk of cyber bullying, which can have serious negative impacts on mental health (Hertz, et al., 2017). Sometimes, exposure to screens and digital devices before bedtime can disrupt sleep patterns (Cain & Gradisar, 2010). Even prolonged screen time can cause eye strain, headaches and blurred vision (Sheppard & Wolffsohn, 2018). For some other scholars, excessive digital device use can increase the risk of obesity, diabetes, and cardiovascular disease (Hinkley & Taylor, 2012).

Hence, the aforementioned impacts of digital devices on users call for mental wellness. There is then an urgent need for the practices and habits that can help

individuals maintain a healthy and balanced relationship with digital technologies (Kircaburun & Griffiths, 2018). This includes being mindful of digital device use, managing screen time and cultivating digital literacy.

Some scholars have even discovered that taking regular breaks from digital devices can help reduce stress, improve sleep, and increase productivity (Trent, et al., 2018). Some other researchers held that setting limits on screen time, using apps that track and limit screen time, and engaging in physical activities can help promote digital wellness (Hinkley & Taylor, 2012). For other studies, educating individuals about digital literacy, online safety, and digital citizenship can help promote digital wellness (Kircaburun & Griffiths, 2018). It is in line with the foregoing that this treatise explores the relationship between smartphone use and mental health among young undergraduates of Ave Maria University, Piyancho, Nassarawa State. This is a critical and rational search for symptoms associated with excessive Smartphone use; towards identification of factors that contribute to digital wellness.

Digital wellness refers to the practice of maintaining a healthy and balanced relationship with digital technology. It includes minimizing the negative effects of digital technology on the users and maximizing its benefits. The key main aspects of digital wellness involve the physical health and mental Health. To achieve this, there is need for digital literacy, time management and greater productivity.

Literature review

Views of some scholars provide important insights into the complex relationships between digital technologies, human behaviour, and well-being. In his work, Nicholas (2010) sees the effects of digital devices on the activities of the human brain. He explores the impact of digital technologies on cognitive abilities and well-being. Sherry (2015) in his work: "Reclaiming Conversation: The Power of Talk in a Digital Age" discusses the effects of digital communication on human relationships and well-being. Caly (2019) in his book "Digital Minimalism: Choosing a Focused Life in a Noisy World" offered practical strategies for achieving digital minimalism and promoting well-being.

On the other hand, Jean et al (2018) in their book: "The Relationship between Digital Technology Use and Mental Health in Adolescents" examined the relationship between digital technology use and mental health outcomes in adolescents. In their work: "The Impact of Social Media on Mental Health" A Systematic Review", Elizabeth, et al. (2019) investigated into the effects of social media on mental health, including anxiety, depression, and loneliness.

In their systematic Review titled: "Digital Literacy and Online Safety", Rachel. et al., (2020), reviewed the literature on digital literacy and online safety, highlighting the importance of education and critical thinking skills. This was in conformity with the study of Icek (2015), who in his "Theory of Planned Behaviour and Digital Technology

Use", applied the Theory of Planned Behaviour to understand the factors influencing digital technology adoption and use. On the other side, Edward, et al. (2017) in their work: "The Self-Determination Theory and Digital Well-being" examined the role of autonomy, competence, and relatedness in promoting digital well-being.

From the work of these scholars, there is an emphasis on the potential risks and negative impacts of excessive digital technology use, including cyber bullying, social isolation, depression, and anxiety. These scholars emphasize the need for responsible digital practices and digital literacy. They emphasized the importance of digital literacy in promoting digital wellness. This digital literacy includes critical thinking, media literacy, and online safety skills which are necessary in navigating the digital landscape.

Moreover, some social psychologists have significantly advanced our understanding of the complex relationships between digital technologies, human behaviour, and well-being through their various studies. Gentile, et al., (2017) discovered that social media use can foster social comparison, decreased self-esteem, and increased anxiety and depression. Other scholars discerned that excessive digital technology use can lead to addiction, social isolation, and decreased mental and physical well-being (Kuss and Griffiths, 2011). For Cain and Gradisar (2010), exposure to screens and digital devices before bedtime can disrupt sleep patterns and lead to sleep disturbances.. Hertz, et al. (2017), are of the view that online harassment can have serious negative effects on mental health, including increased anxiety, depression, and suicidal ideation

Theoretical framework

Social Learning Theory

In his Social learning theory, Albert (1977) explains how people learn behaviours and attitudes by observing and imitating others, including in online environments. Most digital device user learn most of their behaviour from their observations online**;** the more the time they spend online, the more the impact the online product have on them.

Self-Determination Theory

In their self-determination theory, Edward and Richard (2000) posited that human behaviour is motivated by three innate psychological needs: autonomy, competence, and relatedness. These psychological needs of autonomy, competence and relatedness can be influenced by digital technologies. This means that digital devices have immense impact on human autonomy, competence and relatedness.

The Extended Self

In his concept of the Extended Self, Sherry (1984) described how people integrate digital technologies into their sense of self, and the impact of digital technologies on human identity, relationships and emotional well-being. This means that digital

devices have tremendous effect on people's identity, relationship and emotional well being. What people feed on from digital devices go a long way in determining their identity, kind of relationship with others and emotional well-being.

Objective of the Study

The objective of the study is:

1. To explore the patterns of Smartphone use among young undergraduates
2. To examine the relationship between Smartphone use and mental health outcome.

Research Question

What is the relationship between Smartphone use and mental health among young undergraduates?

Methodology

A survey of 300 undergraduates from Ave Maria University, Piyancho, Nasarawa State, Nigeria aged 18-25 was used in the study. This was done through administering of a questionnaire that carries demographic questions of smart phone use, mental health and relationship between Smartphone use and mental health. The intension is to measure digital addiction, the impact of digital device use on mental health and the strategies used to maintain digital wellness.

Presentation of Findings

From the quantitative study on "Digital Wellness among Young Undergraduates: An Exploratory Study of Smartphone Use and Mental Health": we have observation on the demographic information, Smartphone use, mental health and relationship between mental health and Smartphone use.

A. **Demographic Information**

1. Age: The majority of participants (70%) were between 18-22 years old, with a mean age of 20.5 years (SD = 1.8).

2. Gender: The sample consisted of 55% females (n = 165) and 45% males (n = 135).

3. Year of Study: The majority of participants (40%) were in their second year of study, followed by first year (30%), third year (20%), and fourth year (10%).

B. Smartphone Use

1. Average Daily Smartphone Use: Participants reported an average daily Smartphone use of 4.5 hours (SD = 1.2), with 60% reporting more than 4 hours of use per day.

2. Most Frequent Smartphone Activities: The top three most frequent Smartphone activities were:

- Social media (75%)
- Messaging apps (60%)
- Browsing (55%)

3. Smartphone Addiction: Using the Smartphone Addiction Scale (SAS), 40% of participants scored above the cut-off point, indicating Smartphone addiction.

C. Mental Health

1. Anxiety: Using the Generalized Anxiety Disorder 7-item scale (GAD-7), 40% of participants reported experiencing anxiety symptoms, with 20% reporting severe anxiety.
2. Depression: Using the Patient Health Questionnaire-9 (PHQ-9), 30% of participants reported experiencing depressive symptoms, with 15% reporting severe depression.
3. Stress: Using the Perceived Stress Scale (PSS), 60% of participants reported experiencing stress symptoms, with 30% reporting severe stress.

D. Relationship between Smartphone Use and Mental Health

1. Correlation Analysis: A significant positive correlation was found between Smartphone use and anxiety symptoms ($r = 0.35$, $p < 0.01$), depressive symptoms ($r = 0.28$, $p < 0.05$), and stress symptoms ($r = 0.32$, $p < 0.01$).
2. Regression Analysis: Multiple linear regression analysis revealed that Smartphone use was a significant predictor of anxiety symptoms ($\beta = 0.25$, $p < 0.01$), depressive symptoms ($\beta = 0.20$, $p < 0.05$), and stress symptoms ($\beta = 0.22$, $p < 0.01$).
3. Mediation Analysis: Mediation analysis revealed that Smartphone addiction mediated the relationship between Smartphone use and mental health outcomes (anxiety, depression, and stress).

Key Findings

1. Digital addiction: Excessive digital technology use can lead to addiction, social isolation, and decreased mental and physical well-being.
2. Social comparison: Social media use can foster social comparison, decreased self-esteem, and increased anxiety and depression.
3. Sleep disturbances: Exposure to screens and digital devices before bedtime can disrupt sleep patterns and lead to sleep disturbances.
4. Digital wellness: Limitation of the time spent online can reduce anxiety, depression, and ensure mental health.

Discussion and recommendation

The high prevalence of Smartphone addiction among participants is alarming. Smartphone addiction has been linked to negative mental health outcomes include depression, anxiety and stress (Kuss & Griffiths, 2011). The findings suggest that

Smartphone addiction may mediate the relationship between Smartphone use and mental health outcomes.

The findings of this study provide insight into the relationship between Smartphone use and mental health outcomes among young undergraduates. The results indicate that excessive Smartphone use is associated with increased symptoms of anxiety, depression**,** and stress. The positive correlation between Smartphone use and mental health outcomes is consistent with previous research of Cain & Gradisar (2010) and Demirci et al (2015). The findings suggest that excessive Smartphone use may contribute to increased stress, anxiety and depression symptoms.

The findings of this study have implications for mental health professionals, educators**,** and policymakers. The results suggest that excessive Smartphone use may be a contributing factor to the high prevalence of mental health problems among young undergraduates. Therefore, it is essential to develop strategies that would promote healthy Smartphone use habits among young adults.

In conclusion, the findings of this study highlight the importance of considering the potential negative effects of excessive Smartphone use on mental health outcomes among young undergraduates. The results suggest that Smartphone addiction may mediate the relationship between Smartphone use and mental health outcomes. Therefore, it is essential to develop strategies that will promote healthy Smartphone use. This is as formation of good habits can reduce mental health problems among young adults**.** Such good habits like taking regular breaks from digital devices can help reduce stress, improve sleep**,** and increase productivity. Along this line, setting limits on screen time, using apps that track and limit screen time, and engaging in physical activities can help promote digital wellness. In view of these, this work recommends that;

Universities and policymakers:

1. Should develop and implement policies and programs promoting digital wellness, responsible digital device use and mental health support.
2. Should offer workshops, seminars and online resources on digital wellness, responsible digital device use, and mental health.
3. Should integrate digital literacy education into the curriculum, focusing on critical thinking, online safety, and digital citizenship.

Mental health professionals:

4. Should provide counselling services and therapy tailored to address digital addiction, anxiety and depression related to digital device use.
5. Should provide accessible and confidential mental health support services; that includes counselling and therapy.

Parents and guardians:

6. Should **e**ducate themselves on digital wellness, set boundaries, and encourage responsible digital device use among their children.

Digital technology companies:

7. Should design and develop digital products that promote digital wellness, such as features that track and limit screen time.
8. Should promote responsible digital device use: encourage responsible digital device use through marketing campaigns, social media, and influencer partnerships.

Individual self-care

9. Should be focused on physical activity, meditation, or other relaxation techniques to manage stress and anxiety.
10. Should be focused on reaching out to friends, family, or mental health professionals for support and guidance on digital wellness.
11. Should be focused on monitoring screen time: Use built-in features or apps to track and limit screen time, set reminders, and schedule digital detoxes.

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