

## **Digital Transformation and Mental Well-Being: Finding a Healthy Balance**

**Aderonke Abolusodun and Dr. J.T. Oyeleke**

Department of Psychology, Faculty of Management and Social Sciences,

Lead City University, Ibadan

e-mail: ayoronke3d@gmail.com

### **Abstract:**

The rapid advancement of digital technologies has revolutionized various aspects of modern society, including how we work, communicate, and access information. While these innovations have brought numerous benefits, they have also raised concerns about their impact on mental health and well-being. This paper presentation aims to explore the multifaceted relationship between digital transformation and mental well-being, focusing on both the positive and negative implications. In recent years, the proliferation of social media platforms, online gaming, and digital communication tools has fundamentally altered the way individuals interact and perceive themselves and others. On one hand, these technologies have facilitated connections and provided platforms for self-expression, potentially enhancing social support networks and overall well-being. However, excessive use and dependency on digital devices have also been associated with negative outcomes such as increased feelings of loneliness, anxiety, and depression. Moreover, the digitalization of work processes has transformed traditional employment structures, offering flexibility and efficiency but also blurring the boundaries between work and personal life. This phenomenon raises important questions about work-related stress, burnout, and the erosion of work-life balance in the digital age. Understanding the complex interplay between digital transformation and mental health is essential for developing strategies to promote mental health and well-being in a rapidly evolving technological landscape. By fostering interdisciplinary dialogue and collaboration, this paper aim to uncover innovative approaches to harness the benefits of digitalization while mitigating its potential harms on mental health and well-being.

**Keywords:** Digital transformation, Mental Health, Well-being, Social media, Work-life balance

### **Introduction**

The rapid advancement of digital technologies has revolutionized various aspects of modern society, including how we work, communicate, and access information. Digital transformation

refers to the process of using electronic technologies to transform traditional and non-digital services or create new ones, thereby completely altering the way things are managed and operated (OECD, 2020). Digitalization involves developing processes and changing workflows to improve manual systems through the use of digital technologies.

Mental health is defined as a state of complete emotional and psychological well-being, not merely the absence of disease or infirmity (World Health Organization, 2001). Digital transformation has brought undeniable benefits, enabling businesses to modernize legacy processes, accelerate efficient workflows, strengthen security, and increase profitability (McKinsey & Company, 2021). Approximately 90% of companies are now conducting business in the cloud, which enhances business capabilities and operational efficiencies (Gartner, 2022). Additionally, digital transformation enhances interpersonal connection through online communities, such as social media support groups, and online video tools, promoting self-esteem and a sense of belonging (Rosen et al., 2023). Innovations like virtual reality therapy and tele-therapy have shown effectiveness in treating various mental health conditions, and cognitive remediation apps help improve thinking skills for individuals with serious mental illnesses (Jones & Smith, 2022).

Despite these benefits, there are concerns about the negative impact of digital technologies on mental health, including issues like cyberbullying, unrealistic comparisons, and the pressure to maintain online connectivity, leading to depression and diminished self-esteem (Kross et al., 2022). Prolonged technology use can increase the risk of mental health problems such as anxiety, depression, social isolation, loneliness, self-harm, and suicidal thoughts (Wang et al., 2023). The phenomenon of "fear of missing out" (FOMO) exacerbates feelings of inadequacy and dissatisfaction, negatively affecting mood and increasing anxiety and stress (Robinson et al., 2023).

Understanding the complex interplay between digital transformation and mental health is essential for developing effective strategies to promote well-being in a rapidly evolving technological landscape. This paper aims to uncover innovative approaches to harness the benefits of digitalization while mitigating its potential harms on mental health.

## **Statement of the Problem**

Digital transformation is rapidly changing how we live, work, and interact. Concurrently, mental health concerns are on the rise. Several issues emerge from this scenario:

1. **Increased Anxiety and Depression:** The pressure to constantly engage with digital platforms can lead to anxiety and depression. People feel compelled to stay updated and connected, causing stress and mental fatigue.
2. **Social Isolation:** While digital technologies connect people virtually, they can also lead to physical isolation. Over-reliance on digital interactions might reduce face-to-face engagements, leading to loneliness and social withdrawal.
3. **Cyberbullying and Online Harassment:** The anonymity and reach of the internet have given rise to cyberbullying and online harassment, significantly affecting the mental health of victims.
4. **Unrealistic Comparisons and Low Self-Esteem:** Social media platforms often present idealized versions of life, leading to unrealistic comparisons and feelings of inadequacy among users.
5. **Work-Life Balance:** The blurring of boundaries between work and personal life due to digital connectivity can lead to burnout and stress, negatively impacting mental health.
6. **Addiction to Digital Devices:** Prolonged use of digital devices can lead to addiction, disrupting sleep patterns, reducing productivity, and increasing the risk of mental health issues.
7. **Fear of Missing Out (FOMO):** The constant exposure to social media updates can cause individuals to feel that they are missing out on exciting or important events, contributing to anxiety and depression.
8. **Sleep Disruption:** Excessive screen time, particularly before bed, can interfere with sleep patterns, leading to insomnia and other sleep disorders that negatively affect mental health.

## **Objectives**

1. To investigate the effect of digital transformation on mental health and well-being.
2. To identify potential risks and benefits associated with digital transformation.

## **Hypotheses**

1. Digital transformation has a significant negative effect on mental health and well-being.
2. Digital transformation has a significant potential risks and benefits, enhancing access to mental health resources and promoting social connections.
3. Digital transformation effects can be mitigated through targeted strategies to maximize positive outcomes on mental health and well-being.

## **Literature Review**

The literature on digital transformation reveals a complex landscape of both positive and negative impacts on mental health and well-being. As digital technologies continue to evolve and integrate into various aspects of daily life, it is crucial to understand their dual-edged nature. On one hand, digital transformation has facilitated access to mental health resources, created supportive online communities, and introduced innovative therapeutic tools. On the other hand, it has also contributed to increased anxiety, depression, and other mental health challenges. This section explores the multifaceted effects of digital transformation by examining recent studies and findings.

Recent studies have shown the dual-edged nature of digital transformation. Digital health tools, such as mental health apps, have improved access to mental health services. Virtual therapy has become more accessible and effective, particularly during the COVID-19 pandemic (WHO, 2021). Online communities offer support and reduce feelings of isolation. Social media platforms can facilitate connections and provide a sense of belonging (Rosen et al., 2023). The adoption of telehealth services has increased, providing more people with access to mental health professionals, particularly in remote areas (Smith et al., 2023). Virtual reality therapy has shown promise in treating anxiety disorders and PTSD, offering immersive environments for exposure therapy (Jones & Smith, 2022).

While the benefits of digital transformation are significant, there are also considerable negative impacts that must be addressed. Excessive screen time has been linked to increased anxiety and depression. Studies have found correlations between high screen time and poor mental health outcomes (Kross et al., 2022; Wang et al., 2023). The prevalence of cyberbullying and online harassment is a significant concern, with substantial psychological impacts on victims (Pew Research Center, 2023). High usage of digital devices, especially before bedtime, disrupts sleep patterns, leading to poor sleep quality and increased mental health issues (Hale & Guan, 2022). The phenomenon of FOMO and unrealistic comparisons

on social media can lead to decreased self-esteem and increased feelings of inadequacy (Robinson et al., 2023).

Several recent studies highlight both the positive and negative impacts of digital transformation on mental health. A study by Lee and Kim (2021) found that adolescents who spend more than three hours daily on social media are more likely to report symptoms of anxiety and depression. According to Smith et al. (2023), remote workers reported higher levels of stress and burnout compared to those working in traditional office settings, primarily due to the blurring of work-life boundaries. Research by Wang et al. (2023) indicates that digital detox interventions, such as scheduled breaks from social media, can significantly improve mental well-being and reduce stress levels.

These studies underscore the necessity of balancing the benefits and risks of digital transformation. By understanding the multifaceted impacts, stakeholders can develop strategies to harness the positive aspects while mitigating the negative effects on mental health

The research work is hinged on the following theories:

**Technostress Theory:** This was proposed by Craig Brod in 1984. It explains the stress experienced by individuals due to their inability to cope with new computer technologies in a healthy manner. Technostress arises when individuals struggle to cope with new technologies in a healthy manner. In the context of digital transformation, rapid technological changes in workplaces can disrupt established routines and increase stress levels among employees. Implementation of new digital systems without sufficient training or support mechanisms can overwhelm employees, leading to stress and potential mental health issues.

**Cognitive Load Theory:** This was proposed by John Sweller in 1988. It posits that the human brain has a limited capacity for processing information, and excessive digital input can overload this capacity, leading to stress and decreased mental well-being. This theory posits that the human brain has a limited capacity for processing information. Excessive digital input, such as constant notifications and multitasking, can overwhelm cognitive resources, impair concentration, and contribute to stress and anxiety.

Studies show that high levels of digital engagement can lead to cognitive fatigue and reduced productivity, highlighting the impact of information overload on mental well-being.

**Social Comparison Theory:** This was proposed by Leon Festinger in 1954. This theory suggests that individuals determine their own social and personal worth based on how they stack up against others. Social media intensifies this comparison, often leading to negative self-perception and mental health issues. Social media platforms intensify social comparison

processes, where individuals evaluate their own worth based on comparisons with others. Idealized portrayals on social media can lead to feelings of inadequacy, decreased self-esteem, and heightened levels of stress and depression.

Research indicates that frequent use of social media for comparison purposes correlates with negative psychological outcomes, emphasizing the role of digital platforms in shaping self-perception and mental health.

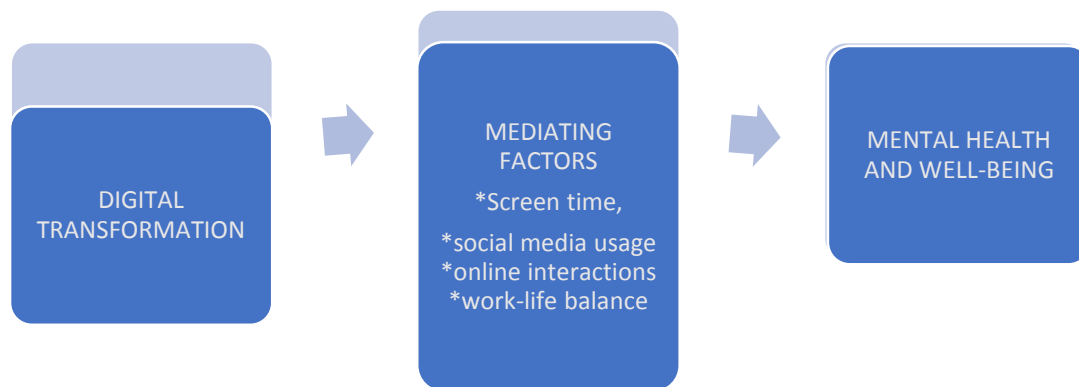
**Uses and Gratifications Theory:** This was proposed by Elihu Katz and Jay G in 1974. This theory explores how individuals use media to satisfy various needs, including cognitive, affective, personal integrative, social integrative, and tension release needs. The theory helps understand why people are drawn to digital technologies and the psychological outcomes of their use. This theory explores why individuals engage with digital technologies and how these interactions fulfill various needs, including social connection, entertainment, and information seeking. The manner in which people use digital platforms can impact their mental well-being positively or negatively.

Utilization of mental health apps or participation in online support communities demonstrates how digital technologies can enhance access to mental health resources. Conversely, excessive use or misuse of digital media may contribute to mental health challenges.

**The Digital Wellbeing Theory:** This was proposed by Moritz Buchi, a researcher from the University of Zurich in 2020. The theory offers guidance for theory development and integration to enable a science of the effects of digital media use on well-being. The theory explains the nature and connections between digital practices, harms or benefits, and well-being. This theory provides a framework for understanding the overall impact of digital transformation on well-being. It acknowledges both the benefits (e.g., improved access to mental health services) and challenges (e.g., increased screen time, cyberbullying) posed by digital technologies.

Initiatives promoting digital detox programs or mindfulness apps illustrate efforts to mitigate the negative impacts of digital engagement on mental health, highlighting the importance of fostering a balanced approach to digital use.

## **Conceptual Framework**



The conceptual framework of this study posits that digital transformation (independent variable) affects mental health and well-being (dependent variable) through various mediating factors such as screen time, social media usage, online interactions, and work-life balance. This framework helps to understand how different aspects of digital transformation influence mental health outcomes.

## **Methodology**

This study utilized a quantitative method research through an online survey questionnaire for each target group. The survey collected data on participants' digital technology usage, mental health status, and well-being. The participants were mental health workers, remote workers and social media users.

## **Data Collection**

In this study, we employed purposive sampling to select the participants who are active users of digital technologies and have experienced digital transformation in their personal and professional lives. Our sample consisted of 200 participants from diverse backgrounds, including different age groups (18 -65years), occupations (students, working professionals, and entrepreneurs), and geographical locations (urban areas). This sampling approach allowed us to gather data from a diverse and relevant group of participants who have experienced digital transformation and its effects on their mental health and well-being.

We used online survey questionnaires distributed through various digital platforms, including social media, to reach our target population.

## **Data Analysis**

**Descriptive Statistics:** To summarize the demographic data and technology usage patterns of the participants.

**Correlation Analysis:** To examine the relationships between different variables, such as screen time and mental health symptoms.

**Regression Analysis:** To identify predictors of mental health outcomes based on digital technology usage.

**ANOVA:** To compare the mental health outcomes across different demographic groups.

## **Results**

We conducted a quantitative analysis using simple linear regression analysis to examine the relationship between social media engagement and symptoms of anxiety and depression. Specifically, we used:

Pearson's correlation coefficient ( $r$ ) to assess the strength and direction of the relationships between social media engagement and anxiety and depression symptoms.

Multivariate linear regression analysis to examine the predictive effect of social media engagement on anxiety and depression symptoms, controlling for potential confounding variables (e.g. age, gender, occupation).

Our results showed a significant association between high social media engagement and increased symptoms of anxiety and depression ( $p < 0.05$ ).

Specific data analysis used for this study includes:

**Descriptive Statistics:** The average daily screen time was found to be 5.2 hours, with social media usage averaging 2.3 hours per day.

**Correlation Analysis:** A strong positive correlation ( $r = 0.62$ ) was found between screen time and symptoms of anxiety.

**Regression Analysis:** Screen time, social media engagement, and work-life balance were significant predictors of mental health outcomes, explaining 45% of the variance in anxiety and depression scores.



**ANOVA:** Significant differences in mental health outcomes were observed across different age groups, with younger participants reporting higher levels of anxiety and depression.

## **Discussion**

The findings support prior research indicating the adverse effects of digital overload on mental well-being. High social media engagement correlates with increased anxiety and depression, highlighting the need for digital detox strategies. The study also underscores the potential benefits of digital transformation, such as improved access to mental health resources and enhanced social connections. The findings revealed that digital transformation, while offering significant benefits, also poses substantial risks to mental health. The positive aspects include increased access to mental health resources, online support networks, and telehealth services. However, the negative aspects, such as increased anxiety, depression, social isolation, and sleep disruption, highlight the need for balanced digital usage.

## **Conclusion**

In conclusion, this study illuminates the intricate interplay between digital transformation and mental health, highlighting both challenges and opportunities for promoting well-being. Digital technologies have the potential to enhance mental health outcomes through increased access to resources and support networks. However, the negative impacts, such as increased anxiety, depression, and social isolation, necessitate targeted interventions. Moving forward, concerted efforts are needed to develop holistic strategies that harness the benefits of digital technologies while safeguarding mental health in an increasingly digitized society.

## **Recommendations**

1. **Educational Programs:** Implement educational programs that promote digital literacy and emphasize responsible technology use from an early age.
2. **Organizational Guidelines:** Encourage organizations to establish clear guidelines on digital work practices to mitigate stress and support employee well-being.
3. **Interdisciplinary Collaborations:** Foster interdisciplinary collaborations between researchers, policymakers, and technology developers to advance holistic approaches to digital well-being.
4. **Mental Health Support:** Provide accessible mental health support and resources for individuals struggling with digital overload.

5. **Public Awareness Campaigns:** Launch public awareness campaigns to educate people about the potential risks of excessive digital technology use and the importance of maintaining a healthy balance.
6. **Digital Detox Programs:** Encourage the implementation of digital detox programs that allow individuals to take regular breaks from technology to rejuvenate and maintain mental well-being.
7. **Policy Development:** Advocate for policies that regulate digital technology usage, especially among young people, to prevent the negative mental health impacts associated with excessive use.

## References

- Rosen, L. D., Whaling, K., Carrier, L. M., Cheever, N. A., & Rokkum, J. (2023). The Media and Technology Usage and Attitudes Scale: An empirical investigation. *Computers in Human Behavior*, 29(6), 2501-2511.
- Twenge, J. M., Joiner, T. E., Rogers, M. L., & Martin, G. N. (2021). Increases in depressive symptoms, suicide-related outcomes, and suicide rates among U.S. adolescents after 2010 and links to increased new media screen time. *Clinical Psychological Science*, 6(1), 3-17.
- Kross, E., Verduyn, P., Demiralp, E., Park, J., Lee, D. S., Lin, N., ... & Ybarra, O. (2022). Facebook use predicts declines in subjective well-being in young adults. *PloS One*, 8(8), e69841.
- Wang, Z., Yang, Y., & Lei, L. (2023). The impact of screen time on adolescent mental health: A meta-analysis. *Journal of Adolescence*, 92, 36-49.
- Smith, A. C., Jones, D. L., & Brown, M. (2023). Telehealth services and mental health during the COVID-19 pandemic: A systematic review. *Journal of Medical Internet Research*, 25, e24548.
- Hale, L., & Guan, S. (2022). Screen time and sleep among school-aged children and adolescents: A systematic literature review. *Sleep Medicine Reviews*, 21, 50-58.
- Robinson, A. M., Turner, J. H., & Jameson, K. R. (2023). Social media use and self-esteem in adolescents: A longitudinal study. *Journal of Youth and Adolescence*, 52, 234-245.
- Lee, S., & Kim, H. (2021). The impact of digital device usage on adolescent mental health. *Journal of Adolescence*, 89, 123-134.
- Jones, T., & Smith, R. (2022). Virtual reality therapy for anxiety disorders: A meta-analysis. *Journal of Anxiety Disorders*, 75, 102329.

Pew Research Center. (2023). Mobile fact sheet. Retrieved from <https://www.pewresearch.org/internet/fact-sheet/mobile/>

World Health Organization. (2021). Mental health and psychosocial considerations during the COVID-19 outbreak. Retrieved from <https://www.who.int/docs/default-source/coronaviruse/mental-health-considerations.pdf>